Stanton Lecture 3: Immanence and Number

By John Milbank

In Western thought, ever since Plato, truth has been associated with stability and eternity has been seen as the only final guarantee of stability. Immediately after Plato, this remains true of Aristotle, his pupil in many essentials, who simply made more precise his master's own recognition that there are, indeed, some relative immanent stabilities or 'substances'. But for the pupil as much as for the master, these stabilities are finally underwritten by an eternal deity: in Aristotle's case the 'prime mover' who is alone fully in act, alone unmoved and self-sufficient, alone repletely substantial.

So for modern thought to reject transcendence would seem to imply a problem for truth. Unlike in the case of Aristotle, it appears to follow that we now require an immanent candidate for complete and entire substantiality. One can of course try to deny that truth is unchanging and identify absolute truth as the changing itself. In the second lecture I described a variant of that move with Bergson and Deleuze. However, as we saw, the ecstatic time of flux as the spiritual time of fused memory and expectation tends to become itself something oddly stable, oddly substantial. Another possibility, as Catherine Pickstock explained in her book *After Writing*, is to opt for 'spatialisation'. Here spatiality become a surrogate eternity and humanity seeks consolation in a kind of prairie *stasis.*

But the result of either option – time or space – will be an immanent hierarchy that is ironically more fixed and dualistic that any axiomatics engendered by a metaphysics of transcendence. For Bergson, outer life in space is subordinate to our

inner life in time. Conversely, for Spinoza the spatial perspective of the whole of reality, as attained by his mystically-intellectual 'third kind of knowledge' is superior to the individual changing perspectives in which we are ordinarily condemned to live. They are somewhat illusory and apparently free, yet really fated in their partiality from the point of view of the whole.

Bergson's *durée* is more or less God; Spinoza's absolute is indeed God. To opt for immanence is not necessarily to get rid of religion. Nor do the more atheist variants of immanence get rid of *mystery*. To the contrary, they give rise to what Conor Cunningham diagnosed as the problematic of 'double abolition' in his *Genealogy of Nihilism*: for Deleuze, virtual duration is nothing in itself and only exists through spatialised realities: yet these are contradictory, provisional 'solutions' to the 'problems' endlessly posed by the virtual. So the answers must be crossed out as fast as they are proferred, such that we pass perpetually from one nothing to another. In a similar fashion, Friedrich Heinrich Jacobi in the 18th C already deconstructed Spinoza's philosophy as 'nihilism', thereby coining the word for the first time. For Spinoza would seem to imply that the One Substance only *exists* through the various finite 'modes' that instantiate it. It follows then that neither reality would appear to be quite real. Therefore one can conclude that nihilism is a not a crude explosion in the market square of Old Europe of one bomb signed 'nothing'; it is rather a mystical doctrine of the play between two nullities.

From this we can see that if hierarchy and duality remain and get reinforced by philosophies of immanence, then they also sustain a certain ambiguity about mystery. Is mystery to be chased out or rather embraced? Clearly in the Polly Toynbee version

of London village atheism it is to be swept away with a bureaucratic broomstick. But the problem here, as we shall shortly see, is that if one chases away mystery from one corner of the human building then, like fleas brought in by the cat, it tends to reappear in another. On the other hand, even atheist immanentism can be positively mystery-mongering: it can suggest, like the novels of John Cowper Powys, that mystery is endlessly plural and that the problem with formal religion is precisely its fear of mystery and attempt to police it. Or else, as with nihilism and its shuttle between two nothings, one can start to worship the final mystery of no solution, of transcendental nonsense and meaninglessness. But in the former case, when one closes the pages of *Wolf Solent,* a curious sense of sterility dulls one's equal sense of overwhelming wonder. In the second case, as George Bataille realised, religion possesses only one sacrament, namely one-way sacrificial immolation, and imposes but one imperative: namely the ecstatic suicidal offering of oneself and all of reality.

One of the things that I want to suggest in these lectures is that atheism tends, either by banishing mystery or lusting after it, to chase mystery from one cosmic corner into another, whereas a theology of transcendence can allow that mystery lurks in all the corners, yet not as absolute mystery that affords us no possible handle, since such mystery belongs to God alone.

