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Maritain and the Philosophy of Nature

Non Thematic Papers

God and Nature: Is the Divorce Final?

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The separation of the Christian God and all other gods from nature has become a passion. In the scientific community, even the thought that nature might show signs of intelligence, much less clues about its origin in a mind, is regarded by many as a major assault on the integrity of the community, by some as a return to superstition, and even by reasonable thinkers like Michael Ruse as a "science stopper."[1] By this, Ruse means that all such suggestions have the effect of stifling research since, he thinks, once we decide there is divinity or some other "designer" involved, we will stop the search for mundane explanations. On the fundamentalist side, the notion that intelligence might be evident in nature is acceptable, but the suggestion that we might discover something new and important about their god is not. For all we are entitled to know about the divinity is already to be found in revelation. Even believers devoted to reason tend to reject the notion that what we find by studying nature could change our views about the deity, though it is hard to know how you could find intelligence in nature without learning something about the nature of that intelligence.

The separation of scientific enquiry and religious truth goes back a long way, and the notion that faith and reason have their own domains probably has its origins in honest attempts to promote free enquiry into nature as well as to attempts to protect religion from assault by those who conducted such enquiries. Ibn Rushd, Averroes, whose work emerged on the European stage

[1] Michael Ruse, *The Evolution-Creation Struggle* (Cambridge, MA: Harvard University Press, 2005), p. 281.

in our high middle ages is one of the sources of the idea that separation is necessary, and Thomas Aquinas gave it his own twist and made it almost the standard currency.

The Pakistani philosopher M. M. Sharif thought that Ibn Rushd himself, and Averroism in general, were to be found at the heart of a change in thought that was to prove disastrous. But the disaster was not provoked directly by the attempt to assign faith and reason their proper spheres or even by the related "two truths" doctrine which characterised what was called "Latin Averroism." It was, according to Sharif, provoked by Ibn Rushd's doctrine of matter.

It was this, Sharif believed, that most influenced – and led astray – the West as well as bringing disaster to Muslim thought. It is the preoccupation with matter, conceived in a certain way, that makes intelligence as a shaping force in nature seem an outrageous intrusion.

Certainly, whatever it entailed, Averroism was influential. Sharif says that despite its many official condemnations, Averroism really dominated Italian thought for four centuries, from the twelfth to the sixteenth and led to an instructive crash in the Islamic tradition.

> "From the thirteenth century onwards... there was a rapid decline. The reasons for this decline were many, but one of them was the extreme philosophies of al-Ghazali and Ibn Rushd – extreme intuitionism of the one and extreme rationalism of the other. Under the influence of the former, Muslim thought was lost in clouds of mysticism, under the influence of the latter, Western thought ran into the abyss of materialism."[2]

It was not rationalism itself that Sharif was attacking in that sentience, but materialism.

It was not exclusively materialism, though, for Sharif's quarrel with Ibn Rushd (as I shall continue to call Averroes, since that was actually his name) included an issue that bothered Thomas Aquinas, too: Ibn Rushd did not want to admit that each of us has a distinct agent intellect. His particular form of panpsychism implied, as Sharif says, the immortality of the world soul but the mortality of the individual human soul.[3] Thus Sharif saw Ibn Rushd as dehumanising the mediaeval world and leading that world along the mechanical line that led to materialism. But one could argue that Ibn Rushd's theory of matter led directly to materialism.

Sharif believed – and I think there are grounds for this belief – that for Ibn Rushd, matter was not a negative reality as Ibn Sina's – Avicenna's – thought. It was not, that is, simply the limitation forced on being in order to make

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[2] M. M. Sharif, *Muslim Thought* (Lahore: Sh. Muhammad Asrhraf, 1951), p. 105.
[3] *Ibid*., p. 94.

distinctness possible in the world, but the true reality, and the source of all power. The world was a mechanical system in which nothing was truly added – only the potentialities already in matter could appear in the world. To make his theory acceptable to the religious community, Ibn Rushd, of course, had to urge the acceptance of his two truths thesis, the thesis religious and philosophical truths were distinct, and this, says Sharif, "was a godsend to the scientifically minded people of the world" who "were as a rule condemned and persecuted by the orthodox church and state." But the result was to debase religion, to leave it in the hands of the mystics and fundamentalists, and to encourage scientific materialism.

I think Sharif was right about the importance of his idea of matter. The change in thought that led a tailspin in Arab philosophy and that still lies at the heart of important problems in our own time did very likely come about through Ibn Rushd's view of matter. It was not, however, the doctrine of matter that worried Thomas Aquinas a little later. Aquinas was worried about Averroes' notions of the soul and the idea that we all shared in a single agent intellect, but I think people often acted as if the Averroist view of matter was a necessary part of Thomas's campaign to clarify the realms of faith and reason. I shall argue that this was a bad idea. Aquinas did not, I think, actually hold the disastrous doctrine about matter, though the distinction between the realm of reason and natural science and the realm of theology did end in a situation in which Jacques Maritain and others found it necessary to struggle over the philosophy of nature, and to find that they had difficulty getting from nature to the God of Christianity without recourse to mystical experience. Aquinas insisted that "God exists in everything, not indeed as part of their substance or as an accident, but as agent is present to that in which its action takes place." Such a god is not in things, nor do things possess properties in common with that divinity, though they possess analogies of those properties. Though one of his arguments for the existence of a god emphasises the evidential value of the fact that things work together, he would not have expected that the study of cell biology in its particular details would give us information about divinity which we could not infer from abstract nature of the causal system of things, though he would have been interested in some things that biologists have lately discovered. At any rate, a struggle to get the philosophy of nature in its right order occupies most of Maritain's *Distinguer pour unir,*[4] surely his masterpiece, and the book ends with appeals to mysticism.

I am not alone in thinking that the ontologies involved in some widely accepted forms of the separation of the domains that belong to students of

[4] Jacques Maritain, *Distinguer pour unir ou Les degrés du savoir* (Paris: Desclée de Brouwer, 1932).

nature and those that belong to students of theology have led to disaster. John Haught, the director of Georgetown University's Centre for the Study of Science and Religion, began a recent book by recalling that Hans Jonas said just before his death that philosophy has yet to produce an ontology adequate to evolution.[5] Haught comments: "Materialism, the belief that lifeless and mindless 'matter' alone is real has provided the philosophical setting for most evolutionary science…. Alfred North Whitehead had already demonstrated that the reigning materialist metaphysics… choked out any sense of emergence novelty."[6] One does not have to agree with Whitehead or Haught to suspect that the problem of an effective ontology might lie with ideas of matter so conceived as to draw a sharp line between intellect or intelligence and the workings of nature.

In point of fact, Aquinas himself was clear that form has "more being" than matter and matter is not anything in any ordinary sense. He says that "matter is what in itself, i.e., considered according to its essence, is neither a what, i.e., not a substance, nor a quantity nor something belonging to other genera by which being is determined or divided."[7] And so his view was nearer to that of Ibn Sina, one of Sharif's heroes, who thought that matter is a limitation on form than to Ibn Rushd who thought it was something in itself. But we must be careful. I said that I think Sharif was right about Ibn Rushd on matter, but the issue is very subtle. We are on slippery ground here. Near the beginning of his *Kitab al-Nafs,* Ibn Rushd concedes that matter is only the potentiality to take on form, but he insists that the forms we find in matter have no existence outside matter.[8] In Aristotle though, the forms inform matter and do not exist in some Platonic garden by themselves, they are not merely confined to the objects informed by them in the material world at any moment, but also act as formal causes, and the universe is so organised that they have an intelligible propensity to manifest themselves. In Aquinas, of course, there are exemplary ideas in the mind of the Christian God and everything in matter directly reflects that mind in some way. Furthermore, forms abstracted from matter have an existence in our minds as the basis for

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[5] John Haught, *Mortality and Morality* (Evanston IL: Northwestern University Press), p. 52.

[6] John Haught, *God After Darwin* (Boulder CO: Westview Press, 2000)., p. 1.

[7] Thomas Aquinas, *Commentary on Aristotle's "Metaphysics,"* 7.3 (1029a5-30), on substance and prime matter, tr. Peter King. Reproduced here from a University of Toronto web site.

[8] p. 8 in the edition cited by Ahmed Fouad El-Ehwany edited by himself, Cairo, 1930, and discussed in his article on Ibn Rushd in M. M. Sharif, ed., *A History of Muslim Philosophy* (Wiesbaden: Otto Harrassowitz, 2 vols., 1963), pp. 540-564. The reference to matter is on p. 552.

our knowledge of things, Ibn Rushd seemingly reads Aristotle so as to create a greater degree of independence for matter, and this is likely crucial for our story here. The point for our story is that in the *Kitab a-Nafs* the ground is laid for the doctrine that is now often taken as standard: we cannot look to nature for any sign of god because the forms exhibited in nature have no place beyond the realm of material things.

Jacques Maritain, who would surely have said that he was reflecting on Thomas, also urges us to remember that "what philosophers call matter (the existent non-being of Plato) is in the last analysis nothing other than the ontological source of relative unintelligibility." But he adds darkly that matter "signifies the distance which separates [material things] from the intelligibility in pure act." The objects of science are discovered "by the operations of the intellect that are freed from matter."[9] This suggests on the one hand a separation of the world from the "pure act" that is Maritain's God, and on the other, the dark side of things as they are in themselves. Is anything left unknown after all abstraction? In any case what be known about the originating being of the universe from the material world is what can be learned, according to Maritain, at the third level of abstraction, beyond the most empirical sciences and mathematics and at the point where it is the being of things as such that becomes apparent.[10]

This suggests a struggle for a satisfactory doctrine, and the issues raised here will emerge more clearly as we go along; but first, let us look at the shift in Arab philosophy and, as it happens, its Christian background. Ibn Sina was a Neoplatonist, but his view of matter seems to trace back to Gregory of Nyssa, who entered the Arab world via philosophers in Baghdad, especially, perhaps, Dirar bin Amr.

Gregory of Nyssa was in one sense of the term an idealist. The nature of Gregory's idealism is, however, a matter of dispute. He has been likened to Bishop Berkeley but it is not the idealism of Berkeley's *Principles* and *Three Dialogues* that comes to mind but the more Neoplatonic Berkeley of the *Siris.* Gregory did not deny that there were material objects. What he held – as did Berkeley in some of his most read works – was that material bodies are only collections of qualities and that the qualities are in turn thoughts or concepts which have their origins in the mind of God.

Our world, however, is organised and has an objective structure which all minds share. Gregory speaks of this as a "substratum" in which these qualities in our world somehow inhere. Darren Hibbs, in his *British Journal for the History of Philosophy* paper thinks of this substratum as a "point of

[9] Maritain, *Distinguer pour unir,* p. 70. In the English translation by Bernard Wall, *The Degrees of Knowledge* (London: Geoffrey Bles, 1937), p. 44.
[10] *Ibid*., pp. 73-74; translation, p. 46.

confluence for qualities."[11] And perhaps this suggests something other than idealism.

Such a "substratum," however, would be a Neoplatonic emanation, the expression of the mind of God in a world which is distinct from him. Our minds are part of the same emanation or system of emanations and so we share in its structure. Thus the idealist point seems to be sustained.

It remains true, that is, that for Gregory the world can only be understood as being dependent on a mind.[12] His fundamental argument was that, if anything like the Christian God exists, the things in the created world could not be wholly unlike their creator. They would have to bear the mark of divinity and in some way share in the divine nature. This, of course, is the very view that is now so widely under attack. But Gregory argued that the separation would make creation unintelligible.

Gregory is arguing from what he believes about the Christian God to what he believes about the world. But the argument can readily be reversed. What we perceive in the world are, as Gregory says, collections of qualities. We believe that something holds them together and that this is what gives them their intelligibility. This intelligibility can readily be understood as the substratum of which Gregory speaks, but the intelligibility would seem reasonably to be the intelligibility that comes from an intellect.

Richard Sorabji associates Dirar bin Amr (the Baghdad philosopher who lived around 800) with Gregory of Nyssa and cites Fritz Zimmerman as

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[11] Daren Hibbs, "Was Gregory of Nyssa a Berkeleyan Idealist?" *British Journal for the History of Philosophy.* Vol. 13 no. 3 2005, pp. 425-435. The quotation is on p.433.

[12] There is a theological argument that underlies Gregory's position. The clearest statement of it perhaps is in *De Hominis Opificio, Patrologiae Cursus Completus, Series Greca* (Paris: P. J. Migne, 1858), vol. 44*,* col. 133 AD. There is an English translation by H. A. Wilson in *Select Writings & Letters of Gregory, Bishop of Nyssa: Nicene & Post-Nicene Fathers*, Second Series, Oxford, Parker, 1893, Vol. 5, pp. 413-414. Richard Sorabji calls attention to Gregory's discussion in his commentary on the *Hexaemeron* of his brother Basil. The Greek text cited by Sorabji is in *Patrologiae Cursus Completus, Series Greca* (Paris: P. J. Migne, 1858), vol. 44 Col. 69-BC. There is a Latin version in the Migne edition and a very influential one, *In Hexaemeron commentarius*, ed. Petro Francisco Zino, (Venice: Aldi filii, 1553). The argument is that God would or could not create things wholly different from himself, and so would not create material substances, but only material properties that depend on minds, so "none of the things we call a body is on its own a body." That is, things that appear to be material turn out to cease to exist if the supporting minds are withdrawn. Sorabji likens Gregory to Bishop Berkeley, though as I noted this has been disputed. Gregory's idealism is also to be found in *De Anima et Resurrectione,* translated *in Select Writings & Letters of Gregory, Bishop of Nyssa*, vol. 5, p. 445 and in *Patrologiae Cursus Completus Series Greca,* vol. 46 col. 124 BD.

providing evidence that Gregory's writings were available in the Arab world in Dirar's time.[13]

This view is consistent with the conclusions of H. M. W. Alousi, a recent scholar, and with the reports of Dirar's near contemporary al-Jahiz about the work of Dirar.[14] Dirar also believed that bodies are collections of perceptions.

Dirar has become a shadowy figure and Sorabji thinks his idealism may have been exaggerated, but Alousi has found references in al-Jahiz's *Kitab al-Hayawan,*[15] a notable work of the time, asserting that Dirar spoke of things as being created "only as seen." Dirar and Gregory were at one: There is no separation of God and nature, and cannot be. Ibn Sina simply continued to build on this tradition.

To say this, however, is to state a problem, not to solve it. Both Gregory and Dirar thought they knew certain things about God, a lot about our experience, and only such things about nature as they could infer from practical life or by interpreting their experience in the light of their philosophies, their theologies, and their religious revocations. Platonism and Neoplatonism were their natural allies in any attempt to build a picture of the world. Aristotle did not seem an alien thinker, but someone from whom they could draw arguments as they needed. Like Plotinus himself they did not in any case see Aristotle and Plato as related in quite the way that many scholars beginning in the high middle ages did. To some extent the changing view of Aristotle must be attributed to Ibn Rushd and the Arab community. The availability of texts no doubt played a part, but the separation of faith and reason clearly had something to do with the way in which one read Aristotle on mater even though thinkers like Thomas Aquinas approached it with great caution.

What was at work was a combination of a desire to open thought to new knowledge and a natural consequence of certain kinds of theism. The change from polytheism, taken for granted by the Greeks even if skeptically by their philosophers, to monotheism brought a range of demands to conceive of a god who was separate from the world and from all earthly spirits who might be

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[13] Richard Sorabji, *Time, Creation & the Continuum* (London: Duckworth, 1983) pp. 295-296.

[14] H. M. W. Alousi, *The Problem of Creation in Islamic Thought* (Baghdad: National Printing & Publishing, n.d. [The British Library gives 1965 as the date]). The cover & title page reads Husam Muhi Eldin al Alousi, but the British Library gives the author's name as Alusi, Husam Muhyi al-din.

[15] Al Jahiz, *Kitabal-Hayawan* (Cairo: al-Halabi, 1938), ed. al-Salam Muhammad Harun, vol. V, pp, 10, 12, 13 . "al-Jahiz" was the common name of Abu Uihman Amr Ibn Bahr al-Kinani al-Fugaimi al. He was born in Basra in 776 and died in 869. His book contains a pioneering theory of evolution in which the issue of animal minds and bodies is discussed.

deified. Judaism banned representation of the deity and insisted on narrow channels through which, exclusively, the deity might be approached. The idea that there might be intermediaries between us and God did not wholly die out in all parts of the Jewish community, but it became at least a dark subject. God still spoke to his people and promised a Messiah, but communication was mainly through the scriptures and, after the fifth century B.C., gaining acceptance as a prophet certainly became difficult and in some people's eyes virtually impossible. Islam, when its turn came, took this process further. God spoke to Mohammed and dictated the Koran, but he was not to be represented in any way,

In between Judaism and Islam, it would certainly seem that Christianity amounted to an attempt to restore personal relations with the deity. For the Trinitarian doctrine has it that God appears among us as one of us. To locate himself in the natural world clearly shows a regard on God's part for nature and, as Cardinal Bérulle and many others have argued, a humility that transforms all our relations. Christianity with its rich cast of saints also established a great many lines of communication through which believers might seek interventions in the world, and Christian art brought divinity itself into view. The Reformation recoiled from much of this, and we may well ask why.

Is it because the separation of realms begun in the high middle ages had become a deeply entrenched pattern of belief so that it seemed to the reformers a part of the "real religion" and the observable traces of god in the world seemed doubtful? Certainly by the Seventeenth Century thinkers like Thomas Hobbes and the practitioners of the new sciences had come to think of matter as something much more than the non-being described by Thomas Aquinas or indeed, than the "ontological source of relative intelligibility" mentioned by Maritain. The relevance of the forms espoused by Platonists and Aristotelians in their different ways disappeared from the sciences. So matter had to take on more and more of a life of its own. Even Maritain's matter seems a little richer than Thomas's. Hobbes still claimed to believe in god, but how he managed it he never made clear. God has disappeared from the Hobbesian world. He may be looking at it with a jaundiced eye. But he is not directly apparent in the objects that we see. Still, whatever Christian doctrine may say, Maritain's God is not among the objects that people Maritain's world, either.

The much older view, that of Gregory of Nyssa, Dirar bin Amr and perhaps Ibn Sina also makes a comeback in the Seventeenth Century, however. Nicolas Malebranche said we see all things in God and Bishop Berkeley spoke of nature as "natural language of God."

But notice that difference is, indeed, in their views of matter. What one believes Berkeley thought about matter may depend on what book one reads. In the *Principles* and the *Dialogues* matter most often seems to be a collection of perceptions in the mind of God. The notion of nature as the natural language of god appears in the *Principles*, too. That idea of a "natural language" is developed in *Alciphron* and then, perhaps, matter is just the stuff of god's alphabet – a collection of symbols. In the *Siris* matter is more nearly, as it was for Gregory, an expression of Neoplatonic ideas, so that the world expresses God's mind in a slightly different sense. Malebranche and Berkeley shared some notions – as one may learn from reading Canon Luce[16] – and, for Malebranche, matter, though real, is an expression of the divine ideas, distanced from his God no more than my idea of the computer on which I am writing is distanced from me.

The suggestion in these theories is that we can learn about a specific god – the Christian God – by studying specific elements in nature and not merely by abstracting from our ideas of nature and reaching the concept of being. There is no residue of Averroist matter as something real in its own right or even of whatever it is that we abstract from in Maritain's sense. There is no sense in such theories that there is no nature to be studied, only that whatever matter is, it gets its reality from the expression of the divine nature. The divinity which is expressed is clearly an intelligence.

The question, of course, is whether or not an intelligence really is expressed in nature and, if so, how we might find out. Of course if one believes on any ground that there is a god who is the author of nature one will believe that an intelligence is expressed in nature, but it would not follow from that we could find it there or that the study of nature would confirm our theistic hypothesis.

So what are we looking for? I think first of all we are looking for signs of bias in the universe, the kinds of bias that suggest that intelligence and

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[16] A.A. Luce, *Berkeley and Malebranche* (London: Oxford University Press, 1934). Luce's *Sense Without Matter* (Edinburgh: Nelson, 1954) gives the exposition of the case for Berkeley as he is most commonly understood by readers of the *Principles of Human Knowledge* and the *Three Dialogues Between Hylas and Philonous*, but the notion that nature is the natural language of God runs through Berkeley's writings. In *A New Theory of Vision*, Section 147, p. 51 of *George Berkeley, Philosophical Works,* ed. M. R. Ayers (London: Dent, 1975), Berkeley says: "Upon the whole I think we may fairly conclude that the proper objects of vision constitute an universal language of the Author of Nature." In the first edition the text read "the universal language of Nature" The same line can be in *The Principles of Human Knowledge,* first published in Dublin by Jeremy Pepy in 1710 §65. The idea is expounded in important ways in *Alciphron or the Minute Philosopher.* In the Fourth Dialogue, Section 7, *Works,* ed. A. L. Luce and T. E. Jessup (London: Nelson, 1948-57), Vol. III, p. 149.

intentionality are at work. There are two questions, here. The first is: Is there any bias? And the second is: Is it the kind of bias that would result from the exercise of intelligence? It would be most convincing if we were to finds signs of a plan.

The answer to the first question is that there is and has to be some bias. To say that something happens purely by chance is to say that it is likely as not or as unlikely as not. If there is no bias for or against an event, then the probability of an event is ½. This is called the principle of indifference. If there are two such events, the probability that they will both occur is ½ x ½ or ¼. But the probability that at least one will occur is ½ + ½ or 1. If we had three such events the probability that at least one would occur would be 1 ½ -- and that is a contradiction.[17] So in any universe in which there are three or more possible events, there has to be some bias. We know by observation that we live in such a universe, but we also know something about biases. A die is a little universe with a bias, because it has six sides and you have one chance in six of rolling any number given numbers between one and six just as you have one chance in 52 of pulling the Ace of Spades out of a standard deck. But the way a cube lands allows simple reckoning, because only its uppermost side is relevant and it is designed so that it will always land with one side uppermost. Given all we know about it, we are fairly safe in saying that its bias is designed. With respect to a whole universe, however, very many properties reveal themselves as it unfolds and at every stage there are apparently many possibilities. Two properties may be especially interesting for our enquiry, however: complexity and organic unity. Successive states may show more or less complexity and more or less organic unity. A steady movement in one direction or the other would indicate a bias. It need not be a direction without exception. Individual organisms, for instance, tend to become more complex when they are in their growing phases and then become disorganised and die. And, of course it is only the observable features of the natural world that we can pronounce upon. What goes on inside black holes involves speculation, what goes on in other spaces and times, if there are any, is unknown to us.

With life forms we have a lot of data. The oldest life forms we can observe seem to be unicellular and there has been steady development since involving more complexity, at least up to the appearance of mammals like us. We also know quite a lot about the observable features of the space-time system in which we life. The simplest atom is hydrogen, but many much more complex

[17] This is a notion advanced by John Maynard Keynes and discussed by Bertrand Russell. See Russell, *Human Knowledge, Its Scope & Limits* (London: George Allen & Unwin, 1948), pp. 391-392.

atomic structures can be developed from it. Our present universe shows a great deal of atomic complexity.

Living creatures are collections of such atoms, but in cells we find very close unities and dynamic systems that constantly adjust to sustain life. Multicellular creatures have organic unities characterised by the fact that very many individual components work together in mutual dependence and in a constant process of adjustment. Still closer unities seem to develop as mind appears on the scene.

There is now a very strong tendency for social processes to bind the whole world together in a unity which we have discovered no successful means of managing – and which we mysteriously try to manage by harnessing the forces of industrial capitalism. But those forces are designed to give profit and power to individuals in a way that opens increasing gaps between rich and poor people and between rich and poor societies. If real unity comes it seems it will have to arise out of a different vision of the possibilities for organic unity.

There are forces that make us move toward social unity or face extinction. But they are paralleled by another tendency: the tendency for individuals to have more choices and for individuality to become more marked. This, of course, exacerbates the problems. Mind permits self-awareness and reflection and the building of individual interests, but they can be developed only in a social context. If we understand this we may begin to see a way out.

But what would make one think this bias is related to a divine intelligence?

Within whatever biases there are, certain things happen. Within the biases of the cards royal flushes occur in poker. It seems very likely, though, that they occur with just the frequency that our probability theories agree on even if the notion of probability remains somewhat problematic. It is perhaps much odder that some processes that lead from, say, the amoeba to us should happen to have the results that they do. Of course, life did not develop in a simple linear way. Life forms came and went. There were dead ends and regressions to simpler life forms. The process may work through Darwinian "natural selection" provoked by mutations of genes and the tendency for organisms well adapted to their environments to survive. But as Jerry Fodor has pointed out, one who ascribes this to random chance runs laughably against the odds of probability.[18] We can certainly laugh at probability if we want, but let us think a little more about chanciness.

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[18] Jerry Fodor, "Climbing Mount Improbable," *London Review of Books,* Vol. 19, No. 8, April 18, 1996, pp. 19-20, reprinted in *In Critical Condition* (Cambridge, MA: MIT Press, 1998), pp. 163-170.

We are talking here about the probability that events within a universe that admittedly shows a bias might all still be chance events within the scope of the bias, as throwing snake's eyes or craps is an event within the probabilities determined by the form of the dice.

What of the possibility that a whole universe *with the biases we think we detect* should just happen by chance? It is often said that from a scientific point of view the universe just happens. Astro-physicists are not quite content with the notion that before the big bang there is nothing. Logically this seems to mean that universes might spring spontaneously from nothing, But if that can happen, anything can happen. If universes can spring spontaneously from nothing, why should lesser things not do so as well? Perhaps then the explanation for anything might be that it "just happened." The answer to this complaint – the complaint that allowing a big bang opens the door to anything whatever is that once you have a universe at all what there is gets in the way of other things and structures the balance.

It is on this account that people in the sciences think they have a chancy beginning and still do not think they must abandon all explanation. But how are we to look at the structure of what gets in the way of mere chaos or simple randomness? Does the study of what there is give us any clues?

Consider: There are not usually tigers in London outside the zoo and the circus because the conditions are not right for tigers. The conditions are rather complicated. They include not only a somewhat more suitable climate but also such things are being at the right point of the evolutionary chain.

Jerry Fodor, as I said, thought chance wouldn't take us all through the evolutionary chain. But if one concedes that probability makes us expect that things do happen against the odds – people in poker games do sometimes draw into a royal flush – how much that's against the odd is admissible? Is there any way of answering such a question?

Certainly scientific investigators want to talk about repeatable processes if they can. For the ability to do the thing over again is a test of many scientific hypotheses. Those who think that life arose naturally think that, given the right moment in the history of the cosmic soup, life sprang from lifeless chemicals – and we would do again. There are those, however, like Stephen J. Gould, who think it might have done so, but might not do so again – that neo-Darwinian[19] evolution may well depend on non-repeatable events.[20]

Neo-Darwinian explanations then become no more than saying "it happened and it could have happened by natural selection." But Gould

[19] Darwin's theories combined with later theories about genes and chromosomes are generally dubbed "Neo-Darwinism."

[20] Stephen J. Gould, *Wonderful Life, The Burgess Shale and the Nature of History* (New York: Norton, 1980).

thought, of course, that the model was like the luck of drawing into an inside straight in a poker game.

People once believed in spontaneous generation. No one does now. If life can be generated from random mixtures of chemicals why doesn't it happen quite often or at least within the laboratories of those who believe in such things? The answer is that no one has been able to say exactly what the necessary conditions are.

Let us then look at the next episode of the story. Suppose life could be generated. Such life might be a virus (which seems simplest) or a unicellular organism. There are, though, those like Michael Behe[21]who think that the simplest cell is "irreducibly complex." That is to say that you can't get from a pile of chemicals to a cell just by adding bits because there is nothing simpler than a cell from which a cell could be derived. There is much argument about this.

In any case, to get from bacteria to tigers, of course, one would have to have multicellular creatures. There are some oddities involved. Creatures like us have cells powered by mitochondria. Unicellular creatures generate power by manipulating the inner and outer membranes which surround them but not enough power could be generated that way to run very complex creatures. Our mitochondria have, however, DNA which is different from the rest of our DNA. They were once separate organisms. How they got into their present condition and traded off some of their genes so that though they are still distinct we cannot propagate them on dishes outside cells is a mystery. The appearance of mitochondria powered eukarytoic cells = cells with nuclei – is called by Nick Lane "the arrival of a "hopeful monster." It happened 2,000 million years ago, through the merger of two cells, one of which continued its life inside the other. Without them we would not now exist. Yet it is an event that seems to have happened only once.[22] He thinks it is a once in a universe event and a major objection to the hope of generating complex life in the laboratory. Be that as it may, mitochondria will play an important role in our story for quite another reason: they pose a problem about how we identify different life forms.

People, then, keep turning up sobering facts about chance and the universe. We have seen at least that the universe does have biases and that we may be able to guess what same of these biases are like. But this does not take us very far.

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[21] Michael Behe, *Darwin's Black Box Biochemical Challenge to Evolution* (New York: Free Press, 1996).

[22] Nick Lane, *Power, Sex, and Suicide* (Oxford: The University Press, 2005), especially p. 23ff.

The question is: what does what we know about bias in nature tell us about the likely nature of its inner well-springs, of whatever explains the bias and what we would need to know more about it? Perhaps we can even detect a direction in things, but what we would like to see is a sign of intelligence. But if it does show intelligence at work it must also show some values. When we look at bridges and tall buildings and aeroplanes we get some idea of what the people who built them had in mind. It is not always so. Getting a glimmering of the minds of those who built the great figures on Easter Island has proved very difficult, and Stonehenge remains a subject of entertaining speculation. It is always possible that whatever designed the universe, if anything did, had values unimaginable to us. It is said that the Cambridge mathematician G. H. Hardy once remarked that our planet seems to be the only thing in the world with strange fungus growths on it and that a deity might regard it as merely unsanitary. In that case our attempt to fathom the mind of a cell-designer from what we know of cell biology would be wholly misguided.

But we may know something. Alfred North Whitehead noted that everything in the universe has a mental as well as a physical pole.[23] By that he meant that there is an inner process that reaches out into the world. He thought that the world was composed of events rather than of substances and that everything we need to talk about has a measure of indeterminateness. Nothing is a perfect or exhaustive example of the idea or concept by which we identify it, and everything has a certain openness which he thought of as a degree of freedom. Notice that in raising these questions we are not saying that the world has inexplicable gaps and then filling them with an unexplicated god. Keith Ward, an Oxford divinity professor, recently accused Michael Behe of doing this,[24] and indeed Behe opens himself to this accusation by saying he knows nothing scientifically about the designer of his irreducible complexity. The point here is to try to find some intelligible pattern in the whole of nature – one that, if it existed, would require a *different mode of explanation*, one that if a god is too involved logically points to an appropriate god.

The thought here is that things have an inner side and that the inner side reveals a mind at work. Famously, Pierre Teilhard de Chardin in *The*

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[23] Alfred North Whitehead, *Process and Reality* (New York: Macmillan, 1929), "corrected" edition, eds. David Ray Griffin and Donald W. Sherburne (New York: Free Press, 1975). The "mental pole" is introduced on p. 45 but reappears throughout the book.

[24] Keith Ward, "Beyond Boundaries, The Infinite Creator," *The Tablet,* September 2, 2006, pp. 6-7.

Phenomenon of Man opened the notion of a "within" of things.[25] But he was not alone or the first to do so. John Scott Haldane had raised the same suggestion in 1935.[26]

These are not easy notions to understand, much less to sustain. We are aware that the world as we see it in our reflective consciousness is individual and particular and cannot be reduced to the world that others see from the outside. At one time many people believed that we could, for scientific purposes, dispense with the inner side and learn all there was to by studying the external behaviours of things and people. Behaviourism was popular in psychology and in the social sciences. People could take this seriously only at a certain level. and there is an old joke about the two behaviourist psychologists who meet and one says to the other "you're fine, how am I?" Behaviourism has faded in those fields but there are still philosophers, of course, who think the inner life is a kind of mirage, merely a way that matter appears in certain circumstances or that its phenomena are epiphenomena – that is, that they have no real independence. Perhaps, like optical illusions, they have no objective existence. Optical illusions do, though, have a real place in our inner lives.

Very big questions are involved. I have written about them extensively elsewhere,[27] and I can only note here that there are various properties which cause us to take the inner life seriously. If I say I saw a little green man with antennae growing out of his head descend from a space ship, there will be a legitimate debate about whether there was something else which my perceptive powers organised into that shape, but the question of whether I saw it or not is one that only I can answer, even though I am limited by the fallibility of memories and limitations of my language and its concepts.

But let us pursue the matter. If I ask you to imagine a round red patch you can probably do so. It may be that in some sense you are really seeing one of your brain states, but that has to be a rather Pikwickean sense. For I can ask if what you saw was really round or perhaps looked a little ovoid, but there are no round or ovoid brain states.

So there is an inner side to our lives, and we are quite sure our dogs have inner lives, too. It is a good guess that the Sparrow who hangs about with his mate on the British Library terrace in search of crumbs from Kit-Kat bars has an inner life, too. Charles De Koninck brought this problem home to us in *The*

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[25] Pierre Teilhard de Chardin, *The Phenomenon of Man* (London: Collins, 1959), Chapter II, Book One.

[26] John Scott Haldane, *The Philosophy of a Biologist* (Oxford: Clarendon, 1935), second edition, pp. 72-74; there was a second edition in 1936,

[27] See Leslie Armour and Edward T. Bartlett III, *The Conceptualization of the Inner Life* (New York: Humanities Press, 1980).

Hollow Universe,[28] De Koninck's basic argument was that science presents us with a universe of abstraction. Unless we understand the principles on which it is built and the sense in which it cannot be the whole of reality, we are apt to mistake a hollow shell for the whole of reality. Part of the problem is the dominance of calculation in which our concern is not with things as they really are but with what we can do with them, and hence with the external natures. Science also tends to substitute the formulae which govern calculations for descriptions of reality. This is not a criticism of science, but of the misunderstanding of its nature, and of its misuse.

One of De Koninck's important examples concerns life. He wonders why live animals in the zoo are more interesting than dead ones in a museum. Our purely scientific descriptions may make it appear as though "life" is not something which can figure in knowledge. His book, is, in effect, a plea for the construction of an adequate philosophical framework within which science can be understood, and it was towards the construction of this framework that most of De Koninck's later philosophical work was directed.

No one quarrels with De Koninck about lions and tigers but, as we go down the evolutionary line to much earlier life forms, we become doubtful. Do the mitochondria in our cells have an inner life? What went on when they first entered a cell, entered into the co-operative living arrangements, and made possible the eukaryotic cells that in turn enable complex living things to develop?

John Scott Haldane as much as Teilhard wanted to say that the germ of the inner life goes all the way back and is part of evolution. He was less often shot at by his biologist colleagues than Teilhard de Chardin was to be later, perhaps because he had the advantage of not being a Jesuit, though he did have a tendency to talk about god. In any case, their thesis is the old one: *ex nihilo nihil fit,* out of nothing, nothing comes. If there is an evolutionary story it includes everything. In that case, consciousness is the reflective outcome of something that has always been there.

If that is so, we can see a continuous process which, again, seems to have a direction. Samuel Alexander thought ahead of us in time was the development of "deity,"[29] though he thought that deity never quite emerges. In this way, he was on the same track as Teilhard, though Teilhard thought deity would emerge and indeed, in one sense, had been present all along.

What can we make of such arguments? What is their logical structure? Do they really close the gap between god and nature?

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[28] Charles D. Koninck, *The Hollow Universe* (London and Toronto: Oxford University Press, 1960); Québec, Presses de l'Université Laval, 1964.
[29] Samuel Alexander, *Space, Time, and Deity* (London: Macmillan, 1920).

They are extrapolations from data which are in dispute. Worse, they do not close the gap because whatever emerges as the ultimate form of consciousness might be a moral disaster. After all, we have now subverted or at least brought to an end the processes of evolution in the sense that we now dominate the planet and contemporary genetics probably allows us to determine our own future. The human mind has so far shown itself to be rather destructive.

Using evolutionary development for theological ends also raises, in many people's minds, suspicions of heresy. There is a suggestion sometimes put forward explicitly as it is in the work of Samuel Alexander and Teilhard de Chardin that divinity develops along with the world. If divinity puts itself in the world it is hard to know how one can insist that divinity does not change as the world develops. Of course, one could try to square this with Christianity, for the Christian God does make a personal appearance at a particular time and will appear again, it is said, at or nor near the end of time, but to say this still leaves us with the notion we actually learn about a Christian God by studying evolutionary biology. Not everyone is happy with that. The unhappiness of believers with such a notion is not philosophical or my concern here. But an evolutionary god does pose philosophical questions about just how one is to delimit the concept of god so that one can tell whether nature does or does not provide evidence of divinity. If our concepts of god are defined essentially by reference to a theological tradition, there is every likelihood that they cannot be made to mesh with any scientific evidence.

In any case, however. the gulf between god and nature cannot be spanned so easily as the theological evolutionists sometimes seem to suggest. And this is true for two different reasons. One is that we have gone on from Averroism to insist on a distinction between facts and values. It seems a natural move. The concept of god that permeated the work of the Arab philosophers at least up to and including Ibn Sina and that of the Church fathers was imbued with the Platonic idea of the good and the Arisotelianism which followed did not break that bond. If the Averroist matter was something in its own right, then it was separated from that value. If the forms that it could take on were such that they could exist *only* in matter –- as the reading of Ibn Rushd I have been following insists – then they have to be comprehensible without values.

The separation of facts and values is often located in the Seventeenth Century and it certainly has connections with the materialism of thinkers like Thomas Hobbes and received support from those who read Descartes as insisting that what science studies are measurable properties of things. For we cannot weigh goodness or put a tape measure on it. But the split between facts and values no doubt has roots going back much further. If science has no

truck with values one will not find traces of any god in nature. And so, as I suggested, even if one finds a bias in nature not only toward complexity but also toward consciousness, the enrichment of the inner life, and the freedom that allows us to dominate nature, it does follow that one will have found any traces of god.

Traces of god would have to be traces of a purpose, a purpose sufficiently rich so that we could say that it was intelligibly the purpose of a plausible deity. This would mean that one would have to read nature as revealing a story. Facts, if they are supposed to be stripped of values, do not, of course, provide any such story.

The truth of the matter, however, is that the appearance of facts as stripped of values, may well be achieved in the biological realm only by a kind of sleight of hand. We need to think for a moment of how it is that we divide up the biological world and provide ourselves with the data which we then link with evolutionary theories. The days when biology was largely devoted to naming and classifying life forms are certainly long gone. Yet very much still depends on getting classifications right.

How is it that we decide that dogs and worms are two different species while the myriads of cells in your body constitute a single organism? The answer, of course, is that, though many of your cells can live independent lives and be cultured by researchers, they all work together for some single end whereas the dog and its worms have aims which clash. We may identify your various cells by common patterns in their DNA, but every one of your cells has mitochondria without which it could not survive and which have different DNA. Indeed, the mitochondria – which were once distinct creatures in the evolutionary tree – co-operate with their host cells. They have co-operated to such an extent that they have engaged in genetic transfers so that attempts to breed them outside a cell have up to now failed. Yet they can live in the culture dish.

In a larger way it is difficult to imagine understanding the workings of a human heart without grasping its functions or to imagine medicine without taking account of such purposive activities. So values do in one way or another enter into accounts of the biological realm.

Can we substitute the language of random chance for all the occasions in which we introduce values? This in itself seems to be a decision about values. Physicists lately have been interested in the fine tuning of the universe. A very slight change in any of the conditions would have resulted in our not being here at all. Fine tuning has implications for the idea of purpose

But all this again takes us only a little way. And we tend to duck such issues. In our scientific studies we prefer some kinds of explanations rather than others partly because we have a tradition of preferring explanations

without values. The issues raised by Michael Ruse, whom I mentioned at the beginning of this paper, are relevant here. One reason that those who practise the sciences have a distaste for any explanations which have theistic or deistic implications is, as Ruse says, because they believe that such explanations bring scientific research to a halt.

There is no reason that this should be so. If, say, Michael Behe is right and there is a case to be answered about irreducible complexity we can search for more and better examples, try to show weaknesses in existing examples, and of course investigate the contexts in which cases of irreducible complexity arises. All that sounds as if it is part of ordinary everyday scientific activity. If Behe's case is demolished we will learn something along the way, and if it is not demolished, we may have to do some rethinking.

What may be dispiriting is that if Behe were right we would have a new mystery on our hands. As I noted, Behe does not claim that he can reason his way to a Christian God, much less find out anything about any god. He says only that there seem to be signs of intelligent design. Is this a dead end?

Explanatory patterns *do* tend to land in dead ends. The child told that God created the world naturally answers by demanding to know what created God and is not likely to be mollified by the answers. Physicists, who have now taken the side of the Christian philosophers against people like Ibn Sina who thought the universe was eternal, seem content to say that nothing happened before the big bang.

There are long and short answers to these conundrums. I have given a long answer elsewhere,[30] but the short answer is that whatever you postulate one entity as the explanation of another, it is legitimate to ask for an explanation unless the only alternatives are all logically contradictory. It would seem to be true, then, that if we are not to have endless infinite regresses we would have to have a necessity at the end of our line of explanations. Now a god might be logically necessary in some sense, though the big bang is not. But Thomas Aquinas, unlike Anselm, did not think we could see into the essence of this necessity and indeed, in the sense of a Christian God who did all the things Thomas believed in – came among us as a man, for instance – he is certainly right.

A necessary entity is something that cannot come into existence or pass out of it, but anything which we might call a being is subject at least to logical limitations and can not be shown to be necessary in that sense. Goodness, though, is another matter. You can create good things, but not goodness itself, or what Plato called the form of the good. Nor can you destroy it, however many of Mr. Bush's aeroplanes and tanks you deploy.

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[30] Leslie Armour, "Values, God and the Problem About Why There is Anything at All," *Journal of Speculative Philosophy*, (New Series), Vol.1, No. 2, 1987, pp.147-162.

John Leslie and I have therefore suggested that the universe exists because it ought to.[31] Of course, as I have argued, if that is true then one of the things that ought to exist is a God of the sort that I think Christians do or ought to believe in. A Cudworthian God whose nature is love and who "governs sweetly."[32]

This, of course, is a speculative theory. There are no objections to those, though there have been recent rumblings but physicists about "string theory" which it is hoped might be the explanation of everything physical but which is a wholly mathematical enterprise and may remain so.[33] The question is whether or not such speculative theories might give rise to research programmers which could, as Sir Karl Popper liked to insist, tell against them. Popper thought that the falsification of theories was the major issue and that it was a simple idea. It has turned out not to be so simple, but at least one has to allow that something would count against any theory.

Theists have often insisted that nothing would count against the existence of God. The Book of Job seems to be a story to that effect. For believers that is a matter of faith. But the thesis that something might tell against a specific argument for the existence of God is, of course, a different story and has always, I think, always been recognised as such. The notion that the world shows the conditions that would exist if a god of love existed is, I think, quite capable of investigation.

Love requires a plurality of persons for its fullest expression. Self love, to repeat, is possible but always a doubtful commodity. So the world would require a plurality of beings capable of love. Love has to be freely given not something created by an external agency. It requires a world of free agents who will find themselves initially in various degrees of separation, but who will have the capacity to come together – and will show a tendency to do so.

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[31] John Leslie, *Value and Existence* (Oxford: Basil Blackwell, 1979).

[32] Cudworth says that God is love, "if by it be meant, eternal, self-originated, intellectual Love, or essential and substantial goodness, that having an infinite, overflowing fullness and fecundity dispenses itself uninvidiously, according to the best wisdom, sweetly governs all, without any force or violence… and reconciles the whole world into harmony." His final judgement is that "love in some rightly qualified sense, is God," *The True Intellectual System of the Universe* (London: Royston, 1678), p. 123 (the page number is misprinted 117 in the three British Library copies); ed. John Harrison (London: Thomas Tegg, 1845), vol. 1, p. 179. (The Harrison edition has a rich index and also J. L. von Mosheim's still-valuable notes.)

[33] See Peter Woit, *Not Even Wrong: The Failure of String Theory and the Continuing Challenge to Unify the Laws of Physics* (London: Cape, 2006), and the discussion by Philip Anderson in *The Times Higher Education Supplement,* August 25, 2006, pp. 22-23.

Such a world could not be created all at once A Hindu god with a taste for cows might think first of creating them, but a cow without an environment — gravity to hold it together, food to eat, the company of other cows, would be impossible. Our world has evolved to contain cows and then to contain human beings who can express their love and can imagine the divine love of which Cudworth talks.

We can explore this phenomenon. Is it all a kind of sham? Does love merely conceal self-interest? Is it simply driven by biology? Such questions suggest research projects open to us.

What is it that makes people on both sides of the debate so uneasy when such proposals are made? For one thing, any empirical research project with theological implications blurs the distinction which has been endemic in much of our thinking between the natural and the supernatural. Few people, as Anthony Kenny has recently pointed out, now really want to set out to disprove the existence of God. Rather, they think of themselves as devotes of naturalism, the doctrine that there is nothing outside nature, and then they interpret naturalism as physicalism, the thesis that what is described by the natural sciences is what there is, preferably physics.[34] Biology, which, as I said, keeps throwing up traces of issues about values, thus becomes the frontier of a certain kind of unease.

And when the line between the natural and the supernatural is said to be breached, we also become uneasy because such breaches so easily come to seem or to be absurd. An elderly priest once explained to me how the angels won football games for Notre Dame. When I asked what would happen if Notre Dame played Fordham, he assured me that that did not happen. Ruth Kelly, who has lately been the British "communities secretary" and the education minister, landed in controversy for suggesting that a Scottish football player should not cross himself on the pitch on the ground that it aroused enmity between Catholics and Protestants. He was actually given an official "caution" by the Scottish police. Strife on football pitches is a real threat, but Ms. Kelly might have contented herself with raising a wry smile by pointing that it seems unlikely that any god bets or is concerned with the outcomes of football games, and, anyway, we do not know what such an interest would bring about. It is well known to lovers of baseball that the god of perfection is a Chicago Cubs fan on the ground that Wrigley Field is the perfect place for the game and such a god must be present wherever perfection is to be found, but it is also well known that the Cubs usually lose.

Once we admit that values enter into the story, however, we do have to erase the line between the natural and the supernatural. In these terms we can

[34] Anthony Kenny, *What I Believe* (London: Continuum, 2006).

read the New Testament as a story about the coming Kingdom of God, a world in which what ought to happen is what does happen. Thus the New Testament miracles could be taken as precursors of change in which moral laws come to take precedence over the old order laws of the universe. Sometimes in the New Testament the hungry are fed with loaves and fishes, the thirsty have good wine to drink, the sick get well, and even the unfairly dead, like Lazarus, come to life again – or like Jesus himself turn out to never have been truly dead. Looking for such signs in our world would no longer be taken as moments of dark superstition, but they would have to be related to an understanding of what the good is and given a law-like form. Neither believers nor unbelievers might take kindly to this.

What all this suggests is that there are various ways of reading the world, that the world needs to be interpreted – as does the scripture of whatever religion one subscribes to – in such a way as to make an intelligible story. If, as Gregory of Nyssa urged, what we are confronted with are clusters of qualities which we must arrange in a way which makes sense and can ,as he thought, arrange in such a way as to make intelligible the handiwork of the God in whom he believed, then all of this makes sense. The notion that the world is to be read and has more than one reading goes back to Philo whose notions find echoes in the Fourth Gospel.

But that is also the view of contemporary physics. Fuel has been added to the impulses toward the idea of real multiple readings by some recent work of Stephen Hawking and Thomas Hertog. The implications of quantum theory and speculations about the origin of the physical universe lead to the view, indeed, that the history of the universe varies with the way we look at it. There may be infinitely many different histories to choose from, and the one which appeals to us may be determined by the observations we make of it.[35]

The notion that the world is, in some sense, a book to be read, seems to inspire the idea that the world has an author. Sir Arthur Eddington, who was convinced that reality is best understood as the expression of underlying mathematical structures, thought that there was a god who "mathematicises." Such notions are deeply puzzling, perhaps, but the divorce between any intelligible god and any nature we can believe in may not be final, though anyone who tries to bring them together again may well expect to excite the suspicions of both sides. One can avoid that by following Maritain's road. But there is a price to be paid for that, too.

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[35] See the account by Amanda Gefter, *New Scientist,* April 22, 2006, pp. 28-32.

Matter: From Evil to Subjectivity

Richard Feist

I. The Malaise of Modality

In everyday discourse we often say things like, "you must hand your paper in on time" or "it is possible that the mission will succeed." Such utterances heavily rely upon modal terms, for instance, "necessity," "contingency," and "possibility," and we employ modal terms without giving them much thought. This general complacency about such terms is not limited to ordinary discourse; the history of philosophy is full of the uncritical use of modalities. The single most famous critic of modal notions is without doubt W.V.O. Quine. Throughout his long intellectual career, Quine launched several serious attacks against modal terms.[1]

Generally speaking, there have been two types of attacks on the cavalier use of modalities. One stems as far back as Hume (and no doubt further into the complex systems of medieval logic) and is an empirically-based attack on the semantics of modality. Hume insisted that all our terms be, in some sense,

[1] A classic example of Quine's analysis of the problems with modal notions is in his "Two Dogmas of Empiricism," in *From a Logical Point of View: Nine Logico-philosophical Essays* (New York: Harper and Row, 1963). Quine's writings on modal terms have generated a voluminous reply, which I make no attempt to summarize here. However, a simple overview of modality (including a critique of Quine's views) can be found in Joseph Melia, *Modality* (Montreal & Kingston: McGill-Queen's University Press, 2003).

traceable back to experience.[2] Given that experience does not yield necessities, then to the flames with the *enfant terrible* "necessity" and all of its modal siblings that masquerade as ontological terms. Of course Hume's attack is within the context of a particular interpretation of the semantics of experience itself. What is found within experience is highly dependent on what one takes as constitutive of experience.[3] For instance, Hume's notion of "experience" would not include such an event as the "intuition of fundamental truths" as one finds in Aristotle's epistemological investigations.[4]

One might reply that Hume did accept necessity as applicable to the relations between ideas. This account of necessity among ideas is not the same as any kind of ontological necessity; that is, for Hume, necessity ultimately makes sense only within the context of language or as a misnomer for some kind of psychological feeling.[5] The point is that, empirically speaking, modality makes sense only within the context of language.

If one does not like building upon a highly disputable notion like "experience," one can embrace the second attack on modality, which concentrates on language. Because of this concentration on the proper functioning of language, it is not surprising that this second attack has a relatively recent origin – the early twentieth century.[6] This second, more technically-based attack, insists that all language must be extensional. This raises two questions. First, why should we insist on extensional language? And second, what is extensional language? I will look briefly at the second question.

Admittedly, analytic philosophers use the term "extensional language" quite often and yet rarely define it. "Extensional language" is a very difficult term to nail down – still, the following may help. A piece of language, or a discourse formation, can be classified as extensional when the interchanging

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[2] This is a version of Hume's insistence that *simple ideas* are derived from *simple impressions*. (*A Treatise of Human Nature,* ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1990), 2nd edition, p. 4. But the basic idea holds: that experience itself is the basis for ideas.

[3] Not all philosophers agree with the basis of experience upon which Hume constructs his philosophy. For example, Franz Brentano and Alfred North Whitehead are two thinkers that would disagree with Hume's starting position.

[4] See Aristotle's discussion in Book 1 (and especially Book II, chapter 19) of the *Posterior Analytics*. For a good overview of Aristotle's thinking concerning the foundations of experience, see C.C.W. Taylor, "Aristotle's Epistemology," in *Epistemology*, ed. S. Everson (Cambridge: Cambridge University Press, 1990).

[5] See Book I, Part III, Section XIV, "Of the Idea of Necessary Connection" in *A Treatise of Human Nature.*

[6] This is largely, though not solely, through the influence of Quine's work.

of any two of its co-referential terms does not alter the truth value of the embedding sentence. Consider the following sentence:

(1) The tallest man in Ottawa is taller than anyone else in Ottawa.

Clearly this is a tautology – or as one might say, it has *de dictu* modality.[7] It is a true sentence; however, there is no explicit term that expresses the modality. Nonetheless, this sentence can still be regarded as extensional. To see how, replace the term "The tallest man in Ottawa" with the term "Fred." For the sake of discussion, suppose that "Fred" refers to the individual who is in fact the tallest man in Ottawa. Thus, "The tallest man in Ottawa" and "Fred" are co-referential terms. If we exchange these terms, (1) becomes:

(2) Fred is taller than anyone else in Ottawa.

This sentence is also true. So the condition of preserving truth conditions under interchanging co-referential terms is satisfied – at least in this case. Let us now generalize and state that if the set of sentences, Q, with truth value, "true," remains true under the interchanging of "The tallest man in Ottawa" and "Fred" *salva veritate*, then Q is indeed an extensional discourse formation.

Now that we have some idea of what an extensional discourse formation should look like, let us return to the first question as to the importance of extensional discourse. There are numerous arguments for the importance of extensional discourse, but perhaps one of the strongest arguments is one of a logical nature. The point here is that when a language is extensional, we can know which sentences are derivable from which. Ultimately, this is a question of the logical links between sentences. For instance, the propositional calculus clearly illustrates the logical behaviour of the sentential connectives ("not," "and," "or" and "if…then"). The predicate calculus, turn, clearly indicates how the internal structure of sentences bears on their inferential relations.

In sum: we have well-understood, tried and true logical systems that reveal entailments relations among sentences. In essence, the ability to understand clearly what follows from what was thought to be of critical importance to doing serious philosophy.

Now, let us consider what happens when we explicitly bring in modal operators. Recall sentence (1) and let us explicitly write it as follows:

(1') It is necessary that the tallest man in Ottawa is taller than anyone else in Ottawa.

[7] With *de dictu* modality the modality applies to the entire proposition.

Something is different, (1') is not extensional in the sense that (1) is. For if we make the same substitution into (1'), we get (2'):

(2') It is necessary that Fred is taller than anyone else in Ottawa.

This, however, is false—since someone could be taller than Fred. The situation is nicely summed up as follows:

> …introducing terms expressing the modal notions into our language converts extensional contexts into non-extensional contexts; and according to many philosophers in the forties and fifties, that means that modal notions can have no place in serious philosophy. [One would think primarily of W.V.O. Quine's protests again modal logic here.]

Why are modal notions not part of serious philosophy? Because sentences containing modal notions cannot be accommodated by the various systems of first order logic. In sum:

> …philosophers who invoke these notions have no account of the inferential relations between the various modal claims they want to make. *They have no firm grasp of just what they are committed to in making a particular modal claim; and that, critics insisted, is just to say that they really do not understand what they are saying.*[8]

Now, one might counter, why not just construct a logic for modal inferential relations, just like it was done for sentential and predicate inferential relations? In other words, why not just construct a *modal* logic?

That is precisely what many sympathizers with modal claims did. The problem is that constructing modal logics became a cottage industry: eventually there were too many systems of modal logic. For instance, given two sentences containing modal operators, one internally consistent modal system declare them logically linked while another internally consistent modal system will declare the opposite. Now, which internally consistent modal logic system is correct? This plethora of conflicting, yet internally consistent modal systems played was ample grist for the anti-modalist's mill.

In sum: both the empiricist and the analytic philosopher presented serious concerns about modal terms and, in many ways, caused the retreat of the modal theorist. Without doubt most philosophers continued to nurse a private belief in the serious use of modals in philosophy but these two attacks left most believers speechless. But, this was about to change.

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[8] Michael J. Loux, *Metaphysics: A Contemporary Introduction* (New York: Routledge, 2002), 2nd edition, p. 180.

II. The New Worlds

Perhaps one of the most fanciful pictures of the universe has to be the "Many Worlds Interpretation of Quantum Mechanics."[9] This interpretation is certainly the most popular with science fiction artists, and arguably with the general public as well. The basic idea is that the formalism of Quantum Mechanics needs to be interpreted. However, some physicists, such as the late Richard Feynmann, were strongly against interpreting the formalism.

> Do not keep saying to yourself, if you can possibly avoid it, 'But how can it be like that?' because you will get 'down the drain,' into a blind alley from which nobody has yet escaped. Nobody knows how it can be like that.[10]

However, there has been much good work on the interpretation of Quantum Mechanics and so Feynmann's and Neumann's views are regarded as somewhat dated. In fact, Quantum Mechanics, shortly after its birth, was given a particular interpretation, which came to be known as the Copenhagen Interpretation.[11] The point is that there are many ways to interpret the formalism of scientific theories and so one must be extremely careful not to naively read a theory's underlying ontological presupposition straight out of its formalism. The continuing debate over how to interpret the basic equations of special relativity – now over a century since their publication – illustrates the difficulty of interpreting even very so-called simple pieces of scientific formalism.

But let us consider the Many Worlds Interpretation of Quantum Mechanics, which suggests that every time a specific kind of measurement is made on a particular kind of atomic system, the universe bifurcates. In sum, you get a bubbling of universes. As one commentator on the Many Worlds Interpretation writes:

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[9] The fundamental idea of the Many Worlds Interpretation was first presented by the physicist H. Everett in *'Relative State* Formulation of quantum mechanics', *Review of Modern Physics* 29, 1957, pp. 454-462. This idea has been developed in a variety of ways. Perhaps the most famous is that first offered by B.S. DeWitt in his "The Many-Universes Interpretation of Quantum Mechanics", in *Foundations of Quantum Mechanics* (New York: Academic Press, 1971). The Dewitt line will be the one used in this paper.

[10] Richard Feynman, *The Character of Physical Law* (Cambridge, Massachusetts: M.I.T. Press, 1965), p. 129.

[11] In many ways the term "Copenhagen Interpretation" is a misnomer. The term is a combination of a number of physicist's views on *how* to read the formalism of Quantum Theory. The most common aspect is of a underlying agnosticism concerning ontology.

> This universe is constantly splitting into a stupendous number of branches, all resulting from the measurement-like interactions between its myriads of components. Moreover, every quantum transition taking place on every star, in every galaxy, in every corner of the universe is splitting our local world into myriads of copies of itself.[12]

Still, one must keep in mind that the Many Worlds Interpretation is just that: an interpretation of the mathematics of the theory.[13] Moreover, judging by the products of currently working scientists, who rarely indulge in philosophical interpretations, it is not much accepted.[14] Second, judging by the products of currently working philosophers of science, who concentrate on philosophical interpretations, it is the favourite target for criticisms. The standard attacks on this interpretation range from the interpretation's internal consistency and philosophical coherency to the conflict it has with other physical theories. For instance, it presupposes an incredibly unique notion of causality: somehow very simple local actions immediately result in huge cosmic reproductions. That is, to account for a particular problem with measurement we have to accept that the universe somehow makes instantaneous copies of itself at the exact moment we make the measurement. However, it does show that even scientists are, at times, willing to entertain some wild types of ontological hypotheses to solve logical problems.

Now, why this discussion of a particular interpretation of Quantum Mechanics? It is interesting to note that around the same time that the Many Worlds Interpretation emerged, the modal believers held that they could solve the malaise of modality by a similar, multi-world approach. However, they did, as many philosophers tend to do, look back into their own tradition in order to find some sort of solution. What they drew upon was Leibniz's possible worlds. There may not be a causal mechanism for generating such worlds (which is likely God's work); however, these worlds are logically required. To declare a proposition is necessarily true is simply to quantify

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[12] R.I.G. Hughes, *The Structure and Interpretation of Quantum Mechanics* (Cambridge: Harvard University Press, 1989), p. 290.

[13] Admittedly, this is an overstatement, since some would argue that the Many Worlds Interpretation goes beyond a simple interpretation of the mathematics, since it drops any kind of wave-function collapse.

[14] Again, this could be an overstatement, since the proponents of quantum cosmology and quantum computing often embrace notions that resemble the views of the Many Worlds Interpretation. However, one must always keep in mind that even the "Many Worlds Interpretation" is not a single interpretation, but a genus of interpretations. Hence, a physicist who works in quantum computing and agrees with one species of the Many Worlds Interpretation may not agree with them all.

over worlds. Hence, "P is necessarily true" could be unpacked as "For any possible world, W, P is true in W." This provides an easy understanding of *de dictu* modalities. Indeed, one can go on to answer all types of questions concerning *de re* modalities as well.[15]

However, without going into such details, we have to ask: do all these possible worlds exist? What sense of existence are we using when we speak of something "being" or "existing" in a possible world? David Lewis, one of the founders of possible worlds semantics argues that these worlds do exist. Just like the many worlds interpretation of Quantum Mechanics, there a plethora of worlds is required to solve particular intellectual problems. Lewis writes:

> Why believe in a plurality of worlds? Because the hypothesis is serviceable, and that is a reason to think that it is true. The familiar analysis of necessity as truth in all possible worlds was only the beginning. In the last two decades philosophers have offered a great many more analyses that make reference to possible worlds, or to possible individuals that inhabit possible worlds. I find that record most impressive. I think it is clear that talk of *possibilia* has clarified questions in many parts of the philosophy of logic, of mind, of language, and of science – not to mention metaphysics itself. Even those who officially scoff often cannot resist the temptation to help themselves to this useful way of speaking.[16]

There is no question that Lewis is right that talk of possible worlds has proven highly useful.[17] But, of course, "usefulness" is not truth in the traditional sense of that term. Instead, it is a pragmatic use of the term "truth." Many philosophers seem to hold a more traditional notion of truth when they encounter Lewis' views on possible worlds. Lewis himself confesses that many times, when presenting his position, philosophers in the audience replied with "blank stares."[18]

There are many challenges to Lewis' system, Alvin Plantinga, for instance, has responded with a well-developed system of his own.[19] But, the question that we should go back to is, how did we end up with all this wild talk of possible worlds? How did we get here?

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[15] *De re* modalities apply within the proposition itself, i.e., to its parts.

[16] David Lewis, *On the Plurality of Worlds* (Oxford: Blackwell Press, 1986), p. 3.

[17] For an examination of the Many Worlds Interpretation of Quantum Mechanics and Lewis' ontology, see B. Skyrms, "Possible Worlds, Physics and Metaphysics," *Philosophical Studies* 30, 1976, pp. 323-332.

[18] David Lewis, *On the Plurality of Worlds*, p. 112.

[19] Alvin Plantinga, "Actualism and Possible Worlds," in *Metaphysics: Contemporary Readings*, ed. M. J. Loux (London and New York: Routledge, 2001), pp. 168-188.

III. Ontological Pruning?

Michel Foucault once remarked that he worried that at the end of the day, despite all his attempts to construct history in a new and non-Hegelian fashion, Hegel himself might be standing at the end of such a task, motionless and waiting.[20] In a similar way, Hume stands behind it all – driving the show as it were by remote control.