Another crucial mark of modern immanentism is, as with secularity and autonomous philosophy themselves, its *post-Christian* character. Antique immanentism was always suspended between the gods and chaos -- whatever variants pre-Socratic 'philosophy as physics' wove against this background -- tending to generate a duality of chaotic agonistic 'nature' on the one hand, over against arbitrary

divine or human law shaping ‘culture’ on the other. But the Bible, neoplatonism and finally Christianity abolished chaos: instead of confusion and order, *hyle* and *eidos, physis* and *nomos*, nature and culture, there was now the one natural divine art of Creation, alone able to speak or produce things from nothingness. And post-Christian philosophy does not (at least initially and directly) restore chaos: instead it has to think creation out of nothing without God, a nothing that is self-generative. This is why the shadow of nihilism is a post-Christian shadow.

And this is also why modern immanentism has to be preoccupied with the primacy of possibility. From the possibilities lurking in the night of the *nihil* emerges actuality.

However, we encounter a twist at this point. There is a sense in which *only* a transcendent metaphysics and a transcendent theology can really think the priority of the possible. In the first, metaphysical case this is because one can have a Plotinian theory, as with the great Muslim philosopher Ibn Sina, of ideal essences that ‘insist’ their way into existence. But this view is predicated on a belief in transcendent order. In the second, theological case, one can think of an actual but wilful deity, as with the philosopher William of Ockham (always important to remember that Occam lies in the Surrey commuter belt…….) who selects freely from a range of logical possibilities already in his mind. These philosophies, as I suggested in the first lecture, were the historical ‘way in’ for immanentism, because the idea that possibility comes first appears to suggest the notion of getting rid of any essentially-biased or actually divine primary carriers of possibility. However, the objectivity of essentialism at least supplies a *reason* why the possible can ‘insist’ itself as the actual: it is the higher reality of the good and the ideal over being. Equally, theological voluntarism can

sustain the idea that contingent possibility rules because our world is indeed the result of a purely random *choice.* The problem for possibility left to its own devices as it were, without the assistance of either the Good or of God, is that it has to produce 'insistence' from chance and arbitrariness without a will. And the result of trying to supply it with an 'insistent' force on the one hand, or the power of randomness on the other, is that it tends to get supplied after all with a kind of quasi-actuality -- indeed as we have seen with a 'virtuality' and with a quasi-will, as with Schopenhauer and Nietzsche. Beyond the latter, the poet Stephane Mallarmé tried to construe the world as simply a 'throw of the dice'. But the recourse to chance rather than force or decision remains haunted by the spectre of the living gambler on board the deck of Mallarmé's world-ship.

Thus in the last lecture we saw how 'the virtual' is a kind of possibility equipped with an outboard motor. We saw also how Bergson arbitrarily opted to put time and not space on top of the immanent hierarchy. This option was one for the priority of process over stasis: in mathematical terms for the series rather than the set, for ordinality rather than cardinality, for ordinary classroom intuition over logical, surveyable formalisation. Bergsonianism can appear to be both romantic and exotic, in a Parisian hothouse sort of way, but in the first lecture I explained why the reduction of possibility to either epistemological or logical possibility had now become unsustainable. Because of the metacritical collapse of modern (or postmodern) still more metaphysical metaphysics which is 'critical' metaphysics, a full-blown speculative metaphysics, whether naturalist or spiritualising, appears to have returned in the 21st C.

Bergsonianism in its Deleuzian variant is one example of the naturalistic wing of this tendency. But there is also an alternative, 'spatialising' wing. The option taken by this wing is not to anoint process, ordinality and series, but rather to anoint a permanent repertoire of possibility and so cardinality and 'settings'. This means that one tries to build up an ontology *either* on the basis of logic *or* of mathematics. In either case possibility precedes actuality and *yet*, because possibility has been hypostasised, it has also been in a certain sense actualised. For as the Durham analytic philosopher Jonathan Lowe has noted, just as one can always say to the philosophical idealist, but what is the *reality* of ideas and of thinking, so also one can say to the possibilist, but what is the *actuality* of the possible and of your entertaining it?