We have seen that Humean types of empirical epistemologies were responsible for one of the attacks on modality. Although Hume had numerous motivations, one was the desire to eradicate metaphysical essences. They simply could not be brought before the tribunal of the senses and so were ultimately unacceptable. In other words, there was a strong nominalistic drive to Hume's program. This nominalism has appeared quite strongly in possible worlds theories, especially that of David Lewis. Recall that a modal notion like necessity, is reduced to a set of possible worlds. These worlds consist solely of individuals; there are no "properties" per se and certainly no second order properties.[21]

As many philosophers have pointed out, this seems to violate some basic intuitions that we have about properties and propositions. In other words, bringing in all these notions of possible worlds may, in some sense, solve problems, such as "what does necessity mean?" but does possible worlds theory solve problems in an acceptable manner? After all, the problem of the relationship of the mind and body is easily "solved" say the eliminative materialists like Paul Churchland – there is no such thing as mind! – but that is not an acceptable solution for everyone. Properties and propositions are things that we "know" and "believe." They are things towards which we have attitudes. The question is, is the analysis of a property in terms of a set of possible worlds truly addressing the problem of the meaning of modality or is such an analysis simply bypassing the problem of the meaning of modality in favour of another issue? It appears that some aspect of subject change is occurring here.

So, this is the turning point, to *completely* get rid of essences is to embrace nominalism. However, this would then start down the path to possible worlds and end up with very counter-intuitive explanations of such regularly used expressions as "necessity" and "contingency." Perhaps we could say that underneath this turning point was a particular philosophy of nature – one with essences and one without.

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[20] Michel Foucault, *The Archeology of Knowledge*, tr. A. M. Sheridan Smith (New York: Pantheon Books, 1972), p. 235.

[21] Nonetheless, not all modal theories are nominalistic; Plantinga's view, for instance, is not.

But, many would argue, physical science jettisoned all talk of essences long ago. And, to employ a reasoning of which Quine would approve, science is simply the best game in town and all our ontological issues must be decided via the approach of science: the system's edge squares with experience and its internal nature strives for simplicity of law.[22] So, let's follow science and reject all talk of essences. Whatever happens philosophically after that, we just have to deal with it. There is no turning back. Or is there?

IV. Essences in Science

It is certainly the case that scientific investigations of the world began by using the notion of "essence." Aristotle adopted the Socratic search for definitions as a basis for all investigations and such a search had as its goal the linguistic articulation of an essence. This methodology was, more or less, used throughout science for centuries until more empirically-based criticisms eroded confidence in essences.[23]

However, the history of science is extremely complicated; it is not a single march towards the truth; the history of science is not a continuum of theories that are converging on truth. As Larry Lauden points out in a classic paper, the notion of a convergence on truth is useful because it is so vague.[24] One should keep in mind that many theories are proposed, tested and rejected and yet live to return another day in another form. Aristotle, for instance, discusses and rejects a particular version of evolution since it simply does not fit the facts – at least those facts of which he was aware.[25] Indeed, one can point out, as Lauden does, that many theories come and go only to return again. Plate tectonics is another example.

In the history of the philosophy of science, the twentieth century led the charge against essences, indeed, any kind of metaphysics in science. Now, just because metaphysics is banned from science, that is not tantamount to a ban on metaphysics *per se*. For instance, Pierre Duhem and Hans Reichenbach both agree that science does not – indeed, absolutely should not – attempt to include essences; science should stick to discussing observables.[26] This examination of the observables is the key to good science.

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[22] Quine, "Two Dogmas of Empiricism," pp. 44-45.

[23] This is a huge and sweeping generalization, but does, I maintain, capture the flow of the movement away from essences.

[24] Larry Lauden, "A Confutation of Convergent Realism," in *The Philosophy of Science*, eds. R. Boyd, P. Gasper and J. D. Trout (Cambridge: The MIT Press).

[25] Aristotle, *Metaphysics*, Book II, Chapter 8.

[26] For Duhem, see *The Aim and Structure of Physical Theory*, tr. Philip P. Wiener (New York: Atheneum, 1977). For Reichenbach, see *The Philosophy of Space and Time*, tr. M. Riechenbach and John Freund (New York: Dover Publications, 1958).

Where Duhem and Reichenbach part company is over metaphysics itself. Duhem still holds that not only is metaphysics possible, it is in fact a superior science to physics. Duhem explains:

> Now these two questions – Does there exist a material reality distinct from sensible appearances? and What is the nature of this reality? – do not have their source in experimental method, which is acquainted only with the sensible appearances and can discover nothing beyond them. The resolution of these questions transcends the methods used by physics; it is the object of metaphysics.
>
> Therefore, *if the aim of physical theories is to explain experimental laws, theoretical physics is not an autonomous science; it is subordinate to metaphysics.*[27]

Reichenbach agrees that there is a sense of meaning outside that of science, by which Reichenbach breaks with standard positivist thought. However, Reichenbach insists that the path towards any epistemology must first pass through natural science.[28] Reichenbach insists that there is a sense in which metaphysical considerations do influence one's scientific judgments – the topological structure of space in itself for instance, is influenced by the metaphysical judgment one makes concerning causality. If one assumes "normal causality," by which Reichenbach means the standard causality accepted by working scientists, one then has the topological structure associated with relativity theory. If one assumes "non-standard causality," by which Reichenbach means the "pre-established harmony" propounded by Leibniz, then one can preserve the Euclidean topology associated with everyday experience.[29] According to Reichenbach, any conflict between science and metaphysics should be decided in favour of science.

But there is another, perhaps more telling, connection between Duhem and Reichenbach. When each uses the term "science," each is really speaking about "physics." Neither thinker could be called a philosopher of biology or chemistry. More generally, when philosophers of science do write about science, they are writing about the philosophy of physics. More precisely, they are examining the philosophical foundations of the historical appearances of theories in physics.[30]

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[27] Duhem, *The Aim and Structure of Physical Theory,* p. 10. (Duhem's italics.)
[28] Reichenbach, *The Philosophy of Space and Time*, p. 110.
[29] *Ibid*., Section 12, "Spaces with Non-Euclidean Topological Properties."
[30] This has changed greatly since there are simply so many more areas of science now being philosophically examined. This is even reaching the teaching of the philosophy of science. A relatively recent undergraduate text book on the philosophy of science approaches the discipline from the perspective of immunology. (Paul Klee, *Introduction*

If one studies the history of physics, one certainly finds that physicists have been leery about essences. Descartes, for instance, regarded the essence of matter to simply be extension. Boyle, Locke and Newton regarded the true qualities of bodies, the inherent qualities, to simply be what is commonly called primary qualities. Differences between bodies must ultimately be traced to differences in primary qualities. But these primary qualities, in sum, are passive. The only place for activity is in consciousness – that of our minds and of God. Nature itself, as it was often said, was dead.

Were one to carefully study the history of chemistry one would get a different picture. Brian Ellis makes exactly this point in his recent and interesting book, *The Philosophy of Nature: A Guide to the New Essentialism*.[31] Ellis notes that he was in fact a Duhemian in many ways. After all, a point mass is not in any way achieved via some kind of stripping argument. Peeling away the inessential properties will not, ultimately, give us the essential properties of anything. Indeed, as is often pointed out, imagination plays a huge role in such accounts as Newtonian thought. This imagination is often rife with metaphysical ideas, which is grist to Duhem's mill. Despite the latent acceptance of metaphysical elements in physics, Ellis turns towards another branch of science. Ellis remarks:

> The essentialist theory that I now accept derives mainly from taking scientific theories about the underlying causes of things much more seriously, and refocusing on areas of science where such theories abound – particularly chemistry.[32]

Chemistry, that is, the modern chemical theoretical picture, is loaded with all kinds of causal claims concerning chemical reactions – claims that Duhem would have regarded as metaphysical. The modern chemical theoretical picture, more accurately described as a family of chemical-based theories, are:

> not abstract model theories, like, for example, those that are commonly found in space-time physics. In relativity theory and Newtonian mechanics, the Duhemian account seems to be not too far from the truth, for the aim of physics in these areas is, very plausibly, just to provide a framework for representing objects in space and time, systematic ways of deriving the laws of motion for such objects, and ways of making predictions based on these laws.

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to the Philosophy of Science: Cutting Nature at the Seams (Oxford: Oxford University Press, 1997).

[31] Brian Ellis, *The Philosophy of Nature: A Guide to the New Essentialism* (Kingston and Montreal: McGill-Queen's University Press, 2002).

[32] *Ibid.*, p. 24.

> However, the chemical theories are not even plausibly describable as abstract model theories, as the dynamics of Newton and Einstein were, because nearly everyone who accepts them believes that the theoretical entities of these theories – the atoms and molecules – all exist, really have the properties ascribed to them, and actually take part in interactive processes like those described.[33]

V. Matter as Evil and Matter as Subjectivity

Today it certainly seems odd to call matter "evil" or attribute subjectivity to it. Typically these are attributes that we limit to humans. Of course, the modern environmental movement, in the incarnation referred to as "deep ecology" often speaks of the world of non-human animals as "objects of moral standing" or "bearers of intrinsic value." So, we have what we could call a modern discourse formation that does indeed speak somewhat in terms of evil and subjectivity outside the human domain.

Matter has long been a problem for philosophers. One can think of Aristotle's struggles with it. Aristotle's thoughts here are quite simple in one sense, yet perplexing in another. Suppose one has a lump of copper. One can shape it into a bowl, a cup, then perhaps a statue. So, the lump of copper has taken on three successive forms. But, consider the copper itself. That, too, has a form that makes that particular lump of matter a lump of copper and not something else. So, what is the ultimate matter that takes on the copper form and then the other forms? This ultimate, or prime matter, Aristotle defines as "…that which in itself is neither a something nor a quantity nor any of those other things by which being is determined."[34] Negatively speaking, this is not difficult to understand: matter simply is not characterized in any way. I suppose that this, too, is a problem, since Aristotle insists that all characterizations of matter are only accidental characterizations of it. So, even to say that "matter is not characterized in any way" is, in fact, to assert a property of it – which is precisely what one cannot do. Positively speaking, matter is not something to which we can associate any kind of image or representation. This, however, is not a problem *per se*, since there are many knowable things for which no corresponding image exists, such as the chiliagon that Descartes discusses in his *Meditations*.

However, a triangle would be made of what Aristotle would call "intelligible matter," matter that could be known but imperceptible to the senses. The lump of copper mentioned above would be sensible matter. But again, what about *completely* essence-less matter, this prime matter? Does it exist? This much is for sure: Aristotle epistemologically declares that

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[33] *Ibid.*, p. 25.
[34] Aristotle, *Metaphysics*, 7.3.1029a20.

"…matter is unknowable in itself."[35] The medieval tradition certainly interpreted him as ontologically declaring that prime matter does not exist. However, there is an ongoing debate as to whether Aristotle himself ruled out the existence of prime matter. My point here is that matter was an extremely important concept in Aristotle's philosophy but he was unsure as to what to do with it. It remains, in a sense, the ultimate other – something sitting just outside the limits of any possible human experience.

This view that matter was outside the limits of human experience also turns up in the thought of Plotinus. Plotinus' relationship to Aristotle and Plato is a matter of much debate – beyond the scope of my paper here. But, suffice it to say that matter also serves as a kind of limiting concept and it is not entirely clear as to whether or not matter actually exists in Plotinus metaphysics. He certainly says that matter is "non-being" so that matter cannot exist in the way, say, a hat or a desk does, but that is not to say that matter is devoid of all existence in any sense of that term. But, I wish to pass over the exact nature of the existence of matter in Plotinus. What is interesting here is that matter has begun to take back some characteristics in Plotinus – he refers to matter as evil and as the source of evil in the soul. This, of course, leads immediately to the problem of the origin of matter. The One is, via emanation, the source of everything. The One would then have to be the source of matter and so, the ultimate source of evil. This, too, I shall pass over.

What I find interesting is that matter not only has a characteristic, but is also a causal agent. For, again, evil presents a problem for Plotinus' metaphysics of soul. What is interesting is that the seeds of subjectivism in matter can be found in Plotinus's notion of how the soul becomes evil via its interaction with matter. Plotinus writes:

> Matter is therefore both cause of weakness in the soul and cause of sin. It is therefore itself antecedently evil and primary evil. For even if the soul, by being subject to some affection, herself generated matter, and if the soul then shared in matter and became evil, matter is still the cause of evil by its presence.[36]

So, matter is not inert since it is, in a particular sense, the cause of evil. Plotinus thinks that it is a necessary cause of evil, but not a sufficient cause.

Now, this notion of matter as having any kind of essence, as we have seen, was eclipsed shortly after the middle ages in the scientific revolution. We also saw that the rise of physics as the dominant scientific discipline lead to

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[35] *Ibid.*, 7.9.1036a8.
[36] Plotinus, *Enneads*, I.8.14.49-54.

burying the notion of matter having any kind of essence. But, as we have just seen with Aristotle and Plotinus, it is difficult to strip matter of all its determinations.

VI. Weyl and the "Agens Theory" of Matter

In traditional or classical physics, matter became the object of geometrical treatment. In this matter remains as something quite other than anything else, except perhaps with the structure of space-time. Both matter and space-time were seen as something simply "there," simply inert. Even relativity theory tended to treat matter as inert, in a certain sense. But things began to change, at least in the mind of Hermann Weyl, around 1920.

Without going into Weyl's biographical details, suffice it to say that next to Albert Einstein, Weyl was the greatest contributor to the theory of relativity. Even some ideas that Weyl had concerning the development of the theory, ideas which Einstein rejected, were eventually regarded as entirely worthy of serious scientific investigation.

An important event occurred around 1920, the development of quantum mechanics – whereby the underlying picture of matter begins to change. Matter no longer was a simple object amenable to deterministic and geometric treatment. That is, matter was no longer seen as strictly governed by classical, deterministic laws. Statistical analysis was required to accurately treat matter. Instead of particular results concerning the behaviour of matter, scientists began to accept that one must speak in terms of "statistically significant trends."

The next concept that came into play is that of the "developing continuum." In other words, Weyl held that physics was indeed pointing towards a philosophy of nature that highly resembles what we today would deem "process metaphysics." Regions of space-time must not be thought of as "entirely present, completed once and for all." Instead, they are developing constantly and will only reach their final development at the end of all time. This notion of a developing space-time is notoriously difficult to square with standard accounts of efficient causality since they have, so to speak, teleological overtones. Weyl writes:

> Indeed, the future will act on and on upon the present and it will determine the present more and more precisely; the past is not finished. Thus the fixed pressure of natural causality disappears and there remains, irrespective of the validity of the natural laws, a space for autonomous and causally absolutely

> independent decisions; I consider the elementary quanta of matter to be the place of these decisions.[37]

For Weyl, the gravitational fields described by the field-equations of general relativity, then, are results of the inner activity – the subjectivity of matter. This really is the result of the problem of an extended object in field physics. Usually in describing objects in physics, the physicists were concerning solely with the object's behaviour; the inside was ignored. But after the rise of the field theories, the problem of the "insides" of objects became increasingly acute. Weyl spoke about this in his 1921 paper, "Feld und Materie (Field and Matter)."

Technical details aside, the problem is quite simply stated: within the context of field-equations, one is limited to speaking solely about the behaviour of certain properties and a very limited notion – if at all – of their internal properties. In sum, the "insides" of objects just dropped out of the picture altogether. Weyl came to view the field simply as an inert transmitter of effects. Matter, he held, is "behind the field" and determines the effects transmitted by the field. Matter, as Weyl writes, is an agens (from the Latin term, "agree," "to act" or "to move").[38]

There are many more places in Weyl's writings where he explicity compares the human ego and that of the inner "ego of nature." Nature, in this sense, has become very much alive. The point is that even physics, for a while, lead in the direction of a particular philosophy of nature and held matter as something that was not inert.

VII. Summary and Conclusions

Briefly put, the drive to eradicate essences from the world, to construct a philosophy of nature that does without them, played a key role in what I called the malaise of modality and pushed much thinking in the direction of embracing possible worlds semantics as a solution to the malaise. I also stressed that the history of physics substantially embraces this drive to eradicate essences. But, the history of physics, as I suggested, is a very complex object and should not be simplified by equating it with the anti-metaphysical interpretations of it. The same goes for the history of science; it too, is a complex object and it should not be equated with a subset of the

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[37] Hermann Weyl, Das Verhältnis der kausalen zur statistischen Betrachtungsweise in der Physik. Schweizerische Medizinische Wochenzeitschrift, 50 (1920): 737-741.[GA 38: II, 113-122] This quotation is GA, p.121—my translation.

[38] Weyl, 1921a, p. 254. "Ein die FeldzustÄande verursachenden Agens." Not surprisingly, the term "agens" is borrowed from Leibniz, a considerable philosophical influence on scientists of this time.

history of physics. This, of course, makes the important history of chemistry and biology irrelevant.

Matter, as I have stressed, is simply something that continues to haunt thought. In a sense, it resists the attempts to strip it. When it is stripped in a system, eventually properties accrue to it in other systems. As we have seen matter went from an indeterminate nothing to something evil and something possessing subjectivity.

Now we might conclude from this that science, in some way, simply cannot work without essences. That the history of science just keeps pushing us back in that direction. That indeed, might be the case. However, the future history of science may say something quite different. And here I suggest that this might indeed be on the horizon. Of course this is only a suggestion – perhaps a "wait and see" kind of comment. If one examines Quantum Mechanics, which is pretty much the most developed and promising part of modern physics, and if one also holds to unity of science theme – which is not without controversy, then one might say something like the following.

Without going into technical details, it seems that properties are possessed in an odd way in Quantum Mechanics. Typically we ask that an object O bears property P. O is a distinct object and so on. Some properties are relational – father of, for instance. But, we clearly hold that some monadic. Quantum Mechanics points to a more relational, holistic view of properties. No properties are monadic. In this sense, nothing has an essence – or if it did, it would be the entire universe.

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The Recent Travails of Hylomorphism

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Introduction

I would like to open with a personal note. I come to philosophy from a background in the environmental sciences. As a result, my exploration of Thomism and Aristotelianism is coloured by serious concern over technology. And so, the following excursions into societal, technological and historical matters will push the envelope of philosophical reflection.

This paper could have been limited to painting the picture of the travails of hylomorphism in the scholarly community, going from the mid-nineteenth century to the present time. Such was my original intention. We will do some of this, but we will also explore a related theme: the relative absence of hylomorphism in our scientific and technological development, and the consequences of this absence.

I. Hylomorphism in the Nineteenth and Early Twentieth Centuries

Matter and form, act and potency. We are back to the fundamental principles of substance in the Aristotelian universe: substantial form is to prime matter as act is to potency. Forms are not infused from above, but rather educed from the potency of prime matter. This occurs through the action of a sufficient agent possessing the perfection of the new form, acting in substances properly disposed for the new form. And the parts of a substance are not substances, but they exist in a kind of potency termed virtual presence, or presence by powers.

What of this ancient doctrine at the end of the nineteenth century and into the twentieth – the triumphal age of atomic chemistry and physics? Certainly, the hylomorphic doctrine had consistently faced opposition from many quarters. The Aristotelian and Thomistic notion of substance had been challenged by modern science ever since Bacon, Descartes and Newton. The trend continued in 1876 with Félix Frédault's *Forme et matière,* which furnished a lively condemnation of Aristotelian hylomorphism.[1] Frédault was confident in the newly-acquired knowledge of his time regarding the atomic nature of matter. He argued against the traditional doctrines of hylomorphism and substantial unity, and in favour of the substantial existence of matter in its own right. The travails of hylomorphism continued apace.

In 1879, Pope Leo XIII issued the encyclical *Aeterni Patris*, enjoining Catholic scholars to embrace St. Thomas in no uncertain terms. The Pope's concern included the physical sciences (we will return to Pope Leo's encyclical below.) In 1892, he penned a particularly warm letter of introduction for the Sulpician father Albert Farges' *Matière et forme en présence des sciences modernes.* This work reached a fifth edition in 1900 as part of an eight-part course of philosophy whose stated aim was to "vulgariser les théories d'Aristote et de saint Thomas et leur accord avec les sciences."[2]

The end of the nineteenth century also saw the foundation of the *Revue Thomiste* and a number of other Catholic scholarly journals. Their express purpose was to give voice to reflections on scientific scholarship in the light of Aquinas. A wealth of such activity was indeed documented in the *Revue Thomiste,* in the journals spawned at Louvain, and in the American journals that would emerge in the following decades.

In our exploration of the travails of hylomorphism, Louvain's Institut de Philosophie deserves a tome to itself. In this house of study created by order of Leo XIII, Cardinal Mercier, Chanoine Nys, and many others (including the young Charles De Koninck) studied the physical and biological sciences in the explicit light of Thomistic metaphysics and philosophy of nature.[3] No matter that Louvain was destroyed in both World Wars – she twice rose from the ashes to pursue her vocation.

The return to Thomas was re-affirmed by Pius X in 1914 and then by Benedict XV in 1916, who promulgated the "24 theses." In 1917, Canon Law incorporated the following text: "The study of philosophy and theology and the teaching of these sciences to their students must be accurately carried out

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[1] Félix Frédault, *Forme et matière* (Paris: Émile Vaton, 1876).

[2] Albert Farges, *Matière et forme en présence des sciences modernes* (Paris: Berche et Tralins, 1900), 5th edition. The quote is taken from the subtitle.

[3] Father Lawrence Dewan holds that much of what we might call philosophy of nature in fact belongs to metaphysics – including the hylomorphic doctrine.

by Professors (in seminaries, etc.) according to the arguments, doctrine, and principles of S. Thomas which they are inviolately to hold."[4]

II. Jacques Maritain's Contribution

L'entre-deux-guerres – the 1920s and 1930s – is where we rejoin Jacques Maritain. In his wide-ranging contribution to philosophy, he did not neglect the relations of philosophy and experimental science, including the topic of hylomorphism. These questions took up the first part of his magnum opus, *Distinguer pour unir, ou les degrés du savoir* (original French text in 1932; an English translation acceptable to Maritain appeared in 1959, published by Scribner's, New York). The same issues were also developed in his *Philosophie de la nature – Essai critique sur ses frontières et son objet*.[5]

Maritain desired to maintain a vital distinction between philosophy and experimental science. He developed a firm position on their distinct levels of intelligibility. Philosophy was a dianoetic science – a knowledge of essences, while experimental science was a perinoetic science – a science not of essences, but of phenomena. Maritain held that since hylomorphism was a dianoetic kind of knowledge, what kind of reception could it expect from the scientific community? How could it be made accessible to a scientific train of thought?

In this firm position, might he not have been excessively critical of fellow scholars' attempts at making hylomorphism more accessible to a wider, less philosophical audience? In other words, did he not set the bar too high regarding reflection on hylomorphism?

One particular case might serve to illustrate this situation. In 1924, Father Pedro Descoqs' *Essai Critique sur l'hylémorphisme* was published by Gabriel Beauchesne in Paris. This was a comprehensive attempt at affirming the ongoing validity of hylomorphism in the light of modern science. Descoqs was engaged in an ongoing polemic with Augustin Périer, among others, in *La Revue de philosophie*. Périer's own *Matière et forme: quelques objections contre l'aristotélisme ancien et moderne* had just been published in 1923 by Geuthner. In his preface, Périer took particular issue with Farges' earlier condemnation of those whose "contempt or laughter dispensed them of intelligence" on the matter of Aristotelian hylomorphism (my translation from the Avant-Propos). All three of these works had received the Imprimatur.

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[4] Codex of Canon Law, 1917, Canon 1366, s.2, as per p. xviii, Vol.1, *Summa Theologica* of St. Thomas Aquinas (Notre Dame: Christian Classics/Ave Maria Press, 1981). Reprint of the Benzinger Brothers edition of 1948.

[5] See Jacques Maritain, *Philosophie de la nature – Essai critique sur ses frontères et son objet* (Paris: Téqui, 2nd edition, 1935).

In his work, Father Descoqs took great pains to point out that philosophical principles cannot depend on scientific proof. And yet Maritain dismissed the attempt on the grounds that Descoqs did not sufficiently abstract philosophical meaning from the scientific facts.

> C'est une illusion de croire qu'en faisant appel à des faits scientifiques sans les assumer dans une lumière philosophique on pourra dirimer un débat philosophique. C'est là, me semble-t-il, l'erreur du Père Descoqs dans son livre sur l'hylémorphisme. Il a recueilli avec une érudition très méritoire un grand nombre de faits scientifiques, mais de ces faits tels quels il a voulu tirer des conclusions philosophiques. Les faits scientifiques bruts ne disent rien sur la question de la matière et de la forme…il n'est pas étonnant que l'enquête du P. Descoqs débouche sur des résultants décevants.[6]

Thus, an entire work – the fruit of decades of study and teaching – was summarily executed.

One might be tempted to ask: is this a reasonable approach to a fellow Thomist in a world increasingly hostile to Thomistic principles? Was this typical of Maritain's approach?[7] In his defence, Maritain was committed to the highest standard of quality. He had no idea of what the coming decades would hold in terms of the loss of institutions and resources dedicated to Thomism.

Maritain did not appear to take a significant interest in subsequent developments on hylomorphism. His discouragement regarding the future of hylomorphism seems to be shared by Etienne Gilson in a letter to Maritain, in 1971.[8]

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[6] *Ibid.,* pp. 136-137.

[7] In the 1930's, Peter Hoenen produced a series of studies on the philosophy of inorganic matter. Some of Hoenen's work is critically commented on in Maritain's *Distinguish to Unite or The Degrees of Knowledge*, tr. from the fourth French edition under the supervision of Gerald B. Phelan (London: Geoffrey Bles, 1959), pp. 42-43.

[8] "What separates us most irreparably from (modern science) [insertion by L. Dewan] is the Aristotelian (and common sense) notion of Substantial Form … Descartes rid nature of it. They understand nothing anymore since they forgot Aristotle's great saying that "there is no part of an animal that is purely material or purely immaterial". It is not the word "philosophy," it is the word "nature" which separates us from our contemporaries. Since I do not have any hope of convincing them of the truth (which yet is evident) of hylomorphism, I do not believe it is possible to propose our hypothesis to them as scientifically valid." (as quoted by Fr. Lawrence Dewan in his paper, "The Importance of Substance," first presented at the Maritain Summer Institute, University of Notre Dame, in 1998).

III. Other Developments in the XXth Century

A variety of other views on science and philosophy developed among Thomists in the twentieth century. Charles De Koninck and the scholars at the Université Laval (Simard, Kocourec) did not see the break between science and philosophy in the same light as Maritain. Father William Humbert Kane and his team – including Benedict Ashley, Nogar, and others – formed an academy in 1950 at the Albertus Magnus Lyceum near Chicago. Known as the River Forest School, this fruitful association would last until the 1960's. This school was based on a very positive approach towards the relations of philosophy and the experimental sciences. High school and university curricula were developed that integrated an Aristotelian philosophy of nature with contemporary science. Vincent E. Smith also showed significant leadership in the 1950's and 1960's. His tomes on philosophy and physics, and the series of studies he edited at St. John's University in New York expounded the compatibility of Thomism and modern science, including the case of hylomorphism.

A similar positive approach is shared by Father William Wallace: "No inconsistency need be involved…in invoking both an essential composition and a structural composition in explaining the properties of bodies."[9] Father Wallace's summative work, *The Modelling of Nature* (1996, Catholic University Press) presents a unified vision of the philosophy of nature, the philosophy of science and scientific facts.

In the French tradition, F.-J. Thonnard provided a comprehensive overview of Thomistic philosophy and science up to 1950.[10] Jean Daujat demonstrated the compatibility of Thomism and modern nuclear physics.[11] P.B. Grenet provided an integration of biological evolution and Thomism.[12] And Georges Salet provided an answer to Jacques Monod's influential *Le hasard et la nécessité*.[13]

The sixties, seventies and eighties saw a precipitous decline of interest in hylomorphism. In this context, the American Catholic Philosophical Association, the Aristotelian Society, the Society for Thomistic Natural Philosophy, and the various Maritain Associations worldwide, as well as similar organisations in Europe and in the Latin countries have all served as

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[9] William Wallace, "Hylomorphism," *New Catholic Encyclopedia*, 1967, Vol. 7, p. 284.
[10] F.-J. Thonnard, *Précis de philosophie en accord avec la science moderne* (Paris: Desclée, 1950).
[11] Jean Daujat, *Physique moderne et philosophie traditionnelle* (Paris: Desclée, 1958).
[12] P.B. Grenet, *Les 24 thèses thomistes (de l'évolution à* l'existence) (Paris: Téqui, 1962).
[13] Georges Salet, *Hasard et Certitude* (Paris: Éditions Scientifiques Saint-Edme, 1972).

vital recipients for the ancient wisdom. The history of their work should one day be written.

Recently, Thomism has borne more hylomorphic fruit with Joseph Bobik's *Aquinas on Matter, Form and the Elements: A Translation and Interpretation of the De Principiis Naturae and the De Mixtione Elementorum of St. Thomas Aquinas* (University of Notre Dame Press, 1998). *The Thomist, The Modern Schoolman,* and other specialized journals continue to publish hylomorphic-friendly articles. For example, see Christopher Decaen's recent article in the *Thomist*, vol. 64 (2000), "Elemental Virtual Presence in St. Thomas," with a comprehensive English-speaking bibliography on the subjects of hylomorphism and presence by powers since the 1930's.[14]

IV. The Damaging Role of Conflict?

Disagreement among Aristotelians and Thomists may have worked against the dissemination and maintenance of hylomorphism among the scientific community of the middle and late twentieth century.

For example, in 1984, Patrick Chalmel published an abridged version of his doctoral dissertation completed at the Pontifical University of St. Thomas Aquinas, under the title of *Biologie Actuelle et Philosophie Thomiste*.[15] His work included a preface by the eminent French biologist Pierre-Paul Grassé. Chalmel affirmed the compatibility of modern biology – with its basic postulates of the material origin of life, evolution, and the cybernetic nature of living organisms - with Thomistic philosophical principles.

Chalmel's work was criticized in the *Revue Thomiste* of 1986.[16] The reviewer held that Chalmel had misunderstood the notion of "virtus" and that he had erroneously reduced substantial form to the structure of living beings. This criticism may have been excessively harsh. Chalmel had in fact mapped out and furnished a valuable, in-depth discussion on the compatibility of modern biology and Thomistic philosophy.

A more positive review might have promoted the dissemination of Thomistic views in the critical ongoing debate on bioethics. The 1980s and 1990s saw the introduction of groundbreaking technologies in assisted human

[14] These later works, along with those listed in previous footnotes, are also part of the extensive bibliography complied by Michael Storck for his doctoral dissertation "St. Thomas Aquinas on the Presence of the Elements in Living Substances," completed in 2004 at the Catholic University of America.

[15] See Patrick Chamel, *Biologie Actuelle et Philosophie Thomiste* (Paris: Charles Téqui, 1984).

[16] Bernard Hubert, "Patrick Chalmel, *Biologie actuelle et philosophie thomiste, Essai de Philosophie*," book review in *Revue thomiste*, Tome LXXXVI, janvier-mars 1986, p. 167.

reproduction, in opposition to traditional notions of human nature and human dignity. If they had been recognized by the Thomist community, Chalmel's valid developments might have been fruitfully drawn out in the defence of traditional Church positions.

The above questions and comments may reflect a fundamental misunderstanding of Maritain and of his legacy. In any case, the fact remains that over the past century, the advocates of substantial hylomorphic unity have faced opposition from within their own scholarly community. This could only add to the increasing distance between hylomorphists and most scholars active in the physical and biological sciences.

Let us now consider a more general question: could the relative absence of hylomorphism in western scholarship have led to more than philosophical consequences?