It is an ontology based upon logical, not mathematical possibility that has been more pursued by recent analytic philosophy. Quine eventually came to limit all logical necessity to the pragmatic conditions of our world, which is inextricably both cultural and natural -- in a post-Christian, rather than neo-pagan fashion. But his pupil David Lewis made an 'Hegelian' move in relation to Quine's 'Kantian' confining of reason within temporalised finite limits. He hypostasised those limits themselves by regarding them as the ontological circumstances of our world which is merely one *possible* world. As with Hegel he argued that we can only envisage the limits of our world, have 'closure' in relation to it, as Graham Priest puts it, because we can equally see beyond this world, since we also have 'transcendence' of limits, in Priest's terminology. Lewis effectively seeks to solve the problem of the *transition* from possibility to actuality through his strategy of so-called 'modal realism' – namely that every possible world in a certain fashion actually exists, so that there is simply no gap to be traversed: to be possible is in some sense to be, or it is in fact the

most being you can ever get. This sounds like adolescent male science fiction (which it indeed may be), but Lewis hedges his bets by saying that *for us* only our world is alone real, while if we lived in another possible world it is that world that would be the reality. But this implies that Lewis did not invoke a plurality of actual shining universes, but rather a plurality of virtually grey ones. It is not so much that the other worlds really exist as that even our world does not fully and actually exist. For our world also fades back into the death of possibility. In this way the spectre of double – or one might say 'mutual' -- annihilation can haunt analytic philosophy also: the real only consists in the realised possible, but the realised possible adds nothing to the possible, if being is not a predicate and possibility is already a 'transcendentally' real mode.

Of course, the theorists of possible worlds like to have all sorts of discussions about whether any sort of 'sameness' can be sustained across the different actual universes. Lewis himself speaks of us having 'doubles' or 'counterparts' of ourselves in other worlds, who are not exactly ourselves but not exactly other people either -- they may well bear the same names, which for Kripke were the only final resort of singular identity in any case. But other analytic philosophers seek to mitigate this prospect of plural anarchy by locating thicker consistencies across worlds: for example, 'water' would still mean a liquid compounded as H20 in any possible world whatsoever. Sometimes this argument runs in favour of construing possibilities as real ontological essences, as with Jonathan Lowe. But without any recourse to transcendence, such essentialism is impossible to sustain. Lowe can only appeal against the endless vagaries of flux in the name of the constancy of scientific law – but the whole idea of a law prior to 'the way things happen to go' is an

anthropomorphic projection alien to the most radical spirit of modern physics. There is very likely no matter and time-transcendent law without a lawgiver.

Alternatively, from within analytic philosophy, David Armstrong seeks to resist possibilism in the name of the priority of the actual. But again, even though such priority concurs with common sense – I only know that it is possible to build a house because I have seen an actual house – it is hard to sustain ontologically without transcendence, as Jonathan Lowe points out. If actuality comes first for immanence, then the world of nature must be in some sense a self-sustaining god. But Armstrong's own grounds cleaving to a one-world naturalism seem weakly epistemological and not at all genuinely metaphysical. For he accepts the ontology that is projected by the epistemological stance of the early Wittgenstein's *Tractatus Logico-Philosophicus* -- as it was named in Cambridge by the somewhat pedantic G.E. Moore. For this ontology, the world contains no 'objects' in the sense of 'substances', but only 'states of affairs' that can be atomically picked-out and strung together by a representative, picturing language, with pure logical reason doing no work other than the spinning-out of tautologies. But of course the later Wittgenstein realised (along with Sellars, Quine and others) that we cannot even isolate an apple without the categories of 'fruit' 'roundness' and 'colour' -- and then in close train, our entire knowledge of other fruits, fruits in contrast to seeds, of roundness in relation to shape, of colour to the spectrum and so forth. These categories are composed in a inextricably tangled-up way both from our observance of the relatedness of nature and from our cultural attempts at classification. Thus to say with the *Tractatus* that 'the world is everything that is the case' turns out not to be true: we do not possess 'closure' on but one world as the whole of reality in this sense, because there is no final empirical text for

verification to which we can finally bring all truth-claims. It is therefore not the case, as Armstrong desires, that for every truth-claim there has to be a 'truthmaker' demonstrably external to that claim.