V. Unnatural Technology: Wherefrom?

The twentieth century has spawned a wide variety of unnatural technologies. These appear to be the result of our growing ability to reduce substantial wholes into parts, and then to reconstruct them into artificial wholes. We can break natural materials down to the molecular and atomic level, and reconfigure them into a wide variety of synthetic materials. We have also acquired the ability to generate and transmit a wide variety of artificial electromagnetic signals.

Much of this technology has turned out to be hostile to the substantial bodily unity of human beings and all living things. We have surrounded ourselves with toxic chemicals and hazardous radiation, all of this leading to ecosystem instability and widespread illness.[17]

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[17] Among these widely-accepted yet destructive technologies, let us mention only three for the sake of brevity: first, mainline cancer therapies, which consist of carcinogenic radiation and chemotherapy; second, our modern food processing technologies, which have successfully removed the very expectation of substantial unity from the dinner table; third – and this is an example which will surprise many – our electrical and telecommunications technologies. An entire chapter of history might be written on the West's ill-advised embrace of electrical technology, beginning at the end of the nineteenth century.

The Eastern Bloc and Europe developed a different approach to this area of research and medicine. Their electromagnetic exposure standards are designed to prevent whole-body symptoms. They reflect a robust conception of the substantial unity of living beings, as opposed to North American standards, which are based on a reductionistic approach that focuses on a single physical effect: heat. Russia, China, Poland, Italy, Belgium, Switzerland, Salzburg in Austria, etc., have all adopted radiofrequency and electrical exposure standards 100 to 1,000 times more stringent than those in place in the UK, the United States, and Canada.

Who is not aghast at the momentum enjoyed by toxic technologies, and at society's eagerness to adopt new technology while remaining ignorant of its dangers? In this respect, scientists, educators and legislators have much to reproach themselves. A simplistic condemnation of moral weakness in at the prospect of financial gain does not serve as an explanation. The roots of our technological development must be examined – including its formative philosophical environment.

My question is, "what of the philosophers?" We have just seen that during the 1920's and 1930's, while organic chemistry, nuclear physics and radio technology were in a red-hot period of development, leading Thomists were arguing over finer points of epistemology. What were the consequences of this mutual isolation?

The lack of a robust doctrine of substantial unity in science – such as would have been provided by hylomorphism – may have led to our unnatural technologies. Instead of focusing on the inherent unity of living organisms, twentieth century science embraced reductionism. We have generated miraculous pharmaceuticals by manipulating their fundamental molecular structure. And the human being is increasingly being considered as a genetically manipulable, highly complex machine. But these reductionistic technologies have not given us harmony with natural living wholes. Degenerative diseases continue to emerge in new forms, and the environmental crisis looms over us.

The Eastern standards were developed in the 1950's, just as Thomism was about to begin its decline in the West. The irony is palpable. Over the past century, we have experienced an epidemic growth of degenerative and reproductive diseases of all types. Soviet-era research clearly shows that these diseases are encouraged by ill-managed artificial electromagnetic emissions. And we wonder at our astronomical health expenses. For a comprehensive treatment of these questions, see Jean-Pierre Lentin's *Ces ondes qui soignent, ces ondes qui tuent* (Paris: 2001, Albin Michel).

It would appear that the last two decades of the nineteenth century – just after *Aeterni Patris* – were decisive for the West. The medical effects of electricity were being investigated, but this work was suppressed by the reorganisation of mainline Western medicine according to the chemical paradigm. In addition, the discovery of radioactivity attracted most biophysicists away from bioelectricity. As a result, electrical medicine was virtually abandoned. The work of documenting these vital decades is being done by historians of science, including the Institute for the History and Philosophy of Science and Technology at the University of Toronto, headed up by our conference's keynote speaker, Dr. Paul Thompson. See in particular the paper by Vivien Hamilton, Doctoral candidate at IHPST-UT: "*The Curative Powers of Electricity: Appealing to Public Authority in Victorian Canada,*" presented on Tuesday, May 30, 2006, at the Canadian Society for History and Philosophy of Science, York University, Toronto, Canada.

VI. The Role of the Church

In the search for a scapegoat, "traditional" Western religion has been blamed for our environmental and health crises. We are seeing a widescale return to animism, pantheism, and the adoption of Eastern forms of religion. In this context, and in the context of our scholarly tradition, what of Catholicism?

What is the Church's role in this environmental and health crisis? Some say that she has exacerbated it through her irresponsible answer to the instruction in the Book of Genesis, to "go forth and multiply, and subdue the Earth." She is particularly criticized for her dogged opposition to artificial contraception, abortion, and embryonic cloning. She is seen to be partly to blame for global overpopulation, the AIDS crisis, and the lack of progress in finding cures to many diseases. But let us take a more historical view on the subject.

What has the Church been saying about scholarship and science? Ever since the thirteenth century, the Popes have repeatedly called scholars back to Thomas Aquinas. This means a call back to Aristotle's hylomorphic notion of substantial unity. (Aristotle himself considered hylomorphism a summit of difficulty: this might well explain the need for regular encouragement.)

In his encyclical *Aeterni Patris*, issued in 1879, Pope Leo XIII affirmed that Thomas' thought could illuminate and guide the physical sciences:

> Hence, also, the physical sciences, which now are held in so much repute, and everywhere draw to themselves a singular admiration, because of the many wonderful discoveries made in them, would not only take no harm from a restoration of the philosophy of the ancients, but would derive great protection from it. For the fruitful exercise and increase of these sciences it is not enough that we consider facts and contemplate Nature. When the facts are well known we must rise higher, and give our thoughts with great care to understanding the nature of corporeal things, as well as to the investigation of the laws which they obey, and of the principles from which spring their order, their unity in variety, and their common likeness in diversity. It is marvellous what power and light and help are given to these investigations by Scholastic philosophy, if it be wisely used.
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> On this point it is well to call one thing to your minds. It is only by the highest injustice that any jealousy of the progress and increase of natural sciences is laid, as a fault, at the door of that philosophy. When the Scholastics, following the teaching of the Holy Fathers, everywhere taught through their anthropology that the human understanding can only rise to the knowledge of immaterial things by things of sense, nothing could be more useful for the philosopher than to investigate carefully the secrets of Nature, and to be conversant, long and laboriously, with the study of physical science. Indeed, they themselves proved this by their works. Thomas, and Blessed Albert the Great, and other princes of the Scholastics, did not so give themselves up to the study of philosophy, as to have little care for the

> knowledge of natural things. Nay, on this matter there are not a few of their words and discoveries which modern teachers approve and acknowledge to be in harmony with truth. Besides, in this very age, many distinguished teachers of physical sciences openly bear witness that there is no contradiction, truly so called, between the certain and proved conclusions of recent physics, and the philosophical principles of the Schools**.**
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> We, therefore, while We declare that everything wisely said should be received with willing and glad mind, as well as everything profitably discovered or thought out, exhort all of you, Venerable Brothers, with the greatest earnestness to restore the golden wisdom of St. Thomas, and to spread it as far as you can, for the safety and glory of the Catholic Faith, for the good of society, and for the increase of all the sciences.[18]

For many readers today, this text is of strictly historical interest; it holds little authority in the present times; it may even appear quaint or naïve. However, science and reality have not changed so much that Leo's text has become obsolete. In fact, the text is prophetic in the sense that I have been developing all along: Thomistic principles are called to protect science and technology from disorder. And these principles – particularly the notion of substantial unity – have not been followed.

It is my contention that the absence of a robust notion of substantial unity in the science classroom has cost us dearly. Modern technology's lethal and unnatural growth has occurred in direct proportion with its disregard for the notion of substantial unity, especially in living things. Enthusiasm for artificial substances such as refined fuels, fractionated and reformulated foods, synthetic pesticides and pharmaceuticals has led to widespread ecological damage and a growing health crisis. The absence of a notion of substantial unity has also denied their natural philosophical foundation to the twentieth century attempts to re-establish harmony with Nature – with human nature, with the ecosystem, and with the planet as a whole.

Still, an atomist and reductionist notion of substance appears to be all that is taught in our scientific and technological institutions. For example, the curative power of any medicinal product is held to exist at the molecular level. Chemical pharmaceuticals do produce impressive results; they can be patented, and this approach has led to great financial success. As a result, the holders of pharmaceutical patents control health research. And so the expensive search for cures to cancer, heart disease, Parkinson's, etc., continues at the molecular level, ignoring dozens of natural cures based on natural substantial wholes. These natural cures have been used in

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[18] Leo XIII, *Aeterni Patris*, as reproduced in the *Summa Theologica* of St. Thomas Aquinas, Vol.1. (Notre Dame: Christian Classics/Ave Maria Press, 1981), pp. xvii-xviii.

"underdeveloped" traditional cultures for decades and even centuries. However, they are under constant attack by the scientific establishment with its basic dissatisfaction with the variability of plant and animal substances and its insistence on molecular quantification and standardization. In the meantime, modern toxicology is faced with the impossible task of evaluating the synergistic interactions of thousands of toxic chemicals, in order to set proper environmental standards and human exposure limits. We have truly lost the forest for the trees.

Conclusion

A significant portion of contemporary technology is waging war on natural substantial unity. How much did dissention among Thomists contribute to this state of affairs? Should a greater effort have been made to spread the doctrine? Some might say that the die was already cast with Descartes: experimental science would inevitably break away from formal and final causes.

In any case, it seems that we have lived a tragic failure. While philosophers have argued fine points of epistemology, Aristotelian and Thomistic principles have not guided and illuminated the physical sciences in their development, as Pope Leo had hoped they would. And today, we are at risk of missing the vital rendez-vous with the growing environmental movement in its attempt to bring our damaging technologies under control.

Aristotelian and Thomistic-friendly scholars are in a special position today. They can play a natural leadership role regarding science, technology, health and environmental matters. Would they be willing to engage in dialogue with environmentalists and alternative health advocates, whose power and influence are daily on the rise, but who appear to be bereft of the guiding lights of Aristotle and Aquinas?

In this respect, the recent efforts of Willis Jenkins, Pamela Smith, Jame Schaefer and Jill LeBlanc in developing the nascent field of *eco-thomism*, constitute promising avenues of reflection and exchange.[19] Eco-thomism

[19] Jill LeBlanc: "Eco-Thomism," in *Environmental Ethics*, Vol. 21 (1999): 293-306. (Professor LeBlanc teaches philosophy at McMaster University, Hamilton, Canada.); Willis Jenkins: "Biodiversity and Salvation: Notes for an Eco-Thomism." Presented at the "Ecology, Theology, and Judeo-Christian Environmental Ethics" conference held at the University of Notre Dame, Indiana, in February 2002. Web site for full text: http://www.nd.edu/~ecoltheo/text_Jenkins.htm. Jenkins is quoted in Francisco Benzoni, "Thomas Aquinas and Environmental Ethics: A Reconsideration of Providence and Salvation," *The Journal of Religion*, Vol. 85 (2005): 446–476. Jame E. Schaefer, *Ethical Implications of Applying Aquinas' Notions of the Unity and Diversity of Creation to Human Functioning in Ecosystems (Doctoral Dissertation).* Marquette University, 1994. Pamela A. Smith, *Aquinas and Today's Environmental Ethics: An*

demonstrates fundamental links between ecological science and Thomistic principles of nature. These efforts might find an echo in hylomorphism-friendly environments such as Maritainian, Aristotelian, Thomistic and Catholic philosophical associations. If such an echo does occur, we will have grounds to hope that the travails of hylomorphism have not been in vain, and that the ancient doctrine is called to bear new fruit in the twenty first century.

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exploration of how the vision and the virtue ethic of 'ecothomism' might inform a viable eco-ethic (Doctoral Dissertation). Duquesne University, 1995. 405 pages. Sister Smith is Superior General of the Sisters of Saints Cyril and Methodius in Danville, Pennsylvania.

Saving the Wilderness: When Beauty is Not Enough

Elizabeth Trott

Defending the preservation of wilderness seems to be a pressing concern. Arguments that appeal to the beauty of the wilderness are promoted by environmentalists and philosophers. Such aesthetic judgments are thought to give weight to the case for preservation. Yet the question can be raised: Is the beauty of the wilderness a sufficient reason to have wide range appeal? What is needed to give beauty that stature? One response has been given (by Glenn Parsons and others), that is to add scientific knowledge about the natural phenomenon at hand to the aesthetic judgments directed towards that phenomenon. Consider: Would an aesthetic judgment about the beauty of the wolverine's habitat be persuasive as a reason to preserve such habitat? And would supplementing such aesthetic judgments with scientific ones emphasizing the unusual features of the habitat be persuasive enough to preserve it from those who would trample it for personal pleasure or develop it for economic gain? This paper shall question the usefulness of beauty as an argument to defend wilderness preservation and question further efforts on the part of philosophers to bolster the status of aesthetic judgments of any kind with scientific knowledge.

The Problem of Definition

We begin by considering one source of difficulty in making a case for the preservation of wilderness on aesthetic grounds: the indeterminate content of the concept of wilderness. It is difficult to discuss beauty when the *referent of the concept of wilderness* is unclear. Wilderness is more delineated than

nature, which can be understood as undisturbed settings in which life thrives without the interference of humanity. Nature includes trickling creeks, meadow wildflowers, as well as violent thunderstorms and foot-long scorpions. Roderick Nash in his book *Wilderness and the American Mind,*[1] has as a primary meaning for wilderness, being uncontrolled, unruly (the wild factor) conjuring thoughts of evil, as in need of bringing under the control of man (directed to do so by God).[2] The meaning implied by this understanding of wilderness is that a man's paradise on earth is not beyond his control. The term wilderness, since this early usage, has acquired more metaphorical dimensions. If we feel stripped of guidance, lost or perplexed we are also "in the wilderness."[3]

Historical Beliefs and Expectations

The problem of a definition for wilderness, particularly in North America, is compounded by the historical beliefs that new settlers had. Certainly when the settlers came to the North American continent they considered the vastness of the continent to be in a wilderness state, in other words, it was not under the control of their systems of order. Man was an alien presence in this new land.[4] This belief, of course, did not reflect the settlement conditions already in place. Indigenous peoples (whom the Europeans at first thought were not quite people – they were thought to be some wild beings which lived more like animals than men) lived on the North American continent. Communities had been established, farming and fishing practices were not unknown; paths had been carved through forests; fences for managing animals had been built. Social orders, bartering systems, languages, etc., all were in place. The European declarations about taming the wilderness really meant bringing the continent under the control of European values and standards. The notion of unruly, wild, or out of control, that is, the world as *hostile other* reflects particular cultural perceptions. The non-European inhabitants of the newly "discovered" continent lived within their own social and ethical orders. The early association of wilderness with social and moral chaos on the part of the immigrant arrivals was originally an obstacle to any recognition of beauty in the wilderness.[5]

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[1] Roderick Nash, *Wilderness and the American Mind* (New Haven, CT: Yale University Press, 1967), pp. 36-38 – hereafter referred to as *Wilderness*.
[2] *Ibid*., pp. 1-4
[3] *Ibid*., p. 3.
[4] *Ibid*., p. 7.
[5] Territorial orders, as a fact of the biological world, well preceded the orders of men. Alexander Kropotkin, a Russian biologist, published his book *Mutual Aid* in 1902. In it he demonstrated through his meticulous observations that living biological systems are

Is the Wilderness Hostile?

The idea of wilderness as a *hostile other* raises questions about what really counts as an example of *hostile other*.[6] What is a primeval state of nature? If you can visit such a place is it still wilderness? Perhaps wilderness is just an idea, a mental construct that has evolved and we apply it to places for various reasons. Nash goes on to suggest that wilderness and civilization are concepts that distinguish degrees of human involvement in places, not differences in kinds of places.[7] The wilderness is an idea that is part of a continuum of our understanding of places, and some places involve more people than others. The *problem* about how to preserve something we call the wilderness as if it were some stuff out there, is really a question: How much human involvement should determine the various distinctions that turn the environment into *places*? Places are identified by human needs, values, and experiences. They are the products of the human imagination. Wilderness is a place born out of our imagination where human intervention is both difficult and often life threatening to those unfamiliar with the skills required to live there. Presumably the less we have altered the environment, the more we think it is wilderness. Government national parks with well marked trails and campsites seem more to be wilderness in kind than streets. People retreat to these wild places to escape the chaos and life threatening risks of cities. Because both environments could be described as wilderness (not under the control of human systems of valuing and ordering), it isn't clear which is the better candidate for being called wilderness. National parks can be marked out in large scale or constructed in small scale as envisioned by a human imagination. Anywhere there is a trail used by people there is a degree of civilization.[8] Every surface square inch of this planet has been mapped, studied, photographed, and documented.

Concepts of wilderness today are not as much a reflection of the Christian ethos which associated lack of order with moral degeneracy. Freed for the weight of the discourse of darkness, evil, and Hell, places of the wilderness can simply be understood as places identified by a pronounced lack of

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both cooperative and competitive. Total competition as a principle of nature does not explain the complex integration of members of ecosystems. The wilderness has never been without principles of order.

[6] Efforts to find a definition for wilderness efforts have been made by Western governments. See Nash, *Wilderness*, pp. 5-7.

[7] Ibid., p. 6.

[8] One might presume that every square inch of this planet's surface has been mapped, photographed and documented, testimony to some kind of human intervention everywhere.

knowledge and abilities to live in them.[9] Perhaps untamed wilderness is just another way of saying no running water, hydro lines or cell phone junctions. As far as surviving in the wilderness goes, we have figured out how to survive in almost any circumstance of environmental difficulty that we can anticipate or know about.

Yet the risk of not surviving in the wilderness is greater because the forces of the wilderness are less predictable. Losing a life trekking in the mountains we consider a risk of being in the wilderness. It is interesting that some insurance companies recognize "acts of God" for example, in house damage from unexpected natural assaults, but not in slipping off a mountain side because of an unexpected sudden rain. Yet the cause of both events is the same. Both events are caused by forces of the environment that have not been brought under our control.

Can What is Hostile be Beautiful?

The wilderness understood as the *hostile other* (meaning difficult for people to survive) doesn't intuitively bring to mind ideas of beauty. Lack of order and moral degeneracy certainly don't incline us to seek properties of beauty, but what about places that are simply challenging, requiring struggle and patience? Is the concept of a difficult environment compatible with its also being beautiful?

One response could be that there are many environments which are both visually beautiful and yet difficult for human survival, such as Niagara Falls, or the deserts in Utah, or underwater coral reefs. A reply to that claim is that these environments lack at least one life supporting element, respectively shelter from powerful forces, water and protection from extreme temperatures, and air. One doesn't expect to survive without extraordinary preparation and planning. We admire their beauty from a safe distance or during a short term visit as spectators, but not as habitants. Wilderness may not lack any of the elements of survival but is overwhelming difficult to live in nontheless and equally difficult to admire, for when immersed in a dark forest, where is the view point?

Seeking the Beautiful in Wilderness: Kantian Judgments

We can conclude that the concept of wilderness is a man-made idea reflecting our relation to the world of our experiences.[10] That relation is viewed

[9] Even this definition does not suffice, because there is always someone who knows how to survive in conditions which others may call wilderness.

[10] For a further discussion of nature and wilderness as a human concept, see Anna L. Peterson "Environmental Ethics and the Social Construction of Nature," *Environmental*

differently through the principles and precepts of different world philosophies.[11] Those very different philosophies alert us to the fact that beauty can be understood as a human category of judgment, an aesthetic judgment. This position has been most strongly associated with Kant in his *Critique of Judgment* and is the most appropriate theory for explaining the claims about nature, or the wilderness as being beautiful.

Instead as associating intrinsic beauty-making properties with the wilderness, we should regard it as the inspiration for aesthetic judgments. Because the meaning of wilderness is indeterminate it is unlikely that agreement will be reached on its intrinsic properties given that the source of those properties has no universally agreed upon categorical referent. [12] To regard beauty as judgment allows us to discuss wilderness without expecting a principle of universality to convince our fellow discussants. What is universal is our capacity to recognize aesthetic claims and know what is being claimed without having to agree.[13] Our ability to make aesthetic judgments "reveals something new and essential about us as human beings."[14] Thus we have a capacity to make judgments of taste reflecting cognitive pleasures and displeasures. But there is little in Kant to assure us that we will all experience the same aesthetic pleasure for every experience that inclines us to judge our response to it through the disinterestedness of feelings without cognitive restraints. If there are principles of beauty, such as harmony and balance and other properties determined to be pleasing to the perceiving mind, then their existence in the wilderness is derivative upon our ability to constitute our experiences through the above principles of beauty as they are applied by the exercise of our aesthetic judgments.

But not everyone will have the perceptual sophistication to experience the beauty such judgments bring forth, and not everyone will choose to exercise such judgments. Indeed the choice to not exercise such judgments could be lifesaving when engaging in aesthetic indulgences in the wilderness. This

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Ethics: Divergence and Convergence, eds. Susan J. Armstrong and Richard G. Botzler (Boston, MA: McGraw-Hill, 2004), pp. 87-94.

[11] For a discussion of these differences see Nash, *Wilderness*, pp. 20-22.

[12] Those that support beauty as sustained by extrinsic properties such as balance and harmony must attribute to nature an aesthetic intentionality, presumably created and sustained by God.

[13] See R. K. Elliott, "*The Unity of Kant's 'Critique of Aesthetic* Judgment," *The British Journal of Aesthetics*, Vol. 8 (1968), p. 245. "And even if we assume that all men are capable of aesthetic experience, and that aesthetic experience involves the feeling of an optimal ration of the cognitive powers, this ratio need not be the same for each individual."

[14] Christian Helmut Wenzel, *An Introduction to Kant's Aesthetics: Core Concepts and Problems* (Malden, MA, Oxford: Blackwell Pub., 2005), p. 3.

critical fact of choice means that aesthetic judgments about the wilderness are neither universal nor necessary. Seeing beauty in the wilderness is a learned experience, and this experience can disregarded more easily in regards to the wilderness than when a specific effort has been made by an artist-creator to address aesthetic principles in his/her creations of things, places and designs.

Promoting Beauty in the Name of Preservation

We can now ask: Will extolling the beauty that some perceive in the wilderness environments serve as a reason for its preservation? If enjoying its beauty were a guaranteed experience then one would think that promoting such beauty would be a good thing to do. But I think there are weaknesses in this position. Consider first the conveniences required to enjoy the beauty of wilderness environments.

The argument that we should preserve the wilderness because it is beautiful has much to do with our development of amenities that make it possible for us to relax on some shoreline instead of having to chop wood to prepare supper.[15] Tom Thompson had to have a cabin in which to store and mix his paints and a pail in which to wash his brushes before he could start capturing on his canvasses the beauties of the world north of Toronto He didn't just wander off into the bush and paint the wilderness. Seeing beauty in the wilderness often means being able to look at the wilderness from an airplane or from some vista viewpoint where some one has conveniently put a little roadside parking space for gazing from a car window (especially if the mosquitoes are bad). Such experiences of beauty are not guaranteed by definition just because one thinks one is in a wilderness environment, no matter how sophisticated one is as a perceiver. For example, there is nothing particularly beautiful about hauling one's canoe through dense shoreline bush filled with thick spider webs in the rain hoping to be in the area of a mapped campsite. (Unsettled environments can offer spectacular visions, more easily seen when one is warm and dry.)

The Role of Judgment and Choice in Recognizing Beauty

Positive aesthetic recognition of wilderness requires more than convenience and good weather. It requires a decision to recognize through an aesthetic category of judgment what the senses provide. While such recognition may engage a universal human capacity, this capacity for beauty recognition is not automatically triggered without reflection and reflection is a choice that we make. We will never know if those who are being killed by a raging river

[15] Nash concludes in his explorations of the wilderness that arguments for its preservation primarily concern the needs and values of civilized people. See Nash, *Wilderness*, p. 271.

current or forest fire, or experiencing snow suffocation or freezing limbs, have as their last thoughts how beautiful their world really is.

I am not suggesting that the wilderness does not appear beautiful from different perspectives etc., but with every judgment we make, our values and expectations, our needs and comfort zones, our general understanding of risks and hazards affect the judgment. For example, our skills at surviving, contribute enormously to our perceptual claims about beauty in the untrammeled world. One person, even though a swimmer and quite secure in a life jacket, can be terrified in a canoe and fail to see beauty anywhere until he or she has the knowledge and skill level to manage the canoe and realize canoes can be quite safe, though not in all circumstances. The point I would make, is that some aesthetic judgments such as those which can be evoked or activated in art galleries, or in controlled city environments, can be enhanced by knowledge of the history of art, or the various art movements. The aesthetic judgments no doubt are accompanied by knowledge that is related to the object or performance or design. But aesthetic judgments in the wilderness require circumstances of appreciation which themselves require knowledge that has little to do with what is being seen or heard or felt. This knowledge is of temperatures and sound implications and principles of change, factors of survival. Such factors have little bearing on the actual aesthetic judgment. Consider the following example. Being mesmerized in one's canoe by the beautiful mist rising round a corner in a river could detract one from the fact that the mist is being caused by a waterfall. Watching the rapid changes in the clouds above is the last thing one wants to do if those changes signal a coming thunderstorm. Aesthetics judgments, while certainly possible in the wilderness, may need to be restrained in light of more pressing cognitive content.

The Problems with Marketing Beauty

The beauty of the wilderness is not a strong argument for the preservation of wilderness because admiring that beauty without cognitively attending to a myriad of non-aesthetic judgments could seriously threaten one's life. A conclusion that could follow from these observations is: Get rid of what threatens human life. Tame the park, turn it into pastoral nature, or development properties; leave it natural, but not hostile. This is not the conclusion sought after by those who want to preserve the wilderness.

There is a corollary to the promotion of the wilderness as beautiful. Once we extol the beauty of the wilderness, (assuming we support the position that we need more beauty in the world and the wilderness provides a great deal) then people will want to partake of such experiences. Perhaps they will want to buy a SUV with which to look at how attractive the pristine world is. Wise

folks know that is exactly what we do not want people to do. So how does one promote the wilderness through being an advocate of its beauty without having everyone else rushing about on one's favourite canoe routes? Furthermore with the novice beauty enthusiasts filling up the wilderness, the wilderness becomes crowded. Some people will go not properly prepared. Others will upset the local inhabitants, who may respond by eating the odd intruder. Government employees then shoot the threat to human life, and nature lovers park their cars and tents all over sensitive environments to stage a protest. The end result is that in the name of beauty the wilderness is further under assault. Perhaps wilderness defenders really mean that they want every one *other than themselves* to stay away from the beauty. To preserve the wilderness we have to have reasons that make sense to persons other than those who are sufficiently wealthy and skilled to visit and admire its beauty.

A Philosophic Conjunction: A**esthetics and Science**

Some philosophers, (notably Glenn Parsons and Alan Carlson) have tried to strengthen the beauty argument in relation to nature, (if not the more specific wilderness) by trying to associate aesthetic judgments with scientific ones presumably thereby making a more universal case for the beauty arguments. The position argued for is that scientific knowledge reveals much that is unexpected and our responses to this cognitive content, when positive, count as aesthetic judgments.[16] What kind of scientific content will augment one's aesthetic appreciation of natural phenomenon?

Certainly Parsons and his contemporaries would have us best learn to appreciate nature through scientific knowledge. Parsons suggests that when faced with knowledge that reveals the unexpected, our initial reactions to that experience, of surprise, or shock or wonder, are aesthetic ones. The reaction could involve the ugly as well as the beautiful and Parsons example is of the ugliness of a Venus fly trap.[17] He refers to the jaw-like formation as a contra standard piece of knowledge, one we do not expect to associate with plants. In spite of the possibility of such negative aesthetic reactions, Parsons suggests that we should regard nature, (and presumably teach others about it) by focusing on the categories of science which reveal its positive side.[18] As we grow to understand more about the natural world, with the emphasis on its positive aesthetic features, we will be more inclined to support its preservation. The knowledge itself becomes the source of it beauty.

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[16] Glenn Parsons, "Nature Appreciation, Science, and Positive Aesthetics," *British Journal of Aesthetics,* Vol. 42 (2002): 279-295.
[17] See *Ibid*.
[18] See *Ibid*., p. 293.

Parsons is not the first philosopher to associate beauty with knowledge, but when Plato made the connection he insisted that the knowledge most significant to beauty was moral goodness. Beauty prior to the separation of the moral and the beautiful demanded of us moral cognitive awareness. Once the moral and the aesthetic parted ways, the aesthetic found home in the discourse of the art world, and while discussions of nature were plentiful, they reflected the visual spectator's point of view, not the active wilderness visitor. This new excursion (suggested by Parsons) into associating the aesthetic judgment with non-aesthetic categories of knowledge raises serious questions. What guides our choice of the particular scientific content to be associated with positive aesthetics? In promoting some aspects of scientific knowledge to enhance the beauty of nature, (or the wilderness) what other kind of knowledge might be suppressed or neglected? Could we be lured into making an aesthetic judgment while failing to note some morally relevant information that could be equally scientific? (How much information should be promoted about the health risk of ground ticks?)

An Example of Matching Science and Aesthetic Judgments

Consider the following example: The individual who is enamoured of the Temagami wilderness studies its rock formations, its geological history, its diverse wildlife. With considerable marveling and care he/she documents this information, and then, determined to convince others about its precious uniqueness, begins to publish travel guides and organize visits to the area – teaching trips that include science that will let the positive aesthetics reign. Parks Canada soon has to regulate the number of visitors in the park, and in order to finance the patrols and administer the trip permits, negotiates to begin selling old growth forest wood. The native bands and inhabitants find lucrative employment, their views of what is beautiful being informed by a different philosophical culture. The wilderness shrinks, being overrun by logging roads, and plastic water bottles. The scientific knowledge invited the appreciation of the beauty of the wilderness but also contributed to the escalation of its loss. The scientific knowledge needed will not be focused on supporting aesthetic judgments about beauty, but on supporting moral judgments about human behaviour and how much human presence the wilderness can absorb, before it evolves from wilderness to a natural man-controlled park. The question being raised here concerns the association of scientific and aesthetic content independently of a moral context. Could we, through such a choice of cognitive categories, be mistaken and generate a reaction of aesthetic wonder (short-lived though that may be), when moral outrage, born out of the greater perspective of preserving habitats for living things could be a better response? Our finding beauty in the wilderness

requires wilderness, and that requires moral decisions that have little to do with aesthetics judgments discussed today.[19]

Wilderness as Economic Resource

The perspective that we cannot avoid is the wilderness as a resource or as an economic factor. Preserving the wilderness is largely deciding how much intervention there should be. When the continent was first being settled, its riches fell under the categories of resources, and agricultural land to live on. Logging companies may agree that the woods look pretty, but with economies and profits at stake that is not an over-riding reason not to log, anymore than the argument that cattle look pretty has prevented the slaughter of them for food and other uses.[20] We are creatures who want to possess and control our environment.

Everyone knows that some parts of the resource industry are short lived in the long run. Drastic measure like seriously controlled population growth on a world scale might lower demand for wood or oil. Meanwhile we will exploit resources as long as the economy demands them. And as trees disappear, new jobs will be necessary. Perhaps the solution is in the other direction. We need to demonstrate that the viability of the tourist industry in the long term will need the wilderness for tourists to view. The more wilderness that we can make accessible to people, the more the need for wilderness to not be tampered with so that *it remains as people imagine it*. The beauty of the wilderness is economically of high value, a capital good for everyone. Selling people on the need for the protection of eco systems and the environment when based on recreation, health, pollution, spiritual renewal, getting a beauty fix, loving space and the great outdoors, (which some people despise) etc., has not yet grabbed the public imagination, By setting out the research and data that economies depend on protection not exploitation of wilderness environment, less settled places would have a better chance at keeping their

[19] Parsons' work seems to be an exercise in conceptual analysis. Such projects are of philosophic interest. But with the wilderness under as much assault as it is, conceptual analysis carries little weight as a practical tool. Such excursions belong to the academy of aesthetic discourse. The preservation of the wilderness requires some morally charged arguments beginning with the fact that wilderness will disappear long before man-made creations. Does this bother anyone? It seems a travesty of the intellect to treat nature and the wilderness as a problem for philosophical exercises.

[20] The celebration of a scenic view point in Georgian Bay did not prevent people from buying the point of land, thereby preventing others from gazing from that point. Building a cottage on that scenic spot for viewing the Bay may well have destroyed the view others across the lake might have had of the "viewpoint" location as they gazed from their cottage.

place in the order of things, which now is a human imposed order.[21] If beauty is to be a reason for preserving wilderness, the reasons will have to sway everyone, not just those fortunate enough to be able to travel and survive there while others sweat in the cities.

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[21] We invented capitalism and cling tenaciously to it, so we might as well market preservation in the universal language. Tree hugging, no matter how much true real and emotionally wrenching love there really is for trees, achieves little.

Dialectic and Demonstration in the Philosophy of Nature

Christopher S. Morrissey

I. Aristotle's Definition of Science as Certain, Causal, and Demonstrative

Modern thought has acquired a prejudice about the relationship between dialectic and demonstration. In this prejudice, dialectic is characterized as *induction* that attains only *probable* knowledge. Additionally, demonstration is characterized as *deduction* that attains *certainty*. But this modern characterization is a false dichotomy. Moreover, the false dichotomy is oblivious to the careful treatment of deduction and induction that has been preserved in the Aristotelian-Thomistic tradition. In order to begin to correct the false understanding of dialectic and demonstration (which we inevitably acquire from our current cultural milieu), I argue we need to call to mind Jacques Maritain's careful treatment of deduction and induction, for which Maritain is indebted to John of St. Thomas.[1] True, there are some minor reservations that Aristotelian Thomists should still have about Maritain's

[1] For my account, I am greatly indebted to John Deely's path-breaking and illuminating exposition of the history of this false dichotomy in *Introducing Semiotic: Its History and Doctrine* (Bloomington: Indiana University Press, 1982), pp. 67-82. For the pertinent quotations from Maritain on deduction and induction see Deely, *ibid*., pp. 181-184, who quotes Maritain's *Formal Logic*, tr. Imelda Choquette (New York: Sheed & Ward, 1946).

understanding of dialectic and demonstration;[2] but these reservations can be answered and accommodated by the River Forest Thomists' treatment of dialectic and demonstration.[3] My thesis is that the distinctions made by John of St. Thomas about induction (to wit, "ascending" induction and "descending" induction) are analogous to what William A. Wallace describes in his treatment of the "demonstrative regress" in scientific method (a treatment of the philosophy of nature that offers subtle improvements upon Maritain's).[4] In order to help you see the truth of this, let me remind you about the correlatively dialectical and demonstrative methodology of the philosophy of nature. To do this, I wish to remind you of Aristotle's definition of science and then explain how it is related to his correlatively dialectical and demonstrative method.

Aristotle defines science neither too broadly nor too narrowly, but precisely: "Science is certain knowledge through causes and effected by demonstration."[5] This definition may seem confusing, especially the phrase

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[2] For the requisite improvements upon Maritain, see Benedict M. Ashley, O.P., *The Way toward Wisdom* (Notre Dame, Indiana: University of Notre Dame Press, 2006), pp. 44-169, who rectifies the "unfortunate position" of Maritain (which divides the sciences along *perinoetic* and *dianoetic* lines) as identified by John Deely, "The Impact of Evolution on Scientific Method," in John Deely and Raymond J. Nogar eds., *The Problem of Evolution*, (New York: Appleton-Century-Crofts, 1973), p. 33 n. 53, p. 35 n. 61, p. 69 n. 172, and p. 70 n. 174. Cf. Jacques Maritain, *The Philosophy of Nature*, *To which is added, "Maritain's Philosophy of the Sciences," by Yves R. Simon* (New York: Philosophical Library, 1951) and Jacques Maritain, *The Degrees of Knowledge, Collected Works, Vol. 7*, tr. Gerald B. Phelan (Notre Dame, Indiana: University of Notre Dame Press, 1995).

[3] Cf. Benedict M. Ashley, O.P., "The River Forest School and the Philosophy of Nature Today," in R. James Long ed., *Philosophy and the God of Abraham: Essays in Memory of James A. Weisheipl, O.P.* Papers in Mediaeval Studies 12 (Toronto: Pontifical Institute of Mediaeval Studies, 1991), pp. 1-15.

[4] The River Forest treatment is epitomized in William A. Wallace, *The Modeling of Nature: Philosophy of Science and Philosophy of Nature in Synthesis* (Washington, D.C.: The Catholic University of America Press, 1996). Cf. William A. Wallace, *Causality and Scientific Explanation*, 2 vols. (Ann Arbor: University of Michigan Press, 1972-1974).

[5] This is the compressed formulation of Aristotle's definition of science from Aristotle, *An. Post.* 71b 9-16 as made by William A. Wallace, O.P., "Some Demonstrations in the Science of Nature", in Dominican Fathers of the Province of St. Joseph eds., *The Thomist Reader, Texts and Studies, 1957* (Washington, DC: The Thomist Press, 1957), pp. 90-118 – hereafter referred to as "Some Demonstrations." I quote the text of Wallace from p. 91. Cf. the manuscript of James Athanasius Weisheipl, O.P., *Aristotelian Methodology. A Commentary on the Posterior Analytics of Aristotle* (River Forest: Pontifical Institute of Philosophy, 1958), p. 2, and Vincent Edward Smith, *The General Science of Nature* (Milwaukee: Bruce Publishing, 1958), p. 4.

"certain knowledge." (For one could ask whether "uncertain knowledge" is still knowledge or whether it is better termed "belief.") To make clear its content, let me restate it, quoting portions from the Latin translation which St. Thomas used, to which it corresponds, and with which it may be clarified: "Science [*scire unumquodque simpliciter*] is certain knowledge [*quoniam illius causa est propter quam res est*] through causes [*cum causam arbitramur cognoscere*] and effected by demonstration [*et non est contingere hoc aliter se habere*]."[6] And perhaps it is most helpful to restate it once again, in order to give fewer Latin terms for each key English word: "Science [*scire*] is [*est*] certain [*simpliciter*] knowledge through causes [*causam cognoscere*] and effected by demonstration [*per scientialem syllogismum*]." In other words, science is both *inductive* cognition and yet also effected by *deductive* demonstration. That is, science simply grasps the cause of something in a kind of *intuitive cognition*; yet this intuitive grasp of the cause is also somehow correlatively consolidated as being *necessarily so* by demonstration.

Note that science (*scientia*) is the species being defined, and its genus is cognition (and thus *knowledge* in the generic sense is represented by the Latin term, *cognitio*). In other words, science is a specific type of cognition, i.e., a special type of knowledge. Sometimes people take the word *knowledge* to be synonymous with *science*; for such has been one venerable, traditional way of translating *scientia*. But that is not the meaning of *knowledge* here for us. Here, *knowledge* is the more general term, i.e., the genus of cognition in general, of which *science* is the species to be defined.

Continuing to clarify Wallace's compressed formulation, I notice how we may parse out three terms (*certain*, *causal*, and *demonstrative*), each of which correspond to the parts of the definition given by Aristotle[7] to define the species *science* of the genus *knowledge*. *Causal*, i.e., *through causes*, represents the first stipulation given by Aristotle,[8] *cum causam arbitramur cognoscere*: viz., we know "the cause from which the fact results." *Certain* represents the second stipulation,[9] *quoniam illius causa est propter quam res est*: viz., we know "that it is the [proper] cause of the fact."[10] *Demonstrative*, or *effected through demonstration*, represents the third stipulation, *non est contingere hoc aliter se habere*: "and that the fact cannot be otherwise."

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[6] I quote the Latin translation of the Marietti edition of the Aquinas in my italics.
[7] Aristotle, *An. Post.* 71b 9-16.
[8] *Ibid*., 71b 11-12.
[9] *Ibid*., 71b 12.
[10] Or as William A. Wallace, *The Role of Demonstration in Moral Theology: A Study of Methodology in St. Thomas Aquinas* (Washington, D.C.: The Thomist Press, 1962), p. 16, puts it: "we know that that cause is what makes the object to be what it is" – hereafter referred to as *Role of Demonstration*.

Demonstration is a scientific syllogism, i.e., a syllogism that allows us to achieve scientific knowing by the mere fact that we grasp it: *scientialem syllogismum dico secundum quem in habendo ipsum scimus*.[11]

In other words, the *form* of the syllogism guarantees that, simply by the fact that it is executed, its conclusion cannot be otherwise. Now, a flaw in the conclusion of a syllogism can only be due to a *material* flaw in its premises. But if its premises indicate proper causes of the fact, as Aristotle specifies with the first two stipulations (*causal* and *certain* – in the compressed formulations I have adopted from Wallace), then the conclusion cannot be otherwise, provided that the syllogism is in the proper form. Its proper form is that which guarantees the results of science. For in the demonstrative syllogism, i.e., in the scientific syllogism, we reason from premises more certain *quoad nos* "as far as we're concerned") to conclusions more certain *quoad se* ("as far as the thing itself is concerned").[12]

It is most important to recognize that the three stipulations given to identify scientific knowledge (*certain*, *causal*, and *demonstrative*) are grounded in Aristotle's text. The widespread failure to understand the interrelation of dialectic and demonstration is due most of all to the prejudice that the modern conception of science is somehow superior to Aristotle's. By focusing on Aristotelian methodology, i.e., the careful elucidation of definition and demonstration in key Aristotelian-Thomistic texts, I argue that Aristotle's definition of science is "truly scientific" (i.e., possessing what Maritain would call true certainty)[13] and superior to the self-understanding of modern science. To clarify how dialectic and demonstration works correlatively in the Aristotelian sense of what science is (and not as in the modern dichotomy between the two), I turn now to discuss how the *principles of a demonstration* are for Aristotle central to both dialectic and demonstration.

II. Certainty Attained in the Demonstrative Ordering of Proper Causes

If physical science, in its demonstrations, is to be *certain knowledge in terms of causes*, as defined above, then "it needs principles to be causal knowledge and first principles to be certain knowledge."[14] In other words, the scientific knowledge of physical science will be *causal* but these causes must be *proper*, i.e., they must be founded on *certain* knowledge of the causes. In

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[11] Aristotle, *An. Post.* 71b 17-19. Latin trans. Moerbeke.

[12] Wallace, *Role of Demonstration*, p. 21. Translations mine, but I follow Wallace's preference for the pithy Latin terminology.

[13] Wallace, "Some Demonstrations," p. 91.

[14] Vincent Edward Smith, *The General Science of Nature* (Milwaukee: Bruce Publishing, 1958), p. 11.

Aristotle's own formulation, it is not just knowledge of "the cause from which the fact results" but also "*that* it is the cause of the fact;" i.e., not just *causal*, but also *certain*. And the certainty of what is predicated of the subject matter of a science depends on the subordination of that science within the architectonic of knowledge. If the reasoning within a particular science is properly founded both on first principles extrinsic to the science and through mediate principles intrinsic and proper to the subject matter within it, then it is scientific reasoning that is certain in Aristotle's sense, because it can be traced back in a chain of syllogisms right up to first principles which are self-evident and therefore absolutely certain.

What this means is best expressed by showing the possible types of *causal* and *certain* demonstrations. There can be demonstrations of the fact (*quia*), and demonstrations of the cause (*propter quid*). The former (*demonstratio quia*) are more characteristic of *science* in its merely *causal* sense, i.e. as knowledge *through causes*.[15] The latter (*demonstratio propter quid*) is, however, more characteristic of science in its *certain* sense, i.e., as *certain* causal knowledge.[16] The meaning of "certain" here, however, is not an otiose synonym for "demonstrative," but instead indicates the dignity of the demonstration (and perhaps would be better put in English as "proper knowledge" than as "certain knowledge" [*scire simpliciter*]).[17] The dignity of the demonstration, whether it is "better" (*potior*)[18] than another demonstration or not, is based on the order of predication in the demonstration. Before I explain what this "order of predication" is, we should first be clear on the relation between science and demonstration.

I have set forth the Aristotelian conception of science as certain, causal, demonstrative knowledge. I stated that Aristotle's definition of science contains three stipulations, one of which is the stipulation *demonstrative*. However, looking at the text, apparently Aristotle defines demonstration separately from science. For Aristotle, *science* is certain knowledge of things in terms of *proper* causes or reasons or principles.[19] *Demonstration*, however,

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[15] The most general mark of science's type of knowledge is *knowledge through causes*.

[16] The more specific mark of science's type of knowledge is *certain knowledge* through causes.

[17] In other words, "Science is proper knowledge through causes and effected by demonstration." But I stick with the formulation of Wallace, "Some Demonstrations", p. 91: "certain knowledge." For, in another way, this formulation is superior, because it also covers the other sense in Aristotle of the concept "certain," i.e., particular (*scire unumquodque simpliciter*). And this is appropriate for Aristotle, for whom "certainty" is not merely a formal, logical concept, but rather the demonstration appropriate for the particular subject matter: *quoniam illius causa est propter quam res est*.

[18] Wallace, *Role of Demonstration*, p. 20.

[19] Aristotle, *An. Post.* 71b 9-16.

is a syllogism *producing* such knowledge.[20] But, in fact, these are not two separate definitions of two different things. The definition of demonstration simply follows the definition of science, in order to make clear what the third stipulation means: i.e., science, most properly speaking, is *demonstrative*.

These two definitions of *science* and *demonstration* are two ways of expressing the same thing. The two definitions are related in the following way. The relation between science as *certain knowledge through causes*, and science as *effected by demonstration*, is a relation clarified only when we understand what the principle of a demonstration is. *The middle term* of a demonstrative syllogism represents the cause or reason or principle for connecting the major term with the minor in the conclusion.[21] *Demonstration* is a syllogism in which the causal knowledge or middle term is certain; and it therefore yields certain knowledge in terms of causes, i.e., it yields *science*.[22]

But what makes a middle term *certain* in itself? This is a very impotant question. It brings us back to the question of the order of predication in demonstrations. For the certainty of middle terms admits of gradation: i.e., considered with regard to the subject of the demonstration, *some causes are more proper than others*. For a demonstration to be certain, a middle term must be proper with regard to its subject.

When perfected, science is knowledge through *proper* causes.[23] In knowing proper and precise (as opposed to common and imprecise) causes, the mind knows better "how one thing differs from another."[24] This means knowing the subject matter of a science better.[25] "A middle term that represents a proper cause of a subject is a 'commensurate universal' of that subject; i.e., it is appropriate to, and coextensive with, the subject in question."[26]

Let the subject of a demonstration be S. The form of demonstration is: "(All) M is P, but (all) S is M; therefore, (all) S is P."[27] The middle term M has to be proper to S. (This means it is all or part of the real definition of S.)[28]

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[20] *Ibid*., 71b 17-18.
[21] Smith, *General Science of Nature*, pp. 4-6.
[22] Cf. *Ibid*., p. 5: "Demonstration, then, is a syllogism in which the causal knowledge or middle term is certain. Put into other form, knowledge resulting from demonstration is always a certain knowledge in terms of causes, precisely what Aristotle called *science*."
[23] Aristotle, *An. Post.* 71b 10-11.
[24] Smith, *General Science of Nature*, p. 6.
[25] *Ibid.*, pp. 5-6.
[26] *Ibid.*, p. 6.
[27] Wallace, "Some Demonstrations," p. 94.
[28] "Real definition" is best discussed in Vincent Edward Smith, "Definitions" in *From an Abundant Spring: the Walter Farrell memorial volume of The Thomist*. Edited by the

Discovering the proper M for a demonstration about S is not an exercise in logic, as if any observation could be plugged into a chain of dry reasoning. On the contrary, discovering the proper M that explains the predication of P to S is a genuine advance in knowledge, because it will clarify all other strands of scientific reasoning, showing how the principle M of this demonstration places the conclusion about S ("S is P") in relation to all other known principles, whether extrinsic or intrinsic to the matter under consideration. Otherwise, the demonstration utilizing M will simply be less certain, because it will be a demonstration not of the *reasoned* fact (*propter quid*), but merely *of* the fact (*quia*).

For example, consider the negative demonstration that a wall does not breathe because it is not living.[29] S is the wall, M is "not living" and P is "not breathing." M is not a proper cause and hence the demonstration, although still *a priori* (because M is a cause and not an effect of P), is only a demonstration of the fact (*quia*). M is a remote cause. "Many living things do not breathe, and yet the fact of the wall's not being alive is sufficient here to explain its not breathing."[30] The proper cause of the wall's not breathing is not having lungs. But if M were "not having lungs" instead of "not living" then the demonstration would be *propter quid*.

Science in the Aristotelian sense, then, is produced by demonstration. Demonstration can be causal (*propter quid*) or factual (*quia*). The *propter quid* middle term is the real definition (at least in part) of the subject, and hence it provides the real cause or reason why the attribute belongs to the subject. The *quia* middle term usually represents the cause or reason why *we* know that the attribute belongs to the subject; it is not the *proper cause in reality itself* why this is so. In general, *demonstratio propter quid* goes from cause to effect (i.e., is *a priori*) and *demonstratio quia* goes from effect to cause (i.e., is *a posteriori*). For modern thought, the former appears to be a "deductive" movement and the latter an "inductive" one; but this simplistic dichotomy blurs something very important. Demonstrations *propter quid* and demonstrations *quia* do not form a strict dichotomy between *a priori* reasoning (cause to effect) and *a posteriori* reasoning (effect to cause), because there are cases of *quia* demonstrations that are in fact *a priori*. For example, this occurs when an *a priori* demonstration is made from a remote but not a proper cause, as in our example of the wall not breathing because it is not alive. Table 1 (below) sums all this up schematically:

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staff of *The Thomist* (New York: Kennedy, 1952), pp. 337-362, and in Wallace, *Modeling of Nature*, pp. 285-292.

[29] Aristotle, *An. Post.* 78b 15-27.

[30] Wallace, *Modeling of Nature*, p. 295.

Table 1[31]
Certainty in Demonstrations Reflected in the Order of Predication

Demonstration	**Order of Predication**	**Example: "S is P because M." (S = wall)**
propter quid	*a priori* (reasoning from cause M to effect P)	"The wall does not breathe because it does not have lungs." P = not breathing M (proper) = not having lungs
quia	*a priori* ("negative proof through a remote cause in the order of predication is *a priori* but not *propter quid*"[32])	"The wall does not breathe because it is not alive." (*demonstratio quia* because "many living things do not breathe"[33]) P = not breathing M (remote) = not living
quia	*a posteriori* (reasoning from effect M to cause P)	"The wall does not have lungs because it does not breathe." P = not having lungs M (effect) = not breathing

[31] My table is modeled on Owen Bennett, O.M.C., *The Nature of Demonstrative Proof, According to the Principles of Aristotle and St. Thomas Aquinas* (Washington, D.C.: Catholic University of America Press, 1943), p. 37 and Wallace, *Modeling of Nature*, pp. 294-295. Cf. Melvin A. Glutz, C.P., *The Manner of Demonstrating in Natural Philosophy. A Dissertation Submitted to the Pontifical Faculty of Philosophy of the Studium Generale of St. Thomas Aquinas in Partial fulfillment of the Requirements for the Degree of Doctor of Philosophy* (River Forest, Illinois: 1956).
[32] Bennett, *Nature of Demonstrative Proof*, p. 37.
[33] Wallace, *Modeling of Nature*, p. 295.

III. The Three Stages of Scientific Inquiry: Abduction, Deduction, Retroduction

Note that when I speak of science as "certain" in the Aristotelian sense, I am referring to *the order of predication* involved in the demonstration. In other words, I speak of the *real relation of cause and effect with regard to the subject matter of the demonstration*. In one sense (the usual English sense of "certain"), all demonstration is "certain" (*per scientialem syllogismum*) when in syllogistic form, because it "cannot be otherwise" (*non est contingere hoc aliter se habere*). But when we speak of Aristotelian science as "certain," this formal, logical sense of "certain" (*per scientialem syllogismum*) is not the meaning we should have in mind. This is because that formal, logical sense (*per scientialem syllogismum*) is the sense indicated by the third stipulation *demonstrative* (i.e., "cannot be otherwise") in Aristotle's definition of science, which is meant to express the character of the *conclusions* in a demonstration as more certain *quoad se* and the premises as more certain *quoad nos*. Rather, the sense here of the first stipulation, *certain* (*scire simpliciter*), indicates the real, factual relation between the terms of the propositions in the demonstration: *quoniam illius causa est propter quam res est*; i.e., ordering what in fact is cause, and what in fact is effect, with regard to the subject. In other words, *a cause is more certain than an effect, and a proper cause is more certain than a remote cause*. Therefore, a demonstration will be more certain (really speaking, and not simply logically) when the principle employed in the middle term M is a *proper cause* and neither a *remote cause* nor an *effect*.

Whether something is a cause or effect of a subject can, of course, only be observed from sense experience and made known through dialectic and induction.[34] Concepts are then subordinated to one another in scientific demonstrations when they are cast in terms of the *certainty* of the order of predication, which is determined by whether the principle used in the demonstration is a cause or an effect. The common caricature of Aristotle is that his science is obsolete because he mostly reasoned *a priori* ("deductively") and not according to experimentation and sense data ("inductively" and *a posteriori*), and that Galileo initiated true scientific progress because he did the reverse, starting not from suspect "first principles" but from experimentation. But this is a gross misunderstanding of Aristotelian methodology. It is not my task here to show it, but in fact Galileo's innovations were made possible by the Aristotelian tradition that

[34] Aristotle, *An. Post.* II. 19.

reflected profoundly upon the *Posterior Analytics*.[35] Galileo learned the "demonstrative regress" (*regressus demonstrativus*) from this tradition: the art of discovery by which an *a posteriori* demonstration *quia* is convertible to a *propter quid* demonstration. If an effect is "not convertible with the cause," the *a posteriori* demonstration "yields knowledge of the existence of the cause and some of its conditions."[36] However, "if the cause and effect are of commensurate universality," then a proper cause has been discovered and the terms M and P may be switched "without circularity," i.e., the demonstration may be "recast as a *propter quid* demonstration."[37]

For example, in Table 1, the cause is "not having lungs" and the effect is "not breathing" and therefore the demonstration is *propter quid* or *quia* depending on whether or not "not having lungs" is taken as the principle M of the demonstration or as the predicate P (i.e., *propter quid* if the former; *quia* if the latter). It is no mere logical game whether or not "not having lungs" is made the principle M or not. It is not a mere tautology to say, "Not having lungs is not breathing," or to say, "Not breathing is not having lungs," although it appears that way to someone not acquainted with the subject matter of the science. Someone not familiar with the matter of the science will be mostly indifferent to the order of predication in the demonstration, and to what is or is not a principle, because they are not sufficiently familiar with all the observations and dialectical inductions made. They will think that demonstration is a mere game of transposing circular definitions. However, the scientist will know the difference between cause and effect. The scientist

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[35] Cf. William A. Wallace, O.P., *Galileo's Early Notebooks: The Physical Questions. A Translation from the Latin, with Historical and Paleographical Commentary* (Notre Dame, Indiana: University of Notre Dame Press, 1977); "The Philosophical Setting of Medieval Science," in *Prelude to Galileo: Essays on Medieval and Sixteenth-Century Sources of Galileo's Thought*. Boston Studies in the Philosophy of Science, vol. 62 (Dordrecht-Boston: D. Reidel Publishing Company, 1981), pp. 3-28; "Aristotle and Galileo: The Uses of *Hupothesis* (*Suppositio*) in Scientific Reasoning" in D.J. O'Meara (ed.), *Studies in Aristotle. Studies in Philosophy and History of Philosophy 9* (Washington, D.C.: Catholic University of America Press, 1981), 44-77; "Galileo and Aristotle in the *Dialogo,*" *Angelicum* 60 (1983): 311-332; *Galileo and His Sources. The Heritage of the Collegio Romano in Galileo's Science* (Princeton, New Jersey: Princeton University Press, 1984); *Galileo's Logic of Discovery and Proof: The Background, Content, and Use of His Appropriated Treatises on Aristotle's Posterior Analytics. Boston Studies in the Philosophy of Science, vol. 137* (Dordrecht: Kluwer Academic Publishers, 1992); and *Galileo's Logical Treatises, A Translation, with Notes and Commentary, of His Appropriated Latin Questions on Aristotle's Posterior Analytics. Boston Studies in the Philosophy of Science, vol. 138* (Dordrecht: Kluwer Academic Publishers, 1992).

[36] Wallace, *Modeling of Nature*, p. 295.

[37] *Ibid.*

will know by experience whether the principle of the demonstration should be "having lungs" or "having breath," because he will know the difference between cause and effect. In fact, it is the material presence of lungs in a body that causes breath, and therefore "having lungs" must be the principle of all respiratory science. If a wall without lungs is observed to breathe, then the principle will have to be reconsidered, i.e., a new principle will have to be found, since there can no longer be *certain* science founded on this principle.[38] "Having lungs" will no longer be the proper cause for *propter quid* demonstrations about respiration. A proper cause must be the *certain* middle term of any scientific reasoning about cause and effect.

Galileo mastered the art of the demonstrative regress, and was such an innovator because he was such a profound Aristotelian. The demonstrative regress is the conversion of a *quia* demonstration to a *propter quid* demonstration when the cause is observed, through careful and deliberate experimention and dialectical reasoning, to be convertible with its effect.[39] The first stage of the procedure is the regress from effect to cause: "The cause is materially suspected but not yet recognized formally as the cause;" in the second stage, the intellect goes to work, "testing to see" if the cause is "convertible with the effect," by "eliminating other possibilities;" in the third and final stage, the progression is made "from the cause, recognized 'formally' as the cause, to its proper effects."[40]

To my mind, in John of St. Thomas, this "demonstrative regress" (upon which Wallace has been our pre-eminent contemporary commentator) is clearly described with the three key distinctions between *abduction* (*ascensus*) from sensible effect to intelligible cause, *deduction* (*syllogismus*) as the work of the discursive intellect, and finally induction or, better, *retroduction* (*descensus*) from intelligible cause to sensible effect. Abduction intuitively abstracts a cause from the sensory data; deduction rationally draws out the consequences of this sense-based intellectual intuition; and then retroduction tests the deduction's insight against further sense experience in order to strengthen the initial abductive intuition (or to revise it in light of new sensory data).[41]

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[38] Note that I am using "breathe" carefully and scientifically, in a univocal sense; any objections to my argument must not make the mistake of using "breathe" in an analogous sense, e.g., "fish breathe (with gills)" or "(porous) fabric breathes."

[39] *Ibid.*, pp. 300-308.

[40] *Ibid.*, pp. 304-305.

[41] Cf. Deely, *Introducing Semiotic*, p. 73. Cf. also Brother Benignus of Jesus, *Nature, Knowledge and God. An Introduction to Thomistic Philosophy* (Milwaukee: Bruce Publishing Company, 1947), pp. 391-397, on the "sensio-intellectual act" of perceptive judgment.

The examples and details of Galileo's applications of this Aristotelian methodology do not concern me here. But I should point out why Galileo and those who imitated him were so successful: i.e., they cultivated the skill of discovering *proper* causes of things. For while any demonstrative syllogism can be called "certain" simply by virtue of the form of its reasoning, it is *truly certain* when considered in terms of the real, factual description of the relation between cause and effect that it expresses. In other words, science and scientific demonstration are most truly scientific, i.e., *certain* in the proper sense, when proper causes are taken as the principles of *propter quid* demonstrations.

Therefore, science is *certain* because it orders demonstrations according to the order of cause and effect. It does this by taking *proper* causes as the principles of demonstrations, thereby demonstrating *propter quid*, and not through either a remote cause or an effect. This order of predication is what is meant when Aristotelian science refers to its knowledge as being certain. It is *certain* because it is knowledge of *proper* causes.

Demonstration doesn't impose a deductive formal certainty on the already-acquired inductive results which the ongoing dialectics of experimentation yield. This wrongheaded characterization is the false dichotomy that modern thought on science unthinkingly presents to us. Opposed to this false dichotomy is the threefold Aristotelian-Thomistic description of how demonstration and dialectic work *correlatively* in ongoing experience: the ongoing process of *abduction*, *deduction*, and *retroduction*.[42] In a phrase, these are the three stages of the one "demonstrative regress" (or even, as postmodern consciousness would put it, of the one "spiral of semiosis" that structures all experience).[43]

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[42] Cf. Deely, *Introducing Semiotic*, pp. 71-74.

[43] Cf. Wallace, *Modeling of Nature*, pp. 300-308. Cf. also John Deely, "The Role of Thomas Aquinas in the Development of Semiotic Consciousness," *Semiotica* 152 (1-4): pp. 75-139.

Christian Philosophy, Critical Realism and the Apprehension of Existence: Etienne Gilson's "Knowledge and Existence"

Michael DeMoor

The final chapter of Etienne Gilson's *Being and Some Philosophers* – "Knowledge and Existence" – is a fascinating exploration into a Thomist epistemology that attempts to take seriously Gilson's "rediscovery" of "existence" (*esse*) as the primary theme of St. Thomas' metaphysics. Thus, on the one hand, it can be read as an attempt to apply the metaphysical doctrine discovered in the first five chapters of the book to questions about our knowledge. More specifically, since Gilson's interpretation of *esse* places it beyond essence and therefore beyond quidditative conceptualization, the sixth chapter can be read as showing how being as *esse* can nevertheless be known, given that it is a basic Thomist commitment that being is the first object of the intellect. The conclusion of this effort, as I will discuss, is that *esse* is known via an act of judgment rather than (as with quiddities) by an act of abstraction. This is the intra-textual context for the chapter. However, there is a much broader horizon within which it must be understood as well. At its broadest, this context is a struggle over the meaning of a Christian philosophy in a post-Christian intellectual world. More particularly, "Knowledge and Existence" needs to be seen as part of Gilson's contribution to the debate over the possibility of a Thomist "critical realism." I will begin this paper by briefly outlining this debate and showing how high the stakes were for Gilson. I will then show how – on Gilson's reckoning at least – the question of critical

realism revolves around the problem of the apprehension of existence; precisely the problem addressed in "Knowledge and Existence." From there I will move on to an analysis of that chapter, tracing a particular problem, in an attempt to see if his conception of the knowledge of existence is adequate and thus whether it can shore up a coherent non-critical realism. I will conclude that it can succeed only given considerations about *esse* that are not discussed in the chapter and which may in fact require an alteration of the conception of *esse* propounded in the first five chapters of the book.

Critical Realism and Christian Philosophy

Perhaps the over-riding task of Gilson's entire philosophical career was his desire to show that, rather than being a contradiction in terms, an integrally Christian *philosophy* was a real possibility. His strategy was to demonstrate this possibility by showing that there in fact *is* a philosophy that is both genuinely Christian and philosophically coherent, *viz*. that of St. Thomas Aquinas. Since the inference from actuality to possibility is valid, showing this suffices to prove the possibility of such a philosophy.[1] According to this strategy, one of the ways of defending the possibility of Christian philosophy is to defend what one takes to be a truly Christian philosophy against all the various objections leveled against it and thus to show its ongoing viability as a philosophy.

Many neo-Thomists, particularly Msgr. Leon Noel and Cardinal Mercier, sought to show that philosophy of St. Thomas remained viable in the modern world by attempting to demonstrate that Thomas' realism[2] is compatible with the nearly ubiquitous modern commitment to the methodological primacy of a critique of knowledge. That is, they attempted to formulate a "critical realism" whereby a philosophical starting point along the lines of Descartes'

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[1] Virtually all of Gilson's works bear directly on this task, but some more directly or explicitly than others. See, for example: *Christian Philosophy: An Introduction*, tr. Armand Maurer (Toronto, Pontifical Institute for Mediaeval Studies, 1993) and the first two chapters of *The Spirit of Mediaeval Philosophy,* tr. A.H.C. Downes (Notre Dame, University of Notre Dame Press, 1991). In the former, Gilson carefully distinguishes a Christian philosophy from Christian theology, while insisting that the two are dependent upon each other.

[2] It is not easy to define just what "realism" means in this debate. It implies at least two different things: First, a belief in the actual and independent existence of a world of bodies ("external world realism" if you will); second, a belief that human knowledge is somehow in touch with this world and determined by it ("epistemological realism" perhaps). As we will see, an essential part of Thomist realism – which connects primarily with "epistemological realism" – is that being is the primary object of the intellect; that is, that all acts of thinking are directly and intrinsically related to what is real.

cogito or Kant's *Critique* would ground a Thomistic account of the world and the various entities therein. For Gilson, this could never be; the only logical result of a critical realism is a dogmatic idealism antithetical to the Christian philosophy of Thomas. Thus, a Christian philosophy must resist the kind of accomodationist posture expressed in critical realism; rather it must boldly begin from its own starting point and its own principles, not that of Descartes or Kant.

In *Thomist Realism and the Critique of Knowledge,* he attempts to show that the project of critical realism is not only unfeasible[3] but incoherent. Any critical philosophy, he argues, begins with concepts; that is (in Thomist terms), with quiddities abstracted from the intelligible being (essence) of a real thing. Thus critical philosophy always begins, not with a real world of existents, but in the purely intelligible world of concepts. Furthermore, this attitude posits this intelligible world as independent of – indeed, prior to – the "real" world of sensibility. The critical *realist* – like Descartes – hopes to move through this intelligible world to an understanding of the world encountered by sense, but this is exactly what Gilson believes cannot, in principle, be done. Rather, this critical method turns the world on its head: "If, as has been seen, intellectual knowledge is abstractive knowledge, the reflexive method undertakes to posit what the understanding retains from reality as the necessary and sufficient cause of what is eliminated during the course of its regressive analysis. Such a method is sophistical and replete with impossibilities of all sorts."[4] That is, by beginning with an abstracted quiddity, critical realism attempts to account for what is left behind in the act of abstraction – viz. real, sensible existence – in terms of what remains – viz. a concept. But how could one do so, without making over all "reality" in the image of the concept, which is nothing other than idealism? In Jason West's paraphrase: "Any attempt to begin from concepts within the mind can only hope to end with concepts within the mind."[5] Since the critical project can only lead from methodological idealism – the positing of the world of concepts as explanatorily prior to the sensible world – to dogmatic idealism,

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[3] That is, it is not only the case that he argues that it won't actually happen that anyone could derive Thomist principles from a Cartesian or Kantian starting point, but that this is impossible.

[4] Etienne Gilson, *Thomist Realism and the Critique of Knowledge*, tr. Mark A. Wauck, (San Fransisco, Ignatius Press, 1986), p. 213. It should be noted that the original French edition of this book was published in 1939, a decade before the publication of *Being and Some Philosophers*; there is therefore nothing anachronistic about placing his refutation of critical realism in the background of his discussion of judgment in the latter work.

[5] Jason West, "Gilson, Maritain and Garrigiou-LaGrange on the Possibility of Critical Realism" *Etudes Maritainiennes/Maritain Studies* 17 (2001), p. 51.

the realist[6] cannot afford to admit the methodological point but must have a completely different starting point.[7]

This starting point can only be the sensible world. Unlike critical philosophy, Thomist realism must give an account of intellectual knowledge that shows its fundamental continuity with the world of real existents, and thus of *existence* as such. On Gilson's understanding of the Thomist view of reality, a quiddity (or concept) is the intellectual expression of the essence of a thing. Since a thing is composed of both matter and form, the thing's being *qua* essence is caused by what makes the thing actual, viz. the form. The act by which the form makes for an actual thing, is then "the very heart of reality"[8] and this is existence. Thus, the essence and the quiddity by which it is (intellectually) known are "in potency with regard to the existential energy of the form" and so "the act of existence is seen by the realist as the ultimate source of what causes experience."[9] Therefore, if truth is an adequation of understanding to being, and if truth is the aim of knowledge, then it is clear that "a being's act of existence, not its essence, is the ultimate foundation of what we know to be true about it."[10]

For a real world to be known in truth, then, requires that there is more to knowledge than the conceptual apprehension of essences through a quiddity: "In order for man to perceive being with his intellect, an existent must be given to him, an existent perceptible to his sensibility"[11] and this requires an inseparable continuity between sense and the intellect that is ruled out by the starting point of critical philosophy. An inseparable continuity, but this does

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[6] Or at very least this applies to the Thomist realist, who (like all Thomists) believes that intellectual knowledge is abstractive; the crucial premise of Gilson's refutation of critical realism is the commitment to this view of intellectual knowledge. It leaves open the possibility of a critical realism that does not regard such knowledge thus, but that would not be a Thomist realism.

[7] Thus, for Gilson, there are at least two perfectly coherent philosophical positions: Realism and idealism, both of which consistently draw out the implications of their respective principles. Any philosopher is free to choose which principles to begin with, but thereafter is bound to philosophize consistently from them. All that is ruled out in this picture is any mediating position. In "Gilson, Maritain and Garrigou-LaGrange on the Possibility of Critical Realism," Jason West argues that this admission of Gilson's part is a mistake and in fact conflicts with his realist principles. Instead, any realism (critical or otherwise) must include a refutation of idealism, showing that, since realism is true, idealism is impossible. He finds such a case in the philosophy of Garrigou-LaGrange. Unfortunately, I cannot enter this discussion in the present context.

[8] Gilson, *Thomist Realism*, p. 200.

[9] *Ibid*.

[10] *Ibid*., p. 204.

[11] *Ibid*.

not imply the identity of sense and intellect by any means. The intellect is still abstractive and knows universals, whereas sense knows individuals. What is required is an account of the fact that what sense discovers – an actually existing object – is what is known by the intellect in virtue of its intelligible existence (its essence). This is what makes it necessary to give an account of how the intellect knows this actual being. In other words, if the act of existence is the heart of reality, a realist philosophy must assume that this act is present to (or in) the act of knowing (otherwise knowing would never reach the real) and it can only be so via sensible knowledge: "Here we discover the true realist meaning of the formula: *ens est quod primum cadit in intellectu*. With its first thrust the intellect apprehends what is most profound in its object: the *actus essendi*. But we do not encounter Pure Being in experience; we encounter the being of concrete substances whose sensible qualities affect our senses. Therefore, one could say that existence accompanies all our perceptions."[12]

That existence is apprehended by the intellect in any truthful knowing is therefore assumed in any coherent realism; *how* this can be accounted for is, however, not easy to see. It cannot be by means of abstraction, since this apprehends only universals and the *actus essendi* is that of a particular substance (since it is the act by which the form makes a particular thing actual). Nor can it be known merely by sense, since the objects of sense are sensible qualities and existence is certainly not that. That is: "the apprehension of existence belongs in the class of apprehensions of the singular, [therefore] we must also seek to determine how the apprehension of existence differs from other members of this class."[13] As we will see in the next section, this is the task of a philosophy of judgment and thus what is undertaken in "Knowledge and Existence." What I have tried to show thus far, is that the question of the apprehension of existence is absolutely central to the task of formulating a coherent realist alternative to the idealist project of critical philosophy and thereby to helping to establish the possibility of an independent Christian philosophy that can boldly assert its own principles

[12] *Ibid*., p. 205.

[13] *Ibid*., p. 195. Gilson goes on to argue that the difficulty of this task is part of what has motivated neo-Thomists to take up the critical project: "This difficult undertaking seems to have lead certain realists to become involved in critical philosophy. Thus they made a difficult task impossible, for when a problem concerning being arises, only metaphysics, not the critique, can offer a solution. Now, we have seen that the Cartesio-Thomists seek a critical justification for metaphysics; it therefore becomes necessary for them to explain how it is possible to apprehend existence before knowing what existence is." (195) This is further evidence of the extent to which the problems raised by critical philosophy and the task of articulating a non-critical realism revolved around the question of existence and its apprehension.

without the fatal accommodation to modern critical methodology. A realist philosophy must show how "the existential acts which affect and impregnate the intellect through the senses are raised to the level of consciousness, and [thus how] realist knowledge flows forth from this immediate contact between the known object and the knowing subject."[14]

Judgment and the Apprehension of Existence.

The apprehension of existence was a contested matter amongst neo-Thomists. Jacques Maritain attributed it to an intellectual intuition that is expressed in an affirmative judgment of existence and discovered reflexively therein and known under a concept, or else abstracted from sensible things in the same manner as any other common notion.[15] For Gilson this cannot be right. First of all, there can be no concept of existence, since concepts correspond to essences and existence is "beyond essence."[16] Furthermore, we have intuitions of sensible *things* not their existence as such. To be known by an intuition, the intellect would have to apprehend the existence apart from any phantasm "but that is impossible in the present state of human nature."[17] Rather, Gilson's account sees existence as the object of an act of judging.

In this he follows Thomas himself. As Joseph Owens explains, Thomas understood there to be two ways in which a thing presents itself to us: by its nature (or essence) and by its being. There is a corresponding two-fold activity of the intellect: first there is "formation" by which the intellect apprehends the thing by according to its nature or quiddity.[18] Second: the intellect "comprehends the thing's being by composing an affirmation, because also the being of a thing composed of matter and form, from which it [i.e., the intellect] gets the cognition, consists in a composition of form with matter, or of accident with subject."[19] In other words, just as the being of a

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[14] *Ibid*., p. 206.

[15] My very brief summary is derived from a summary of Maritain's conception of the apprehension of existence found in Joseph Owens: "Aquinas on Knowing Existence" *The Review of Metaphysics*, vol. 4 (1976): 671-672.

[16] It is "beyond essence" insofar as it is the act of an essence comprehending the intelligible form of a thing (hence: *actus essendi*). In the 1952 afterword to *Being and Some Philosophers*, Gilson admits that there must be a certain kind of concept of existence, but not a quidditative one. For discussion of this and later developments regarding his view of the concept of existence see: Harry La Plante, "Etienne Gilson and the Concept of Existence" *The Thomist*, vol. 28 (1964): 302-337.

[17] Owens, "Aquinas on Knowing Existence," p. 72.

[18] *Ibid*., p. 674. Owens puts this apprehension into contemporary parlance with the term "concept."

[19] *Ibid*., paraphrasing from Aquinas' *Commentary on the* ***Sentences*** *of Peter Lombard*, d. 38, q. 1, a. 3, Solut.

thing is a composition of form and matter, so the apprehension of that being consists in an act of composition. There is then a structural isomorphism between the object and the act by which it is known. This composition, argues Owens, cannot be expressed merely by a noun, or indeed as a noun-phrase: "The cognitional activity in question is the knowledge that something exists. Just 'knowledge of existence' or 'apprehension of existence' will not do [to name the activity], since the term 'existence' taken by itself does not say that anything exists. Here the object has to be expressed in a proposition, not by a noun alone."[20] This complex apprehension of a composite object is, then, rightly called "judgment," though St. Thomas himself does not use the term.

There are a couple of characteristics of Thomas' conception of judgment that should be noted. First, just as existential judgment must always be expressed in a proposition, so, conversely, predication in a judgment is always at bottom existential. According to Owens: "the [predicative] 'is' expresses for him first and foremost the 'actuality of every form.' The fact that something either exists or is so and so is in every case an existential actuality of the thing."[21] We will see that Gilson has a corresponding notion that "existential propositions" underlie predicative propositions. Secondly, the actuality of the form that is the object of judgment is "highly individual and non-repetitive."[22] Existence is not a universal and is not predicated univocally of each existent, but is particular to the thing in question at a given time. Thus knowledge by judgment is a kind of knowledge of singulars, but of a different order from the bare perception of sensible qualities. Judgment is a genuine act of the intellect rather than just sensation, but it is not simply abstractive. Thus it fulfills Gilson's requirement – discussed above – that, to understand the apprehension of existence, we need to find a kind of intellectual apprehension of singulars that is not mere sensation.

Gilson's philosophy of judgment in "Knowledge and Existence" stays largely true to Thomas' conception as unpacked by Owens; and it is to that chapter that I now turn. I will give a detailed analysis thereof, paying particular attention to a particular problem that needs to be addressed, viz. what is the nature of the connection between existence and judgment in Gilson's view? Is it representational? Causal? Etc. After I have done so, I will offer what I take to be the only way that Gilson can make the connection intelligible on his own terms, though this will require a change in the kind of causality that he imputes to *esse*.

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[20] *Ibid*., 680.
[21] *Ibid*., p. 681.
[22] *Ibid*., p. 683.

The Knowledge of Existence in "Knowledge and Existence"

Gilson starts out, like Aquinas, by distinguishing between judgment and conceiving. All knowledge is an act that forms a conception[23] of its object. There are two kinds of such conception, simple – as in the bare contemplation of a quiddity (knowing what that is) – and complex – as where "our intellect compounds or divides such quiddities."[24] In the first case, the act of the intellect is called a *concept* and in the second, a *judgment*. We express judgments verbally as *propositions*. Propositions consist of a *subject*, and a *predicate* and the proposition relates these so as to affirm or deny the predicate of the subject. The two terms are verbally joined by a *copula*, which (unlike the subject and predicate) does not designate a concept "but a determinate relation between the two terms." (190) The copula is a verb, specifically (and significantly) the verb "to be" usually in its present tense: "is."

This verb can do two things, however. First, it can function as the copula (as in the proposition "snow is white"). Second, it can be used to assert the existence of a subject (as in "snow is"). These uses give rise to two different sorts of propositions: "two term" and "one term." One term propositions pose a problem for the notion of judgment and propositions as typically understood: how can a one-term proposition be a composition or division of two concepts, since only one is named?

One answer would be to show that one-term propositions are merely disguised two-term propositions. Just as the apparently one term proposition: "Peter runs" can be put as a two term proposition: "Peter is running," (191) so perhaps we could say that "God is" could be made a two term proposition like "God is being." (191) The problem is, that, though we could conceive the "is" in "Peter is running" to merely be a copula rather than part of the meaning of the supposed predicate "running," this doesn't apply to the verb "to be": "is being" is redundant, since the "is" means the same as "being." It is not, then a genuinely two term proposition. In a two term proposition, the copula does not have any significance of its own apart from the syntactical function of

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[23] It is important to distinguish here between a "concept" and a "conception." The former refers specifically to the formulation of a definition of the nature or quiddity of a thing, whereas the latter is a "looser" term, referring to any act of apprehension or comprehension. La Plante argues that Gilson (particularly in the Appendix to *Being and Some Philosophers)* relies on the distinction between *conceptio* – which "refers to the act of judgment" – and *conceptus* – which "means the intellect's abstraction of an essence." The former includes the latter, but is not reducible to it. "Etienne Gilson and the Concept of Existence" pp. 317-318.

[24] Gilson, *Being and Some Philosophers,* p. 190. Henceforth, references to this text will be in parentheses in the text.

relating the subject and predicate; in a one-term proposition it does have its own (semantic) significance.

This all confirms the "metaphysical truth that existence is not a predicate" (as was discussed earlier in the book), since "being" can't be sensibly predicated of a subject as in "God is being." And this is no surprise, since the terms of a proposition must correspond to concepts, which are concepts *of* quiddities (essences), and existence doesn't have an essence; it is not a "what;" it is an act, the "primary act of being." (193) In one-term (or "existential") propositions, it never loses this "existential connotation, so that it cannot become a copula." (193)

Thus existential propositions cannot be converted into two-term "predicative" propositions. Can the reverse be done? Brentano tried, but his attempt did not fly. His primary mistake, says Gilson, was to assume that the copula of a two-term proposition "already means existence" (195) rather than merely signifying a relation. The "is" of the copula does not denote the actual existence of either the subject or the predicate. The proposition: "All swans are white" in spite of the actual existence of black swans is formally correct; which is to say that "existence is a prerequisite for the truth of any predication, but it does not directly fall under the scope of predication." (196)

The upshot of the mutual irreducibility of existential and predicative propositions is that the word "is" in a proposition must have its meaning "wholly contained in itself," (196) since it neither signifies the subject nor the predicate. "Is" thus does not signify a concept, which is the function of a noun. As an alternative, Gilson moves to consider it seriously as a verb, and to do so he turns to the proper custodians of verbs: the grammarians.

Gilson laments, however, that grammarians have largely been under the sway of the "metaphysical substantialism of Aristotle." (196) He disposes quickly with two early modern grammarians, Lancelot and Bossuet, who tried to wrestle the verb "to be" under a manageable concept. He then turns to modern grammarians for some help. Brunot manages to take verbs out from under Aristotle's substantializing thumb; where the philosopher analyzed verbs in terms of concepts (where "to depart" means "departure" (199)), Brunot lets verbs stand directly for "action in time and mode." (199) He thus "found himself in complete agreement with Thomas Aquinas." (199) That is, both of them realized that the function of "is" in existential propositions (i.e., as a verb) is primary and that, contrary to the problem for logicians, the real puzzle is how it came to be used as a copula in predicative judgments.

The answer to that puzzle, says Gilson, cannot be a logical one, but must be metaphysical. This is because logic cannot be concerned with existence or truth but only with formal correctness or validity: "If a judgment aims to be true, it aims beyond purely formal and logical correction, to achieve an

adequate expression of actually existing reality." (200) Therefore, each predicative judgment, to be true rather than merely correct, must presuppose an existential judgment, and this latter judgment is beyond (or "below") the scope of logic. So the verb "to be" became the copula, since even predicative judgments (which are the province of logic) are aimed at truth and truth is a function of actual existence: "the verb 'to be' is used as a copula because all judgments of attribution which are true or intend to be true aim to affirm or deny a certain way of being." (200) This confirms what we saw earlier as Thomas' own insistence that the predicative "is" is primarily (or originally) existential.

So, the whole logical problem that the differing use of "is" has in existential and predicative propositions is undermined by the fact that existential propositions do not fall under the scope of logic, but are also presupposed by the use of "is" in predicative propositions, since these too aim at truth and, hence, existence. That is, logic in a sense can't "catch" the copula, because it comes to the predicative proposition from a realm beyond its domain of competence: the realm of existence and truth, rather than validity. Once again, we can see here that, on Gilson's view, the starting point of critical philosophy (the realm of validity) cuts it off from its own existential sources, from those conditions that it cannot itself acknowledge and which nevertheless bear it up.

But questions remain about these existential judgments, which elude logic and underlie predicative propositions: "what remains for the metaphysician to do is to define the conditions for their very possibility." (202) These conditions are two-fold: that reality actually includes an act of existence that is distinct from essence, and that the mind is yet able to grasp it in thought or speech somehow. And this is Gilson's big trick, the one I have been anticipating thus far: can he pull off an account of existence that satisfies both these conditions? As I've argued, a great deal depends upon the answer, viz. the existence of a philosophically satisfactory realism that is a real alternative to critical idealism.

Gilson is confident that he has already proven that the first condition obtains, by having shown that any metaphysics that tries to do without existence fails. As for the second, it seems dubitable, since it seems that the mind grasps things via an essence (or a representation of some sort at least), and so existence – which is beyond essence and representation – must elude the mind. But, says Gilson, those who argue like that "fail to grasp the cognitive power of judgment." (202) Existence lies beyond essence and representation, but not beyond intellectual knowledge since it doesn't lie beyond judgment (as he has shown) and judgment is "the most perfect form of intellectual knowledge, and existence is its proper object." (202) In this he

accords with the Universal Doctor, but this doesn't explain, nor has he yet explained how it is that judgments can be *about* existence, since they are made of words which stand for concepts and existence can't be conceptualized. How can something made out of concepts be about something beyond concepts?

But perhaps this is not really such a mystery. Even concepts, says Gilson, pick out something that transcends them and which they cannot contain. A concept corresponds to an essence, but an essence is always the essence of an actually existing thing, and this act of existence is something that the essence cannot contain: "the actual object of a concept always contains more than its abstract definition. What it contains over and above its formal definition is its act of existing." (202) But Gilson just brings us back to the question here, by continuing: "and because such acts [of existing] transcend both essence and representation, they can be reached only by means of judgment. The proper function of judgment is to say existence, and this is why judgment is a type of cognition distinct from, and superior to, pure and simple abstract conceptualization." (202) Thus I will hold onto the question as we continue to follow him.

The problem with essentialists, says Gilson, is that they mistake the part for the whole, abstract essences for actually existing things. The role of judgment is to put those abstractions back into reality by saying either *that* they actually do or do not exist (existential judgments) or *how* they actually do or do not exist (predicative judgments). In the case of existential judgments, "my mental act [of judging] exactly answers the existential act of the known thing. Let us, rather say, that such a judgment intellectually reiterates an actual act of existing." (203) Is this our answer: that judgments can "contain" existence because the act of judging is the mental version of the act of existing? So in just the same way that existence is the primary act of a form/essence, so judging is the primary act of a concept? If this is right, we have an isomorphism between knowing and being all right (which is very much in keeping with Thomas), but it does not yet explain how the one can be "about" the other. What is the nature of the connection? We'll keep the question in mind a little longer, but return to Gilson's story.

Both abstraction – which separates essences from existents – and judgment – which puts them back – are necessary for knowledge. As such, though they are distinct, these two intellectual operations must never be conceived of as being separate: "abstraction and judgment are never separated in the mind because essence and existence are never separated in reality."[25]

[25] Gilson is here again in agreement with Owens' understanding of Thomas. He argues that "nature and existence are always known together" though they are irreducibly

(203-4) Thus, even when we simply think something though a concept (via an essence), it is always attached to existence, otherwise that thinking could never amount to knowledge. And this in turn means that being (understood as that which essence and existence together constitute) is always a component of our thinking: "Being accompanies all my representations. But that even is not saying enough, for each and every cognition is a cognition of being… Being, then, is not only the first and primary object of intellectual cognition, it is the cognition into which every other one ultimately resolves." (205)

Given this understanding of being and knowing, both essentialism and existentialism are wrong in that they both privilege one "aspect" of being and mistake it for the whole. Gilson/Aquinas' understanding of being and knowing emphasizes their inter-twining, whereas both essentialism and existentialism obsess about the world as it appears on one side or the other. For Gilson, "concepts express the common act of the knower and the known thing. To know a thing is to *be it* in an intellectual way." (205) This is his version of Aristotle's doctrine of knowing as the *adequatio rei et intellectus.*[26] So there is no fundamental division between knowing and being as both essentialism and existentialism suggest, "For an intellectual being such as man, thought is not the abstract objectification of existence, nor is existence the ceaseless breaking up of thought. To think is to act, just as to be is to act." (206) Thus we see how Gilson grounds his epistemological realism – which attempts to overcome the critical split between intellect and sense – in a Thomist metaphysics and ontology, which posits no fundamental gap between minds and bodies. Does this answer my question? I indicated above how Gilson takes judging and existing to be isomorphic; what if they're identical? Can this help us explain how judgment hooks onto existence? I'm not sure that it does. An intellect becomes its object formally; their identity is formal. As Gilson himself puts it, knowledge is "the intellectual becoming of an actual existence in an intellectual being." The existence of the object is its own and the act of the essence in the mind (which is the act of judging) is still the mind's own. They remain merely parallel in this sense. Existence is not a form, but the act of a form; thus judging cannot "take on its form" in the way the mind takes on the form of its object in conception. Are they linked by the formal identity of essence and quiddity? That would seem to fall afoul of the

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distinct, since existence actualizes nature and nature (formally) determines existence. Cf. "Aquinas on Knowing Existence," pp. 681-2.

[26] This is in fact a very Thomist spin on the formula. By saying that knowing is the thing "in an intellectual way," Gilson is incorporating an insight that Thomas adds to the account that Aristotle gives in *De Anima*, viz. that the form of the object is received by the mind in the act of knowing *according to the mode of the receiver*.

essence/existence distinction. Gilson has not yet provided the answer to my guiding question.

Perhaps we shall find the solution in sense perception. This is, he says, "the vital exchange which constantly takes place between existing intellectual souls and actually existing things. It is, in fact, the meeting point of two distinct acts of existing." (207) Gilson distinguishes *thinking* (the bare contemplation of essences, perhaps, as in logic) from *knowing,* which is indivisibly connected to existence by its truth-character. Perception is then essential to knowing by keeping thinking in touch with being: "To perceive is to experience existence, and to say through judgment that such an experience is true is to know existence." (207) We have seen that this connection is essential to a realist philosophy and its methodological denial is the downfall of any critical realism, but does it answer my question? Does judgment hook up with existence though a sensory experience of existence, the latter supplying the supra-conceptual content of the judgment (namely: existence)? Could it be that, though existence cannot be conceived, it can be experienced? I don't see that this helps. Though we can experience acts like kicking or running, these can be conceived. Existence itself cannot be perceived. It is for this reason that recourse to judgment – as an intellectual knowledge of singulars – was required in the first place; and we have thus just come back around to the question again: How does "judgment" explain the apprehension of existence? We shall wait some more.

Essentialism wants experience without existence, and existentialism wants experience without essence. You can't have the former because existence hitches a ride on every essence (as we've seen) and you can't have the latter since it would lack all intelligibility: "no concept there, nor even judgment, but the bare experiencing of an *is* which is not yet a *being*." (208) We don't ever have any experience that isn't simultaneously conceptual and existential: "That is why there are no concepts without judgments nor any judgments without concepts… all that which is conceived as a being is also judged to be an *is*… but the reverse holds true." (209) So my question about experiencing existence might have interpreted him a bit glibly. You don't experience pure existence, it always comes in a package with essence. But then that doesn't help explain how the act of judging "answers" the act of existence, unless you could say how existence hitches a ride on the communicated essence and gets the judgment going.

Essentialism and existentialism, Gilson says, are based on a mistaken desire for purity; the whatness of a thing totally unmixed with anything that blurs it, or the "thatness" without being diluted by thought. But purism always fails, as "pure art" and "pure music" show. Being means impurity since it is neither pure essence nor pure existence, but their unity. (209)

Gilson concludes by saying something about what this means for philosophy. Philosophy cannot simply be an act of thought (or "assumption" (212)), as with the idealists, because this leaves existence, and hence knowledge, out. It must instead be based on "seeing." That is, philosophy cannot start where critical philosophy does, but must begin with the world as experienced. This "seeing" is not an intellectual intuition, seemingly provided only to a chosen few, but the experience of a real world. This world is *both* intelligible *and* real, the things in it have both existence and essence. We can conceive the essences and make judgments about their real existence; a philosophical realism needs to give an account of both of these acts as well as of their metaphysical grounds. No philosophy could do without an account of the intelligibility of the world or at least the assumption of it; but no realist philosophy could do without grounding that intelligibility in real existence and this requires a satisfactory account of our knowledge of this ground.

I don't believe that Gilson has provided a fully satisfactory account in "Knowledge and Existence." He has indeed – following Thomas – shown that judgment is an intellectual knowledge of singular, structurally isomorphic with the kind of existence of creatures.[27] Yet I have tried to show by repeated questioning that he has not given an adequate characterization of the connection between them. They cannot be merely isomorphic and yet – as I've argued – the connection cannot be one of identity (judging and existing are different acts) nor can it be formal (since existence is the act of a form, not a form itself).

Gilson's metaphors give clarity to the question. He says in more than one place that the act of judging "answers to" the act of existence; elsewhere he says that it "reiterates" the act.[28] These metaphors are very significant: in what sense "answers"? If that simply means that it has a role in knowing isomorphic to that which existence has in being, then I'm not sure the question is answered. If it means a causal connection, then perhaps it does, but that connection would itself have to be explained. If it means that it's "about" existence, then the question is begged. Being a Thomist, Gilson would have to answer the question by appealing to some sort of a cause, since

[27] That is, both are compositional.

[28] Here is the metaphor again, at a crucial juncture (after discussing sensation as experience of existence): "Intellectual knowledge conceives existence, but the fruit of its conception is not the representation of an essence; it is an act which answers an act. Exactly, it is the act of an operation which answers an act of existing, and such an operation is itself an act because it directly flows from an act of existing. An epistemology in which judgment, not abstraction, reigns supreme is necessarily required by a metaphysics in which 'to be' reigns supreme in the order of actuality." (207-8)

"cause" in this context simply means: "that which accounts for something." What we need is an account of how the act of judgment answers to the act of existence; and the account will be broadly "causal" in this sense. But what sort of a cause?

It does not seem that it could be a material cause. After all, judgments are not made of existence, but are assembled out of various conceptions. Could it be that it is an efficient cause, that a thing's existential act makes a judgment come about in such a manner? It could be, perhaps in a similar manner that a thing's redness causes me to have a certain sensation when I look at it. But this is difficult to maintain at the level of a judgment. For one thing, if judgments came about simply due to the existence of a thing, it would be difficult to explain errors in judgment. Certainly any error in judgment would not be the fault of the judger.[29] Furthermore, there are plenty of things that exist (even in my sensory environment) that I do not make judgments about, or about which I willingly suspend judgment. If existence were an efficient cause of judgments, then it could be called "the act" of judgment, since it would be what makes judgments actual. Clearly this is not the case, judgments are acts in and of themselves, viz. acts of a mind, just as existence is the primary act of a sensible thing. Finally, as Lawrence Dewan points out, for Thomas, "efficient causes are subsisting things, i.e., *things which HAVE esse*;"[30] *esse* itself is not a subsisting thing, but rather that thing's first act and thus it cannot be an efficient cause. Neither could *esse*'s causality be formal for reasons already discussed; *esse* is not a form but the act of a form.[31]

Rather, I propose that, *vis-à-vis* judgment at least, the existential act's causality is final; that is, the act of existence is the end or perfection of the act of judging. All true knowing is, as we've seen an adequation of the mind to the thing. This is in one sense formal; in acts of simple apprehension, the mind becomes formally identical with its object. But it means more than that. It means that reality is the principle and perfection of knowing, it is that toward which knowing strives; reality is what knowing is *made for*, if you will. As judgment's proper object, then, existence plays this role for it; the judgment's perfection is an actually existing thing, and an existential judgment's perfection is thus that very act of existence. Furthermore, the causality of final causes is, in a sense, normative in a way that the other

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[29] These considerations factor into Aristotle's insistence that acts of simple apprehension (say of a sensible quality) cannot be false, but rather that only acts of composition can be false.

[30] Lawrence Dewan, "Etienne Gilson and the Actus Essendi" *Etudes Maritainiennes/Maritain Studies*, vol. 15 (1999), p. 96.

[31] And it could not have a form, since the act of *that* form would be *real* existence, and, if that act had a form, then *its* act would be *esse* and so on *ad infinitim*.

causes are not. Thus, as the final cause of an axe is to chop wood, an axe that cannot chop wood is somehow defective, indeed it is hardly an axe at all. Likewise, if the final cause of judgment is existence, then a judgment that does not correspond to a real existence (i.e., a false judgment) is defective, it is hardly a real judgment.[32] This gives sense to Gilson's metaphor, which states that the act of judgment "answers to" the act of existence: the latter provides the norm by which the former is measured.

I believe that characterizing the relationship of existence and judgment in terms of finality gives a satisfactory answer to my question, thus effectively giving a coherent understanding of the apprehension of existence and, in turn, providing for the possibility of a realism that can boldly repudiate the critical method. However, it conflicts with the way that Gilson himself understands *esse*'s causality. He only ever discusses *esse* as an *efficient* cause of things: "Actual existence, then, is the efficient cause by which essence in turn is the formal cause which makes an actual existence to be 'such an existence.'" (172) Dewan argues, against this conception, that, for St. Thomas, God is the efficient cause of *esse* through the mediation of a formal cause (which corresponds to a thing's essence).[33] *Esse*, on this view, is more like a final cause of things, since – like all final causes – it is "the effect of all other sorts of causality"[34] and yet first in the order of causes:

> He [Thomas] says that the order of ends corresponds to the order of agents, in such a fashion that to the first agent corresponds the ultimate end, and the other ends are proportionate to the other agents. *Esse*, which is the proper effect and the end corresponding to the operation of the first agent must, then, have the role of ultimate end. But the end, though first in intention, is last in the operation, and is the effect of the other causes.[35]

This he argues with regard to the *esse* of things, but something similar may be said about the relation of *esse* and judgment. In intention – that is, as

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[32] In fact, if Donald Davidson is to be believed, a manifold of false judgments could not even be recognized as judgments at all; they are what they are in virtue of their truth-functions. Similarly, I would argue that a judgment that could in principle not be true of a real existent (say a contradictory one) isn't really a judgment at all or is only a pseudo-judgment (just as fictional things are pseudo-things). Its incapacity to fulfill its end, to answer to a genuine act of existence, "denatures" it, if you will.

[33] "Gilson and the Actus Essendi," p. 94. He quotes Thomas from *De veritate*: "God causes in us natural *esse* by creation, WITHOUT THE MEDIATION OF ANY EFFICIENT CAUSE [caps, L.D.], but nevertheless through the mediation of a formal cause: because natural form is the principle of natural *esse*…"

[34] *Ibid*., p. 95.

[35] *Ibid*.

that toward which judgment is directed – *esse* is first, but the perfection of the judgment (i.e., adequation to *esse*) comes about via many other causes: the mind as material cause, a human agent (or perhaps a phantasm) as efficient cause; and the essence of the object in question as formal cause. If Dewan is right – and it corresponds to what I take to be the only way of accounting for the relation between judgment and *esse* – then Gilson needs to reformulate the kind of causality that he accords to *esse*. Dewan does not suggest, and neither do I, that this is an insuperable obstacle for Gilson, but it would require some work. Unless that work is done, then it cannot be concluded that Gilson has succeeded in demonstrating that there is a philosophically coherent realism that does not need to take the critical turn.

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Justice, Piety, and Mercy: A Thomist Inquiry

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I. Introduction

Among his notable cast of characters, Charles Dickens introduces a certain Mrs. Jellyby, and so teaches us a lesson in moral psychology. We can learn something important from this "diminutive woman with handsome eyes" and their "curious habit of seeming to look a long way off [a]s if they could see nothing nearer than Africa."[1] Whether Dickens himself learned the right lesson is unclear, in that his own eyes came to focus more on England's woes than on his ill-used wife, the mother of their ten children.

Yet if there's folly in seeing nothing nearer than Africa, there's folly in not seeing beyond our own comfort. Mrs. Jellyby's telescopic philanthropy, Dickens's target, has its idiot opposite in Faith Popcorn's cocooning counsels. How might we better inform our moral vision? Where are the lenses through which we can see things as they are? There is, straightway, an initial pair of questions to explore. First, what does distributive justice require? And, second, what does the distinct piety of the family ask of us? To this initial pair of questions, I will add another. First, might not mercy sometimes help to balance justice and piety? And, second, can we – in the end – harmonize justice, piety, and mercy?

Such questions invite theoretical answers. But theory should guide us beyond the notional and the general to the real and the particular. Is it not the

[1] Cited in Christina Sommers, "Filial Morality," in *Vice & Virtue in Everyday Life,* ed. by Christina Sommers and Fred Sommers (Belmont, CA: Wadsworth, 2004), p. 271.

real and the particular which spark such questions and put their solutions to the test? With an eye to particulars, let me suggest a pair of examples that can help give a context for our work.

Case #1: Professor Fortuna has a windfall, courtesy of the California Lottery, and she now has $15,000 at her disposal. Reviewing several options, two command her attention. The first finds her taking a long delayed vacation in Tuscany, with her husband at hand. The second calls on Professor Fortuna to give the money to a trusted medical missionary. The missionary, she knows, will use it to provide antibiotics to hundreds of children whose lives are at great risk.

Case #2: Paul Farmer is a research physician and public health advocate. He has launched, and helped sustain, state-of-the-art medical projects in Haiti and Siberia. He's also convinced pharmaceutical firms to market affordable drugs for tens of thousands of at-risk patients. But he can only do so much. Suppose Farmer sees that continuing his work, at his usual pace, will jeopardize his marriage and harm his young daughter.

How, then, are we to advise Professor Fortuna and Dr. Farmer? Chastened by Jellyby and Dickens, yet smelling the popcorn at home, I would urge both Fortuna and Farmer to act justly and with familial piety – and to show how both virtues are in harmony with mercy.

II. The Problem

But my advice leads to a tangled problem which, no doubt, you already have in mind. In such cases, how is one to specify what justice demands and what piety requires, while discerning how mercy might help us to honor both?

This tangled problem takes us back to Plato's *Euthyphro* and, beyond, to the tragedian Sophocles. But the problem is also a matter of current debate. Turning St. Paul on his head, some warn that charity, without justice, makes one a sounding cymbal. Thus Peter Singer says that what many see as charity is, in fact, due in justice. Justice, moreover, demands that we maximize utility. Christina Sommers, in contrast, finds that sometimes utility must wait its turn. She argues that what we owe to others often depends on how we are related to them. And what relation could be stronger than belonging to the same family?

But a specter lurks over any debate about justice and charity, the place of piety, and the plea of mercy. It is the possibility that on occasion we must simply choose among competing virtues. The choice might befall an individual (alas, Antigone) or an entire culture (compare Western universalism with Asian Confucianism). This spectral challenge might be either modest or immodest. Its first, and modest, form doubts whether there are reasonable public criteria for ordering and unifying the virtues. Its second,

and immodest, form insists that the virtues defy ordering, because they are in themselves incompatible.

III. A Thomist Contribution

St. Thomas Aquinas has much to offer us in sorting out the requirements of both justice and piety. With Aristotle, he affirms that the good cannot be at odds with itself; accordingly "no virtue is opposed to another virtue…."[2] Aquinas is confident that there is a harmony among the virtues, and he seeks to find it.

Some definitions are in order. Thomas defines justice as "a habit whereby a man renders to each one his due by a constant and perpetual will."[3] His definition follows Aristotle's: "justice is a habit whereby a man is said to be capable of doing just actions in accordance with his choice."[4] Again following Aristotle, Thomas distinguishes between commutative and distributive justice. The former addresses dealings between two individuals, as such. But our focus is the latter, distributive justice. Thomas explains distributive justice in terms of "the order of the whole towards the parts, to which corresponds the order of that which belongs to the community in relation to each single person."[5]

What of piety? With Cicero, Thomas sees piety as a potential part of justice. As such, it shares in the character of justice and yet falls short of its fullness. Like justice, piety is directed to others. Unlike justice, piety cannot fully render another his due. How could we repay God for the act of Creation? How could we even repay our parents for conceiving us? Thus Thomas, identifying our parents as our "connatural principle of being," annexes filial piety to justice as a special virtue. It is this filial piety, rather than a religious or patriotic piety, which is of chief interest now.[6]

In the order of grace, Thomas adds, piety is a gift of the Holy Spirit. There is an analogy at work: "The piety that pays duty and worship to a father in the flesh is a virtue, but the piety that is a gift pays this to God as Father."[7] While justice is not a gift of the Spirit, the Decalogue itself pertains to justice. Thomas, indeed, links piety, as a potential part of justice, with the Decalogue.

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[2] Thomas Aquinas, *Summa Theologica*, literally tr. by Fathers of the English Dominican Province (New York: Benziger Brothers, 1947), II-II, 101, 4 – hereafter referred to as *ST*.
[3] *Ibid.,* II-II, 58, 1.
[4] Aristotle, *Nicomachean Ethics*, V. 5.
[5] Aquinas, *ST*, II-II, 61.
[6] See *Ibid.,* II-II, 101, 3.
[7] *Ibid.,* II-II, 121, 1.

> "[T]he first three precepts are about acts of religion, which is the chief part of justice; the fourth precept is about acts of piety, which is the second part of justice; and the six remaining are about justice commonly so called, which is observed among equals."[8]

Though some set justice and piety at odds with each other, there is a third virtue to define and to put to work in the service of their harmony. It is *misericordia*, that is, mercy. For Thomas mercy is "grief for another's distress," not simply the feeling of grief, but a tempered grief "ruled by reason" and directed by "elective habit."[9] And how stands *misericordia* in relation to the other virtues? Thomas is emphatic: "[O]f all the virtues which relate to our neighbor, mercy is the greatest."[10] Shakespeare's Portia would add that "earthly power doth then show likest God's / When Mercy seasons justice."[11] Yet charity still reigns supreme over all in that it unites us to God.

Definitions in hand, we can return to Professor Fortuna and Dr. Farmer. If we make headway with their pair of cases, we can turn to another that current debate suggests. It would be mistaken, of course, to suppose that Thomas's definitions apply themselves to particular cases. Rather, it is the prudent person who brings them into play, and I will (imprudently) strive to be such.

What, then, of Fortuna? Distributive justice does not demand that she nix her Tuscan tour. None of us, here and now, must make up for the cumulative failings of others. Many have visited Tuscany and many will do so, largely free of worry about children at risk. What justice does demand is that Fortuna and her fellow Tuscan tourists, together with those who buy yachts, vacation homes, and BMWs (how the list grows), give their "fair share" for the children. Nor is any familial piety at issue. Fortuna has a spouse, but matrimonial obligations do not extend to a Tuscan tour.

If, then, the Professor denies neither justice nor piety, might she follow her fancy? Not if she has a heart. She has seen pictures of the children she can help save. Mercy calls on her to do so. Perhaps, though, Fortuna is deaf to mercy's voice. Or she might lack the elective habit that could move her beyond easy sympathy to disciplined action. It is a sobering thought, but perhaps many of us, much of the time, are deaf to mercy or feckless in acting on it.

What of Paul Farmer? He does the work of justice; he hears the voice of mercy. But in doing so he must honor the obligations he has to his family. It is not filial piety, as such, that demands that he do so. Rather, it is a familial

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[8] *Ibid*., II-II, 122, 1.
[9] *Ibid*., II-II, 30, 3.
[10] *Ibid*., II-II, 30, 4.
[11] William Shakespeare, *The Merchant of Venice*, Act 4, Scene 1.

piety, a virtue also anchored to connaturality, which demands it. Together Farmer and his wife have given life to their daughter. Together they have care of one another in a way that commits them to her nurture. This mutuality must shape their justice and mercy.

Doubtless, some will fault my casuistry in the cases of Fortuna and Farmer, and I will return to their keenest objections. But now I want to look to a new pair of cases that current debate suggests. In doing so, I pursue a new exercise in casuistry. Jane English's discussion of what adult children owe their parents suggests the first new case. Peter Singer's view of filial piety introduces the second.

Case #3: Suppose, *per impossibile*, that Hulga had a normal childhood. Things only soured when she began to take "a larger view of life." By the time Hulga began graduate studies, she had little affection for her parents. Her parents, in turn, had less affection for her, especially in light of her rare visits. She did, of course, return for her father's funeral. Now that her mother is confined to home, Hulga wonders if she ought to visit her more. But unless Hulga writes every day, her work suffers. And she's not unfeeling. She often visits a friend with a neurological disorder. So Hulga focuses on the fact that her mother has good care and that her friend is just what her mother is not: a friend. Thanksgiving will be soon enough to visit, not that she *owes* it to her mother.

Case #4: Hugo is looking forward to his twentieth class reunion, a weekend affair that starts tomorrow. So are his old friends, and they've been exchanging e-mails about the event. Hugo thinks that he might come away from the reunion with a better sense of who he is. Perspective gets more important as one gets older. Poor Dad; he never stops to smell the roses. Well, he'd better learn. A couple hours ago, he'd called to say he needed Hugo's help. Maybe it was the medication change, he said, but he was strangely depressed. Sure, his father would miss him. But so would his friends. Hugo calculates the hurt feelings, the dashed hopes, and the number of people involved. Result: he tells Dad to call the doctor.

In both Case #3 and Case #4, its filial piety, strictly understood, that is the chief concern. This was not so in Case #1 or Case #2. Our new cases differ, though, with regard to how and why their respective protagonists deny the duties of filial piety. Hulga largely supplants justice with affection, or lack thereof, to excuse herself from the demands of filial piety. (Piety, we recall, is a potential part of justice.) Hugo appeals to utility to excuse him from the demands of filial piety. Utility, we recall, on J.S. Mill's view, shapes the justice of which piety is a potential part. If now I might, imprudently, return to my role as a prudent person, I urge both Hulga and Hugo to form a Thomist's conscience.

Is it true that Hulga doesn't owe her mother thanks, much less, say, a monthly visit? By no means is this the case. She owes her mother her very life, and for this she can never repay her. To be sure, there is no duty to spend one's life repaying a debt that one cannot repay. And the loss of affection between mother and daughter is disturbing. But even if one's mother isn't a friend, she is always one's mother. For this reason alone, one should do one's best to meet her basic needs, perhaps beginning with a good faith effort to rekindle the affection that will make it easier to do so.

What of Hugo? Is it true that maximizing preference-satisfaction dispenses him from filial duty? By no means is this the case. There is, for a start, no objective way to rank the preferences at issue. Even if one appeals to the number of those involved and the strength of their preferences, one cannot coherently abstract the preferences from their objects. Renewing a friendship, the object of one set of preferences, *ought not* to be preferred to a son's caring for a father in medical jeopardy, the object of another preference. One ought, rather, to prefer to help that very man to whom one owes one's life. Beyond this, there is the vexed question of the heterogeneous quality of competing preferences. Indeed, some preferences, like some pleasures, might be altogether without moral weight.

But enough of this second round of casuistry. It is time to turn to a pair of pressing objections and offer what reply I can.

IV. Objections & Replies

Of the many likely objections to my casuistry, two are decidedly sharp and most fundamental. The first is "the biologism objection." It recognizes that my case for filial piety appeals to a principle of connaturality: we owe honor and respect to our parents as the very sources of our lives. But this, the critic claims, privileges a merely biological relation. Why, the critic asks, should biology give rise to a primary moral obligation?

The second objection, a specter already noted, specifies "the disunity of the virtues objection." If we accept justice, piety, and mercy as virtues, the critic insists that we also embrace the individual autonomy of the moderns and the impartial beneficence of the utilitarians. Having registered this demand, the critic then points out that it is not even clear that in practice one can unite justice, piety, and mercy. But even if one can, continues the critic, my casuistry suggests that one *cannot* so unite the former virtues with the modern and utilitarian virtues now at issue.

Let's look first at "the biologism objection." It sees parenthood as a brute physical fact and no more. Even Claudia Mills, who argues for a special familial ethic, worries about ceding too much to biology. She says that the familial ethic rests, more specifically, on the human good of an unconditional

and unchosen relation of love. Yet she also asks, as well she might, "Where, after all, do truly unchosen relationships come from, if not from our biological links to one another?"[12]

In forming a fuller answer to the charge of biologism, one should begin by pointing out that human biology, rightly understood, conjoins procreative intimacy with a parental orientation to the nurturing of children. In this regard, "the Jewish mother" is the characteristically human mother; "the watchful father" is the characteristically human father. To relegate these phenomena to *mere* biology invites us to "shift down," as it were, from the rich complexity of what we daily experience to supposedly parallel patterns of cellular activity. Why accept so reductive an invitation?

But something else drives the charge of biologism. It is a barely submerged judgment that life itself is only an instrumental good, of value only because of what we make of it. In becoming adults, the young make of their lives what they will. They fashion, or fail to fashion, lives of authenticity; in this they find the meaning of their lives. We are, of course, all (adult) children of our parents. We neither chose to be conceived nor, at first, even nurtured. The ethical duties which we now have to our parents, and they to us, come about through our free commitments. Biology sets the stage; we alone are the actors – or so some proclaim.

How is one to counter this instrumentalism? Proofs that such-and-such is an intrinsic good, much less incommensurable and non-fungible, are in short supply. (The Terri Schiavo tragedy underscores this.) One might call attention to the almost universal appeal of life, to its central place in all we do, and to the outrage of putting a price on it. But then one must say "Come and see." Or better yet: "Come and see with the eyes of a practically reasonable person." At this point, the burden of proof lies with those who refuse to look, whether at the good or at what puts it in peril. Here we might recall, respectively, Kierkegaard's theme of "the weight of glory"[13] and the mythic power of the fall of Icarus.

Let's next consider "the disunity of the virtues objection," and in the immodest form in which Isaiah Berlin, its celebrated proponent, presents it. Berlin rejects what he calls the "ancient faith [which] rests on the conviction that all the positive values in which men have believed must, in the end, be

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[12] Claudia Mills, "The Ties that Bind: Duties to Family Members," in *What's Wromg? Applied Ethics and their Critics*, ed. by David Boonin and Graham Oddie (Oxford: Oxford University Press, 2005), p. 334.

[13] Cited in John F. Crosby, *The Selfhood of the Human Person* (Washington, DC: Catholic University of America Press, 1996), pp. 93, 95.

compatible, and perhaps even entail one another."[14] Indeed, this ancient faith is largely "responsible for the slaughter of individuals on the altars of the great historical ideals…."[15] Though a liberal, Berlin consistently rejected even liberty as an absolute around which all virtues might be structured. Any monism, he charged, is simplistic and thus suspect, if only for the false comfort it offers. (Were Sir Isaiah more consistent, he might have noted the comfort that a "pick and choose" view of the virtues offers, perhaps even excusing his affair with H. L. A. Hart's wife, though Hart thought him his best friend.)[16]

How might one counter this "disunity objection?" At the highest of metaphysical elevations, Thomists affirm the intelligibility of being; hence they search out its consequent harmony, whether in science or ethics. Berlin, for his part, rightly warns against any artificial unity. Still, at a lesser elevation, as a volunteer casuist, I have given some reason to think there is a harmony among the virtues of justice, filial and familial piety, and mercy. The immediate priority of any one of them serves to order rather than to deny the others. Of course, no casuist, no matter how industrious, could address every case.

Is there, however, any basis to suppose that such a unity extends to the autonomy of the moderns and the beneficence of the utilitarians? It seems not. But this discovery, rather than advancing the disunity objection, suggests that such autonomy and such beneficence are counterfeit virtues. Neither autonomy nor beneficence, so understood, strikes me as in accord with right reason. Such autonomy denies that, as Alasdair MacIntyre reminds us, we are *dependent* rational animals.[17] Such beneficence equally supposes a flawed philosophical anthropology. It calls upon us to measure what we cannot measure and to give equal moral weight to what requires special moral consideration, in light of our very way of being. We cannot consistently live our lives with such autonomy or such beneficence, nor can we imagine how a society embracing them could endure.

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[14] Isaiah Berlin, *Four Essays on Liberty* (London: Oxford University Press, 1969), p. 167.
[15] *Ibid*.
[16] See Nicola Lacy, *A Life of H. L. A. Hart: The Nightmare and the Noble Dream* (New York: Oxford University Press, 2004), pp. 177-178.
[17] See Alasdair MacIntyre, *Dependant Rational Animals: Why Human Beings Need the Virtues* (Chicago and La Salle, Illinois: Carus Publishing Company, 1999).

V. Envoi

Perhaps there is time for one last test for those who would harmonize justice, piety, and mercy, especially while reflecting on the family. What are we to say about adoptive parents and their adopted children?

Adoptive parents do not give life to their children, nor do their children have a duty to honor and respect them on this account. All children, however, have such a duty to their biological parents, absent gravely distorting reproductive technology. Thus the reunion of biological parents with their children is ordinarily a good thing. Adoptive parents, one hastens to add, do give their children the distinctive nurturing that enables them to flourish. So intensively do they nurture their children that we might well see it as akin to a biological imprinting. More critical still is the nurturing of spirit that a loving parent can offer. For these reasons, then, children have a duty to honor and respect their adoptive parents.

From the honor and respect that children owe their parents, biological or adoptive, there can flow a duty to nurture in turn one's parents, even in the basic ways that parents nurture children. And yet St. Thomas teaches that the duty of a parent, in light of connaturality, is stronger than the duty of a son or daughter. "Since a father stands in the relation of principle, and his son in the relation of that which is from a principle, it is essentially fitting for a father to support his son: and [so] he is bound to support him not only for a time, but for all of his life, and this is to lay by [for him]."[18]

For Thomas, Scripture was always in mind. In these matters, his last word might well be that the saving power of Jesus Christ brings it to pass that we all can become *adopted* children of the Father (*Galatians* 4: 4-5). Thus grace heals nature in order to build upon it.

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[18] Aquinas, *ST*, II-II, 101, 2.

The Migration of Philosophical Texts: Buddhist Critical Social Theory and Robert Hattam's *Awakening-Struggle*

Veronique Tomaszewski Ramses

> *Thus philosophy, a thing of the highest utility, flourished in antiquity among the barbarians, shedding its light over the nations. And afterwards it came to Greece. First in its ranks were the prophets of the Egyptians; and the Chaldeans among the Assyrians; and the Druids among the Gauls; and the Sramanas among the Bactrians ('Σαρμαναίοι Βάκτρων'); and the philosophers of the Celts; and the Magi of the Persians, who foretold the Saviour's birth, and came into the land of Judea guided by a star. The Indian gymnosophists are also in the number, and the other barbarian philosophers. And of these there are two classes, some of them called Sramanas ('Σαρμάναι,'), and others Brahmins ('ραφμαναι').*
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> Clement of Alexandria "The Stromata, or Miscellanies," Book I, Chapter XV

Introduction

As the preceding quotation from Clement of Alexandria (at the end of the second century A.D.) indicates, migrations and borrowings between different philosophical traditions are not new. Bactrian Buddhists (Sramanas) and Indian Gymnosophists had a strong influence on Greek thought. Alexandria itself was a cosmopolitan and multicultural city that had already embraced a broad and tolerant intellectual life where Jews had adopted the Greek language and where newly converted Christians were trying to make sense of

divergent eschatological views. Historians have found subtle, but intelligible parallels between early Greek philosophy and Eastern thought. The Heraclitean fire resembles Buddhist impermanence; the Greek Logos resembles the way of the Tao, just to name two examples. Pythagoras had introduced the idea of eternal recurrence into Greek thought, after having studied earlier Egyptian scriptures. Aristotle himself had received an indirect influence and his philosophy suggests some links with Eastern philosophies.[1] Aristotelian philosophy itself had a long lineage up to the 19th and 20th centuries with Schopenhauer,[2] who influenced Nietzsche and the existentialists, and who in turn influenced the early thinkers of the Frankfurt School of Critical Theory discussed in this paper.

Buddhism preceded Christianity by more than four hundred years, even though each philosophical system took close to two hundred years to evolve. The moral precepts advocated by Buddhism (from the time of Ashoka through his edicts) influenced the Christian moral precepts that followed: respect for life, love and compassion, non violence, forgiveness to sinners, tolerance, meditation and monastic life as ethical ways to cultivate these

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[1] It has been claimed that Aristotle had met a Buddhist monk who had come from India with Alexander the Great. It is unclear, of course, if Aristotle had written most of his books after or before he had met this Buddhist monk.

[2] Arthur Schopenhauer wrote: "If I were to take the results of my philosophy as the standard of truth, I would have to concede to Buddhism the pre-eminence over the rest." (Schopenhauer, *The World as Will and Representation*, tr. R. B. Haldane [Boston: Treknor & Cie., 1887], Vol. 2, 3rd ed., p. 371)

As Peter Abelson recalled,

> When the tenets of Buddhism became known in Europe during the third and fourth decade of the nineteenth century, Arthur Schopenhauer was delighted with the affinity they showed to his own philosophy. Having completed his main work Die Welt als Wille und Vorstellung as early as 1818, he considered it an entirely new (and thus pure) expression of the wisdom once taught by the Buddha – at times he even called himself a "Buddhaist."
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> This conviction of being an original European Buddhist kept Schopenhauer from making a detailed philosophical comparison between his system and those of the Buddhist schools he had read up on. To him, the connection was obvious. In reprints of the main work and later writings, he did point out certain similarities, making comments on Buddhism that astonish the present-day reader with their adequacy (considering the immaturity of Indology in his time), but he never bothered to explain the exact philosophical nature of the link he put forward, causing it to remain a matter of atmosphere rather than content. ("Schopenhauer and Buddhism," *Philosophy East and West*, Vol. 43, no. 2 [1993]: pp. 255-278.)

precepts. Jesus and Buddha Shakyamuni's lives present striking parallels.[3] These similarities suggest the possibility of the propagation of Buddhist ideals into the Western World.

Today, another movement of the pendulum takes us back to the East, on the terrain of engagement – that is, of philosophy applied to social justice – with the unusual cross-cultural work that characterizes Robert Hattam's *Awaking-Struggle* – where Buddhist philosophy engages in a revitalized dialogue with its Western counterparts, but this time (and this is the novelty of this era) initiated by Western scholars who have converted to Buddhism.

Since the 1970s and the feminist attacks on the Cartesian scientific ethos – amplified by Foucault's *Philosophie de l'homme* and even post-modern, post-constructionist models developed by Lyotard, Derrida, and their followers – the migration of philosophical texts towards the East has continued on a much larger scale and, more importantly, with real depth. The self-sufficient Cartesian ego and all the dichotomies and dualities that such a philosophical paradigm must maintain to survive, prove today to be discarded in favour of a non-dualistic, holistic perspective, back to ancient Greek philosophers!

Hattam does not hesitate to introduce his work as being a genuine autobiographical project. This project was born from a necessity – by a Western scholar who practices Buddhism to reconcile or at least open a dialogue between two sensitivities that confront or oppose each other within one's own mind, body and heart. Aware that the mind is a sixth sense from a Buddhist perspective, a Western Buddhist scholar needs to investigate and dissociate his or her mind from his or her self/ego, observing and analyzing his or her intellectual work with the unavoidable doubt or distance required or encouraged by meditative practice. This phenomenon, in itself, should be of great interest to philosophers of science, or even of life.

Most Western scholars who practice some form of Buddhism have until recently specialized in Buddhist studies. In that field, we find Robert Thurman at Columbia University, Jeffrey Hopkins who has just retired from the University of Virginia, Jan Willis, the first African-American scholar of Indo-Tibetan Buddhism who teaches at Wesleyan University, and so on. In Canada, we have Victor Sogen Hori at McGill University and Leslie Kawamura from the University of Calgary, to name a few. But Robert Hattam belongs to another growing trend, where Western scholars use their Buddhist practice to re-work a non-religious academic field: Bell Hooks in cultural

[3] Saint Jerome, in the 4th century CE, mentions the birth of the Buddha, who he says "was born from the side of a virgin." More recently, Robert Elinor published *Buddha & Christ* (Trumbull: Weatherhill Inc., 2000) a work that visually approaches the two stories and shows how they both influenced religious art.

studies, David R. Loy in psychoanalysis,[4] and before them, of course, Heidegger and Erich Fromm. Hattam himself lectures in the School of Education, at the University of South Australia.

Hattam's project consists of bringing into sharper focus an emerging dialogic space between critical theory and Buddhism. He attempts to map the broad contours of this dialogic space, and from this vantage point to provide an imagining of the possibilities for furthering a dialogic encounter between a critical and a Buddhist sensibility. Fromm had taken that route before, but Hattam realized that, like Schopenhauer, Fromm had failed to show how the articulation could take place and actually help change both mind and society. Hence Hattam's cautious warning that he wants to open a dialogue that brings some form of real engagement. As Hattam clearly states:

> The central proposition in this book is the impossibility of disentangling 'awakening' and 'struggle' if we are to collectively move towards a more socially just society, or if the very possibility of dharma practice is to be sustained. . . . To not engage in the practices of 'awakening' is to assume naïvely that the path to a socially just society involves merely transformation outside of one's self. . . . How is an enlightened society possible without enlightened people to manifest that enlightenment? . . .To take seriously the interpermeation of 'awakening' and 'struggle' means redefining the subject of politics and the very notion of politics itself. Awakening-struggle demands . . . that politics be simultaneously about both inner and outer transformation, both about self and society, both mind and social structure.[5]

While the first five chapters of Hattam's book articulate philosophical positions (i.e., critical theory, and Buddhist Mahayana philosophy), it is truly Chapter Six, the last one, which brings novelty and opportunity to this otherwise *dialogue de sourds* between (Marxist) social critical theorists and Buddhist philosophers and practitioners. I will begin, then, by briefly recalling the main aspects of critical (social) theory as put forward by the Frankfurt School of Critical Theory, past and present. I will then move on to present a condensed explanation of the main philosophical points of Buddhism as developed by Hattam. We will then be able to contemplate the possibilities of dialogue as foreseen by the author. This will lead us to

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[4] See, for instance, papers by Loy in *Philosophy East and West,* Vol. 55, number 2, April 2005 and other numerous books and articles published by the prolific writer. *Psychoanalysis and Buddhism: An Unfolding Dialogue* (2005), ed. Jeremy D. Safran, is a good start to evaluate the scope of the paradigm.

[5] Robert Hattam, *Awakening-Struggle: Towards a Buddhist Critical Social Theory* (Flaxton, Aus.: Post Pressed, 2004), p. 275 – hereafter referred to as *Awakening-Struggle*.

examine an early attempt by Fromm at bringing together (Zen) Buddhism and critical theory, as applied to psychoanalysis. This is followed by comments on Hattam's personal contribution, in order to evaluate in which direction his work takes us on the path of engaged scholarly method (scholarship). We will conclude with some remarks on the meaning of such migration to the East for the future of social research and the humanities.

Critical (Social) Theory

Horkheimer clearly stated the Institute's research program as follows:

> Actualizing some of the most ancient and important philosophical problems: the question of the connection between the economic life of society, the psychological development of its individuals, and the changes within specific areas of culture (sciences, art, religion, but also laws, customs, fashion, public opinion, sports, entertainments, lifestyles, …).[6]

The first generation of scholars who constituted the Frankfurt School of Critical Theory took charge of this first truly multi-disciplinary programme, even though they formed a small group comprised by Herbert Marcuse, Max Horkheimer, Theodor Adorno, Walter Benjamin, Erich Fromm, Leo Lowenthal and Jürgen Habermas. All were influenced by Marx's reworking of the "ancient problematic" and all tried to align it with their Jewish background – and even mysticism (when it comes to Erich Fromm and Walter Benjamin). But the religious as such was never on the agenda of the School. Immersed in materialist dialectics, they tried to reveal how interconnected all philosophical, social, economic and political problems are. The question of the individual, then, was not so much how much influence does one individual have, but how much weight does society put on individuals' lives to the point of alienating most of them.

Critical theory, though, has become a theory cluster. There is no single critical theory, as the tradition itself is self-reflexive by nature and has taken on many ways of representing critical theory. Horkheimer situated Critical Theory between philosophy and social science, which brought Adorno and Popper into strong debates about the historicity of the object of research and the claim of the limitations of the scientific validity of such historical endeavour. So between philosophy and social science, and beyond Kellner's periodisation of the three generations of critical theorists, Hattam proposes to see critical theory in terms of a neo-Kantian sensibility "that proceeds through a variety of transformations as various social philosophers have developed

[6] M. Horkheimer, *Between Philosophy and Social Science: Selected Early Writings* (Cambridge, MA: MIT Press, 1993), p. 11.

critiques of modernity that were specific for their changing historical circumstances."[7]

Critical theory has theorized the human being, using a range of other theories: existentialism, phenomenology, and psychoanalytic theories, as well as (more recently) Foucault, and it has a renewed interest in the politics of identity. Hattam has concluded that critical theory needs contemporary methodologies to tackle fundamental questions, such as the relation between particular existence and universal reason; the relation between the real and idea; or even the relation between life and spirit, adapted to a new problematic.

Buddhist Mahayana Philosophy

Hattam introduces Buddhism by first listing the names and traditions of his teachers, inscribing his own Buddhist practice within a Tibetan Buddhist lineage of the Gelupa tradition. He introduces Lam Rim, the Four Noble Truths, and then moves on to presenting the Gelupa perspective.

A whole chapter is dedicated to the perspective of the bodhisattva in order to introduce and expand upon socially engaged Buddhism as a new social movement. As Hattam emphasizes: "In the debate about the nature of a socially-engaged form of Buddhism, the meaning of the Bodhisattva vow is central, especially for those who practice within a Mahayana tradition."[8]

A Bodhisattva has to be defined in terms of bodhicitta, that is the awakening heart (relative bodhicitta) and the wisdom realizing emptiness (ultimate bodhicitta). What is important is the present and what has to be renounced is a mind that discriminates on the basis of "I," "me" and "mine;" in other words, a Bodhisattva is a person who cultivates altruism, generosity, love and compassion, articulating the whole by using method (meditation), discipline (consistence, effort and persistence), loving kindness (metta) and wisdom (knowledge). Such Bodhisattva is on the Eight-fold path, has cleared all poisonous minds, and is on the path of the Middle-way, away from extremes such as materialism at one end and idealism at the other end.

The Bodhisattva is also, to borrow Christian terminology, a kind of Saint who vows to be reborn and suffer the life of a human being over and over again until all sentient beings are free from samsara, that is until all beings reach enlightenment or complete liberation from the cycle of birth and death. It is seen as a great sacrifice as it means eons of human rebirths until such total realization occurs.

To become a bodhisattva, a practitioner needs to read, listen, observe, study and meditate. It is not a blind act of faith, as it requires a belief firmly

[7] Hattam, *Awakening-Stuggle*, p. 8.
[8] *Ibid*., p. 171.

grounded. Ghelek Rinpoche, a tulku reborn in the family of the Thirteenth Dalai Lama, explained in his latest book, *Good Life Good Death*,[9] how sceptical he was of the concept of reincarnation, even towards himself, until late in his twenties, when specific experiences helped him ground the truth of such phenomenon deep into his mind ever since. In the same manner, only analytical understanding will allow to realize emptiness, co-dependent arising and expand one's true compassion to others. So the union between insight practice and calm abiding, called special insight, is fundamental to establish a firm spiritual ground on which to build one's bodhisattva training, once one's ego has been transformed.

Nagarjuna's *Precious Garland* (*Ratnavali*) about the Bodhisattva offers a view that describes the actual practice of dharma as "simultaneously personal and social." In this five hundred stanza poem, the limitless nature of a Bodhisattva's compassion is exalted. The author, who in many respects can be considered as important to Buddhism as St Paul to Christianity, also outlines in some detail how these two practices (consciousness and goodness) are "social in character." Commentaries about Nagarjuna's view of the bodhisattva abound in that direction, as exemplified by this clear summary provided by Douglas Berger from Oakton College:

> In these epistles, while Nagarjuna warns that the intentions behind moral acts must be informed by wisdom lest the benefits of the deed be spoiled, he stresses repeatedly the importance of steadfastly ethical conduct. Dharma or behavior upright in the eyes of the Buddha's law of existence has two aspects, one which is characterized by meditative non-action and the other through positive action, and the road to Buddhahood, he says, passes through the positive action of the bodhisattva. For even though dharma is subtle and hard to comprehend, particularly where the notion of emptiness is involved and so easily misunderstood, its practice through the cultivation of moral intentions and attitudes will lead unerringly through the tangle of doctrinal debates. Beyond this general advice, which would apply to any monk or nun, counsel is given to the king that dharma as positive ethical conduct is also "the best policy," for when one socially promotes adherence to ethical conduct, justice will prevail in the kingdom and benefits will accrue to all, benefits which rivals will envy beyond any transient material wealth and false senses of power.[10]

[9] See Rimpoche Nawang Ghelek, *Good Life Good Death* (New York: Riverhead Books, 2001).

[10] *Internet Encyclopedia of Philosophy*; www.iep.utm.edu/n/nagarjun.htm.

Beyond the ethical aspect of any Buddhist attitude and actions, Hattam goes to the extent of showing how significant Nagarjuna's text is to the third dialogical space between critical theory and Mahayana Buddhism:

> The Bodhisattva path is described as a possibility of practicing the Bodhisattva deeds in one's sphere of activity, and that includes the lay householder or even a King, as spiritual attainment is actually both a personal and a social practice. There is no disentangling these two, and hence, a socially unengaged Buddhism makes no sense.[11]

Possibilities of Dialogue

Hattam cautiously describes any possibility of dialogue as a possibility for a common space, a dialogical space from where to review and rethink critical theory, the way ten years ago Fred Dallmayr was calling for a critical theory of politics.[12] At the time, his idea was to find the middle way between positivists doing empirical research and theorists. Hattam also calls it wisely a "third" space from where to work against "a tendency in some Western scholarships to locate other cultures within their own grid."[13] In other words, to move away from Orientalist positions that could position critical theory above Buddhist philosophy or vice versa.

Hattam is not proposing a synthesis of the two traditions either. Rather, it is the idea of an elective affinity that makes such dialogic space thinkable. The condition for dialogue then is to develop a kind of "constellation," in the Benjamin sense of the term. Hattam reminds us that a number of scholars, such as Ebert and McLaren are attempting to develop a critical post-modern paradigm, also called "resistance postmodernism"[14] aimed at deconstructing the way power works in text. Hattam wants to use this as a possible model to push a "Buddhist-inspired critical theory"[15] that takes insights from both traditions but also holds onto differences as well, the way Hattam himself tries to hold this triangular relationship within his own life:

> My interest in mapping this third space between critical theory and Buddhism is, in the first instance, entirely autobiographical in nature. I presently understand my life as being at the intersection of critical theory and Buddhism.

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[11] Hattam, *Awakening-Struggle*, p. 174.
[12] See Fred Dallmayr, *Beyond Orientalism* (Albany: State University of New York Press, 1997).
[13] Hattam, *Awakening-Struggle*, p. 2.
[14] *Ibid*., p. 4.
[15] *Ibid*., p. 5.

> I am working with the categories and views of these two traditions and having them work on me.[16]

This simultaneity of both thinking, reasoning and living the two traditions brought Hattam to this third space where he tries to reconcile differences and enhance dialogue:

> Critical theory provides me with a map for making sense of what's happening in my own community, my country and globally, and also provides me with an imagining of how things might be and hence a direction for my politics. Buddhism, on the other hand, provides me with a map for making sense of my own existential situation, my own suffering, and my imminent death. In addition, Buddhism provides a map of consciousness/mind. […] Buddhism also provides an imagining of what life could be like, of the possibilities for this very embodiment and also, I wish to argue, for our social arrangements.[17]

This articulation between the personal and the social motivates Hattam's writing about awakening-struggle. As a scholar specialized in education, Hattam asks to himself: How to be a "good" teacher in an unjust world? This question is a wake-up call, of course, for those who teach at university colleges and does not leave us indifferent to the model Hattam develops to try to answer such important quest at the intersection between practice and theory.

Hattam decides to name this third space, or dialogical space, a "socially engaged Buddhism,"[18] which clearly indicates that Buddhist Western scholars are socially engaged both as Buddhist and as scholars and try to map such existential territory, such "socially-critical Buddhism," by developing a socially-critical consciousness. But what does it mean to be socially engaged and Buddhist? Hattam retrieves Nagarjuna's *The Precious Garland*[19] as an example of scriptural justification for a socially engaged view and sensitivity.[20] He then takes as living examples the Dalai Lama,[21] Thich Nhat

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[16] *Ibid*.
[17] *Ibid*.
[18] *Ibid*., p. 164.
[19] This text provides an exposition of the socially-engaged view of the Bodhisattva path. Hattam (p. 171) notes that it is not surprising, then, that the two most important Western translators of Tibetan Buddhist into English, Hopkins and Thurman, have written their own commentaries on this text.
[20] The first traces go back to Shakyamuni Buddha, then in the Edicts of Asoka, the king of India around the 3rd century BCE, or even in the Jataka tales about the former lives of the historical Buddha.
[21] ". . . the Dalai Lama is clearly arguing that a world-rejecting or world-denying Buddhism would be contradictory." (Hattman, *Awakening-Struggle*, p. 166.)

Hanh[22] and Sivak Suvaraksa, followed by Stephen Batchelor and the Think Sangha. The definition chosen to define *socially engaged Buddhism*, though, comes from Kraft:

> Engaged Buddhism entails both inner and outer work. We must change the world, we must change ourselves, and we must change ourselves in order to change the world. Awareness and compassionate action reinforce each other.[23]

Erich Fromm and Zen Buddhism

Erich Fromm's life and intellectual production exemplify the dialectical movement between self and the world and the dual project that unfolds from that dynamic tension. For over twenty years, while following a heavy schedule and teaching both in the US and in Mexico, Fromm was involved in the civil rights movement, campaigns against nuclear armament and the Vietnam war, as well as participating in the ecology movement. Progressively, his practice of Zen meditation changed him, altered his mind and opened it up onto a higher level of realization, which in turn he applied to writing books to help others change and somehow try to create different social conditions of a kind that in return contribute to positive personal change.

The least known of the first generation of thinkers at the Frankfurt school of Critical theory, Fromm was distanced early from the rest of the group for his own dissociation from Freudian psychoanalysis. Fromm became then particularly interested in ideas such as "having and being,"[24] "satori,"[25] all from a Zen perspective, after he had met D.T. Suzuki and undertook to co-write with the latter and De Martino *Zen Buddhism and Psychoanalysis*, published in 1960.

Fromm's arguments rely heavily on quotes from Jewish and Christian mystics as well as from Zen teachers, as he wrote for a general audience. Hattam notes that Fromm goes "beyond the Orientalism (superiority) approach that dominated the critical edge of the Western philosophical

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[22] "Thich Nhat Hanh argues that even meditation is not an 'escape from society'." (Ibid., p. 166.) ". . . he wants to contemplate how can we bring meditation out of the meditation hall and into everyday life, or alternatively, how can we rethink the nature of dharma practice in a way that removes the barrier between so-called 'practice' and 'non-practice'. It is this deconstruction of the binary practice/non-practice that is central to the debate about socially-engaged Buddhism." (Ibid., p. 168.)

[23] Kraft, *The Wheel of Engaged Buddhism: A New Map of the Path* (New York & Tokyo: Weatherhill. 1999), p. 10.

[24] Erich Fromm, *To Have or To Be?* (London: Abacus, 1978), p. 34.

[25] Hattam, *Awakening-Struggle,* p. 223.

tradition."[26] He may be compared in that respect to Heidegger, Schopenhauer and Nietzsche who all influenced the third generation of the Frankfurt school. Schopenhauer himself stated that he gave a kind of Buddhist description of the human condition in 1844 in *The World as Will and Representation* after he discovered Buddhist philosophy. In a way, it is similar to M. Jourdain, the main character of Molière's *Bourgeois gentilhomme* who was writing prose without knowing what he was doing because he did not know what prose was! As for Fromm, though, he studied Buddhism seriously and participated to Zen workshops, largely influenced by D.T. Suzuki. Hattam characterized this involvement as "a considerable enlargement and tension of his own Marxist-inspired psychoanalysis."[27] In *The Art of Being* Fromm describes a Buddhist meditation and proposes to incorporate it into one's life as a part of enacting a critical theory of society.[28] It is a considerable leap towards the East if we take into consideration how much the Young Fromm was influenced by Jewish messianism and libertarian ideas – utopias – that reflected the intellectual life of significant Jewish intellectuals of this time, including Walter Benjamin, another member of the first generation of the Frankfurt school. Fromm was most interested in Marx because of the way Marx showed how Capitalism distorts human beings and alienates[29] them. From Marx to Freud, Fromm related the group to the individual, and looked notably at the specific qualities of the social versus libidinal organization formed by experience of the family group. So to understand the Marxist model of base and superstructure, Fromm claims that we also need to acknowledge the unconscious, that is the thoughts and feelings that we are not consciously aware of. Fromm then extrapolated from Freud's notion of the unconscious to a social unconscious:

> We came then, to the conclusion that consciousness and unconsciousness are socially conditioned. I am aware of all my feelings and thoughts which are permitted to penetrate the threefold filter of (socially conditioned) language, logic and taboos (social character). Experiences which cannot be filtered though remain outside of awareness, that is, they remain unconscious.[30]

Marx and Freud, so to speak, direct our attention to become aware of hidden motivating forces, be they biological or historical. Because of this dialectic process between the individual, the group and society as an

[26] *Ibid*., p. 213.
[27] *Ibid*., p. 214.
[28] See Erich Fromm, *The Art of Being* (New York: Continuum, 1992).
[29] "alienation" here has to be understood as both psychological and moral: it corrupts as well as perverts all human values.
[30] Hattam, *Awakening-Struggle,* p. 227.

articulation of all, there is an interconnected influence and articulation that proceeds at different levels of human – individual or collective – experience. As Hattam recalls, Fromm tried to articulate this dialectic in his later work, but became spiritual and then turned to Buddhism and the story of the Buddha in *Chains of Illusion* to confirm the need for a true discussion between theory and practice. This also illustrates the Zen saying that "knowing without direct experience is an illusion," as if practice was the way to experience and to know. Kant also critically pointed at the contradictions which arise from supposing knowledge beyond the limits of experience. Hattam saw the whole Fromm project as born from the need to be authentically well:

> The whole Fromm project becomes then to find the ways in which we could create the social conditions for the spiritual development of people, or for becoming fully human. In other words, to practice the art of well-being.
> …
> In thinking a critical theory of well-being (Fromm did not use this term himself) Fromm refers to Zen experience of satori, as the state of well-being… To be fully awakened is to see the world in an unmediated, direct experience of being, and hence 'can never be conceived intellectually'. [31]

In *To Have or To Be?* Fromm even borrows from the Four Noble Truths[32] to state that change is possible. Nevertheless, Hattam concluded that Fromm's description of meditation is somewhat superficial, as he did not offer any description of the way Buddhism understands the mental process of illusion, greed and hatred. Fromm did not describe how Buddhist meditation actually leads to non-greed, non-attachment and non-illusion. But was it Fromm task to do it knowing that he instead insisted that the ideas of the Buddha, Eckhart, Marx and Schweitzer were a radical humanist protest?

Robert Hattam's map for an ethico-political life

Hattam believes that from a Buddhist perspective, critical theory looks the wrong way:

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[31] *Ibid*., p. 233.

[32] The Four Noble Truths (Pali, "cattari ariya saccani") are taught in Buddhism as the fundamental insight or enlightenment of Shakyamuni Buddha (the historical Buddha), which led to the formulation of the Buddhist philosophy. The Four Noble Truths were the topic of the first sermon given by the Buddha after his enlightenment. He gave the sermon to the ascetics with whom he had practiced austerities. The four are as follows: 1) Dukkha: There is suffering and impermanence in life for all beings. 2) Samudaya: There is a cause for Dukkha, which is attachment and desire (tanha). 3) Nirodha: There is a way out of Dukkha, which is to eliminate attachment and desire. 4) Magga: There are paths that lead out of Dukkha, one named: the Noble Eightfold Path.

> Instead of looking towards the inner dynamics of self and, hence, towards a form of intervention that involves personal transformation as the basis for social change, critical theory misconceives the problem and ignores self in favour of socially transformative action.[33]

This quote summarizes and announces the whole structure of the argument that gave birth to Hattam's "awakening-struggle," by far the most important contribution. Hattam realizes here that no social transformation is possible without first a personal transformation. Society is not an independent entity living a life of itself independently of its subjects. Further, society is a reflection of the human mind, as human actions are dictated by human minds. So any socially transformative action has to have its seed implanted in someone's mind. Society is a product of mind, insists Hattam. Even modernity is born out of the human mind. Quoting Robert Thurman, Hattam recalls that "we end up with a theory of outer modernity"[34] if we do not situate the origin of social movements and ideologies in the mind:

> Modernity itself and its social institutions are in fact derived in large part from a secular coping mechanism against the bearable feeling of lack that has been unleashed since the death of God.[35]

Hattam too bases his approach on the Four Noble Truths, introducing a Buddhist view of self as an alternative to "the deconstructed subjectivity that seems to dominate contemporary critical theory."[36] Using the Four Noble truths as a canvas means considering and acknowledging first the pain, the discomfort and constant dissatisfaction of being human. From a Western perspective, this means understanding or misunderstanding anxiety, and Western psychoanalysis with its psycho-therapeutic approach is the main field dealing with such anxiety. This primordial anxiety is understood here as a fundamental malaise that originates in the very act of facing death one day or another and developing coping mechanisms to try to forget or escape from our fate. As Loy pointed out: "Buddhism, existentialism and psychotherapy all point to some form of resolution of death denial that is the way we deal with death-in-life."[37]

Sartre and the Existentialists, on the one hand, talked about "nausea," psychotherapy calls it "hyper-anxiety" or fear of death. Learning to bear the

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[33] Hattam, *Awakening-Struggle*, p. 248.
[34] *Ibid*., p. 264.
[35] *Ibid*.
[36] *Ibid*., p. 248.
[37] Quoted in *Ibid*.

burden of a meaningless universe, and justify one's own existence within that vacuum, is the first step toward becoming what Nietzsche defined as the "Übermensch" (in English: "overman"). But it is not an easy path as Western philosophers and Existentialists suggest that we live with such malaise and that we provide our own meaning of life to ourselves.

Buddhist philosophy, on the other hand, explains that our existential angst originates from the fact that self-consciousness is a mental construct. The fear of death is in reality a fear of the death of our ego, the result of a strong desire to believe that we have a real self. The terror of death, then, is preferable to lacking any self or sense of being in the present time. By projecting our problem into the future, we create the illusion that the problem is real and that as a consequence we must be real too if we are to experience such problem later. As Hattam explains:

> It is not that the ego is repressing death but that the sense-of-self that is a fiction, a mental construct, is struggling against its own non-existence, its own emptiness… The ego cannot resolve its own lack because the ego is a manifestation of that lack… Buddhist philosophy predicts that the ego can be overcome by an unmediated experience of unconditioned consciousness. The Buddhist path recommends abiding in the anguish with simple awareness: having deconstructed the sense-of-self in an existential sense we realize that there is no lack because these has never been any inherently existing and autonomous self that is separate from reality.[38]

Hattam suggests here what Fromm was proposing too: a direct experience of emptiness as a liberating, spiritual experience that allows for a deep, definitive knowledge of the true nature of reality: empty of inherent existence, ultimately causal, where all phenomena, situations and agents all co-exist, interdependent and interconnected from each other, without Creator, similarly to the way cells, atoms, particles, planets and galaxies co-originate. Such deep level of spiritual insight gives way to genuine, profound, non-attachment, non-greed, non-hatred, as such poisonous emotions (attachment, greed, hatred, anger) dissolve when the ego itself implodes or explodes to embrace the ultimate nature of its reality, the void or emptiness as explained by Nagarjuna and that Lyotard described in *La condition post-moderne* , his first work on post-modernity, as an infinite mesh of intersecting, alleatory trajectories.[39]

Compared to Buddhist philosophy, critical social philosophy understands anxiety in terms of the social organization. "A Buddhist perspective does not

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[38] *Ibid*., pp. 253-254.

[39] See Jean-François Lyotard, *La condition post-moderne* (Paris: Editions de Minuit, 1979).

deny the socially constructed nature of anxiety" continues Hattam, "but wants to distinguish between causes and conditions."[40] While critical theorists see society as the cause of social problems and alienation, Buddhist philosophers view it as the conditions for the manifestation of social predicament. "The recent trend in critical theory towards a decentering of the Cartesian ego in favour of a de-essentialized deconstructive subjectivity resonates with this Buddhist view."[41] Central to the move, though, towards such deconstruction, is an hermeneutic critique of dualistic thinking:

> Buddhist philosophy pushes this critique still further and argues that dualistic thinking is not just an epistemological or even an ethico-political problem, but ultimately an ontological one, in an existential sense, because we live our lives as though we are independent and autonomous.[42]

Critical theory, like Fromm, also fails at explaining how we could realize such deconstructive subjectivity. So Hattam returns to the Four Noble Truths to re-articulate how such realization is possible. With the first Noble Truth, "being human is a cause of suffering"[43] must be understood the view of dependent origination or dependent co-arising:

> Our reality is ultimately a manifestation of patterns or circuits of contingency; there is no first cause, only a series of linkages between a number of factors such as cognition, naming, feeling, craving, etc. The factors of experience are sustained by their own interdependence… The Buddha diagnosed a weak link in the chain; an ignorance grasping at true existence. If this ignorance can be overcome, the subsequent linkages can be extinguished, leading to an exit from the cycle of suffering.[44]

The Buddhist notion of interdependent factors is the antithesis, of course, of the Cartesian mind, of the Cartesian idea that there is a self-grounded, autonomous, rational consciousness, the famous "*Je pense donc je suis*" that Descartes enounced both as a great realization of the human mind as well as a glorification of the mighty power of God who provided such mind to humans. Robert Thurman explained Descartes's predicament in these terms:

> Descartes provides a useful example, because from the Buddhist perspective he made a huge mistake right here. He said, 'The reason I can't find my "self"

[40] Hattam, *Awakening-Struggle*, p. 254.
[41] *Ibid*.
[42] *Ibid*.
[43] *Ibid*., pp. 248, 250, and 255.
[44] *Ibid*., p. 256.

> is because I'm the one looking. I'm the subject, not an object, and that's why I can't find myself. But because I'm the subject, I'm sure I exist. Don't accept this mistaken reliance on self-evidence, a guaranteed way to remain stuck in illusion. […] 'I think therefore I am' was an assertion of the utter conventionality of the self, its relativity and, hence, lack of absoluteness.[45]

Between the self relativity and the concept of dependent origination, Hattam sees a fertile ground upon which to rethink the way in which society is a human product: "Society is a manifestation of mind, of minds that are under the influence of the ignorance grasping at a real self."[46] We might want to define here what Buddhist philosophy defines as "mind." Buddhist philosophy developed an extensive system of analysis of the human mind, which we will not have time to exhaustively dig into. Hattam himself concentrates his argument on the three poisonous minds as an example on how Buddhist philosophy deals with human afflictions and destructive actions which root causes originate from the mind. Take ignorance, desire and aversion as complex causes of inner and societal suffering:

> Out of ignorance, we harm others through killing, lying, stealing, sexual misconduct, speaking harshly, divisively, coveting others and their property, or wishing others harm. But our actions also leave imprints into our minds and will become causes of suffering in the future.[47]

The imprints that Hattam is talking about are of course the "karma" or law of cause and effects that governs the flow of actions and reactions. The aim of Buddhist practice, of course, is to awaken the mind to break out of this cycle to not only extinguish past karma, but to prevent negative actions in the present to create negative karma in the future. As such, karma is also a manifestation of the interdependence between actions and their consequences, but it is not deterministic or fatalist. Karmic imprints can even manifest as social institutions, of course, being positive, negative, or neutral ones. But even though each individual is subject to a personal, family and environmental karma, such person can also resist social pressure: "Under a fascist regime, we are not bound to be fascist."[48] Actually, politicians and other social actors do produce more structural, institutionalized outcomes that embrace more than what their personal karma entails as they link themselves to others and use or conquer resources necessary to achieve their means. The

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[45] Robert Thurman, *Circling the Sacred Mountain: A Spiritual Adventure Through the Himalayas* (New York: Bantam, 2000), p. 114.
[46] Hattam, *Awakening-Struggle*, p. 256.
[47] *Ibid*., p. 258.
[48] *Ibid*., p. 259.

case of the rapid industrialization and economic development of China is one example among many, which allows China to arm itself at a pace and with a budget ten times larger than the already large budget of the United States. The ideology of the Chinese Communist Party that animates such race is not clearly stated though it is undeniable that it is the result of a vision, of a mental map that draws the contours and necessary path to power, control, and hegemony. Such reality cannot be explained just in terms of discourse.

While recent debates in Contemporary Critical Theory are fixated on the idea that society is constituted discursively, recent debates in Western Buddhist philosophy show that society can be understood as an institutionalization of mind, or "delusion institutionalized."[49] Institutions and ideologies – to name but a few – appear to take on a life of their own, becoming things-in-themselves, whether it be the *blind* workings of the economic system or war's inevitability. Loy mentioned that capitalist accumulation, technological development, industrial materialism, and nationalism, are pertinent examples of such symbol systems and also of the collective struggle to give meaning to one's life. Greed, in that system, becomes institutionalized in the form of the religion of consumerism, with an underlying obsession to construct our own identity.

The advertising industry is another good example of delusion as it saturates our minds with desire, our consciousness with promises that particular products and services will make us happy, as if happiness was to be found outside of us, as if culture was a train to catch up. Adorno had criticized the culture industry, predicting that Capitalism would colonize subjectivity through the culture industry. Advertising is today a part and a sum of the culture industry as they are les and less dissociated through popular culture. Hattam calls it "institutionalized greed" and reproaches that it misunderstands the fact that individuals are "somehow autonomous and separate […] from the poverty that surrounds them."[50] In this sense:

> Buddhists see Capitalism as not only a system of wealth creation, but also as an historic responses to the existential fear and frustration that institutionalizes acquisiveness, greed and attachment.[51]

Buddhist scholars apply the same reasoning to the "industrial-military-prison" complex in the United States. Prisons are now an industry as important as the military for the American economy. Hattam recalls that:

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[49] Ken Jones, *The Social Face of Buddhism: An Approach to Political and Social Activism* (London: Wisdom Publications, 1989), p. 69.
[50] Hattam, *Awakening-Struggle*, p. 261.
[51] *Ibid*.

> Our mastery of life and death is assured when we control the fate of others and the ultimate expression of this control is through war… through war, we can admire those heroes who struggle for victory over evil, a symbolic form, more abstracted way to try to buy ourselves free from the penalty of dying or being killed.[52]

Ultimately, though, engaged individuals do not have to look for a solution to their social problems outside of themselves, or to look for some kind of mysterious way to reach happiness. As Hattam said, it is futile to wait until the social conditions are right, until Capitalism and militarism have ended. The only alternative is here and now. It requires motivation to make the situation change, that is the inner strength to renounce to one's ego-grasping existence, to give-up the comfortable illusion that makes one blame others and society and hope that law-makers will dutifully structure their ethico-political life:

> Radical social transformation is not the precursor of psychological liberation (…). Our ego and society condition each other (…). Liberation involves practices of freedom as an affirmation of the personal as political but only if these practices undermine the ego. A Buddhist reworking of the idea that the personal is political involves unsettling identity altogether in favour of a new form of subjectivity, one that privileges the development of an expansive type of altruism as a precursor to realizing our radical interdependence.[53]

Hattam and Buddhism are not reinventing the wheel. Herbert Marcuse already in *One dimensional Man* had characterized such reworking as a practice involving a break with the familiar, away from one's routine, from one's ordinary ways of seeing, hearing and understanding thing; as the only way to become receptive to the potential of a non-aggressive, non-exploitative world.[54] A disconnection from mainstream political propaganda and media discourses is necessary to start the process of disenchantment:

> The way forward must be to abandon forms of rationality based on dualities […] human emancipation / freedom involves shifting consciousness, both personal and social in that direction. Ultimately awakening-struggle must be directed towards unlearning a dualistic rationality.[55]

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[52] *Ibid*., p. 262.
[53] *Ibid*., p. 270.
[54] See Herbert Marcuse, *One-Dimensional Man* (Boston, MA: Beacon Press, 1964).
[55] Hattam, *Awakening-Struggle,* p. 279.

Conclusion

As Greco-Buddhist art and Mahayana schools of thought such as Dhyana were transmitted to East Asia, central concepts of Hellenic culture such as virtue, excellence or quality may have been adopted by the cultures of Korea and Japan after a long diffusion among the Hellenized cities of Central Asia, to become a key part of their warrior and work ethics. So we know that this borrowing and exchange of ideas and philosophical views, with its influence on the arts and cultural values has existed since humans travelled and learn to communicate together, moving back and forth between the East and the West.

What the 21st century is seeing, though, is a move away from Cartesian epistemology and towards non-western philosophical traditions with an unprecedented depth and breadth. The double interplay between identity politics and politics *per se* has dislocated the subject and dislodged modernist claims of the superiority of the human mind over its creations. What Buddhist philosophy adds to the dialogue is the argument that to start with, mind is merely a sixth sense which, like seeing or hearing, is imperfect and prone to errors. What a fall! What a humbling view. Further more, as Hattam has argued in depth, society is a manifestation of self. Delusion, then, cannot be regarded as a personal or a social phenomenon. It has deeper roots that have to be uprooted to move closer, philosophically as well as spiritually, to the true nature of one's self and the ultimate truth about reality. It does not have to be a painful exercise. Through method, that is meditation or the effort to quiet one's mind to simply let it be, and through discipline, that is the commitment to meditate on a regular basis (either sitting or walking or dreaming / sleeping meditation), one will achieve such deep realization, in this lifetime or in a next one. This is the way of the bodhisattva where time has stopped its ravaging effects and one floats towards the clear light of enlightenment.

Robert Hattam's book is a living testimony that such commitment to truth alters one's intellectual capacities and opens up horizons and paths otherwise impossible to conceive of, even less to follow. We are entering a new era when more and more Western scholars engage in such meditative, contemplative, practices, for the benefit of all sentient beings and ultimately the complete liberation from suffering that Critical Social Theory and other Marxists are longing for. Robert Hattam's awakening-struggle needs to be presented to a larger audience. This paper came into being not only to reflect on the migration of philosophical texts to the East, but also to broaden the scope of this phenomenon into a productive, transformative dialogue.

As Chogyam Trungpa eloquently said, the main point of any spiritual practice is "to step out of the bureaucracy of ego."[56] This means, "to step out of ego's constant desire for a higher, more spiritual, more transcendental version of knowledge, religion, virtue, judgment, comfort, or whatever it is that the particular ego is seeking."[57] This *spiritual materialism*[58] is a trap that Robert Hattam lucidly avoided and that makes his dialogic awakening-struggle worth our attention in the hope that Western academia will awaken to a truly ethico-political practice both as educators and as producers of knowledge.

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[56] Chogyam Trungpa, *Cutting Through Spiritual Materialism* (Boston and London: Shambala, 1987), p. 15.
[57] *Ibid*.
[58] "Spiritual materialism" is a term coined by Chögyam Trungpa at a time when in the 1960s, young people were leaving Christianity and Judaism, experimenting with hallucinogens and dabbling in a plethora of Eastern philosophies, religions and mysticisms. Trungpa though characterized any spiritual path as a path that starts with *our own neurosis* and continues with its eradication through meditation.