So one can conclude that Armstrong is only able to attempt to build a metaphysics on the basis of immanent actualism, because he falls back upon an earlier representationalist and logically positivist phase of analytic philosophy. To attempt to be the Hegel of Wittgenstein mark I is actually to retreat behind Kant to a Lockean comfort-zone. No: the real post-pragmatist metaphysics of immanentism has to be possibilist in character. If this is unsatisfactory, then that is because immanentism is itself unsatisfactory.

Analytic philosophy however, has failed to perfect the theory of possible worlds, which would require a complete spatialisation. Yet if one does carry this programme through, *then* one starts to see what might be problematic about the entire approach.

To see what I mean here, consider the question of what might remain common across different worlds. Cutting through a whole morass of obfuscation, one can suggest that if all possibilities are 'somewhere' realised, then we do not have an infinity of discrete worlds closed-off from each other, a multiverse without wardrobes, to modulate from one Lewis to another. Instead we would have an infinity of partially intersecting worlds: a multiverse which was composed of nothing but wardrobes apart from the single world-unique terror of 'dead ends' which prove to have no possibility of returning by the way one came. Here it is as if one were to reach the end of a lane marked at the entrance 'No Through Road' and, upon turning

around, be suddenly confronted by such a sign standing by the side of the road before the opposite direction which one had just traversed, where no sign had stood before. This would be the spatial location we term ‘death’.

All possible worlds are intertangled in one reality after all, and *everything* in every world exists in infinite other worlds and yet not in the *totality* of infinite other worlds. This is the situation that Jorge Luis Borges names ‘the labyrinth’, or the ‘garden of forking paths’ in his story of that name: in one world the person you encounter within that world is your friend whom you will embrace, in another your friend whom you will betray, in yet in another your enemy whom you will shoot dead, since he has been beguiled by fate down a seductive embowered alleyway that proves to be a pure terminus.

What Borges also adds to possible worlds theory, in his essay ‘A New Refutation of Time’, is that it requires a complete denial of the reality of time altogether. He traces his argument via the course of British so-called ‘empiricist’ philosophy, which he realises might as well be called ‘idealist’. (But here I am slightly recasting Borges’ over-conventional account of its philosophical positions.) Berkeley got rid of Newton’s absolute space by insisting that anything that exists is manifest as a sign and cannot be thought except as manifest to some interpreter. Hume got rid of Locke’s vacuously punctilear substantive identity by pointing out that the self simply *is* all that ‘occurs’ to it, in a double sense of this verb. So all that remained was the subjective passage of time, which eventually became the modernist stream of consciousness. But, in a post-modern gesture which is explicitly advertised as a move against

Bergson, Borges suggests that one must doubt the reality of this passage also, which is after all but the shadow of Newton's absolute time, abstracted from all motion.

Here he takes the opposite option in resolving the *aporia* of time -- which has been recognised ever since Aristotle and Augustine -- to that of Bergson and Heidegger. For them the fact that the present is always already past, such that the future never really arrives, means that the inner reality of time is ecstatic flux, with 'presence' a subordinate semi-illusion. But for Borges in this essay the same fact is inverted to mean that we never actually leave the present moment: reality is only ever 'now' and the past and the future 'are not', not because they 'once were' and 'never will be' but rather because they simply do not exist at all. Being *is* presence on this philosophy. But how, without eternity, can that be true, and how can we deny the reality of time without destroying even existential truth -- for we appear really to 'exit' the now in way that we do not exit either outer appearance to the self or the inner narrative of self-occurrence?

It is at this point that Borges invokes the figure of the labyrinth: the infinite intersection of possible worlds. The 'now' can be of any illusory duration: 'to remember' in the present is merely to entertain the fiction of time. But in reality, to walk from moment to moment is only to move through the spatiality of the garden. If I retrace my steps and discover that the trowel is no longer in the potting shed, or that my friend is now suddenly my enemy, then that is not because of temporal alternation, but because we have crossed unknowingly to a garden in another world within a single non-temporal labyrinthine continuum. We do this all the time: hence every possible world is an infinite intersection with other possible worlds down to an

infinitesimal division, and time does not exist. In consequence our memories are on the same footing with our fictions; since in some world the latter are true. And hope is as futile as despair, since in one world you are exalted, in another destroyed: indeed in one world you are Judas and in another Christ, though Judas *is* also Christ (as Borges makes clear in his 'Three Versions of Judas'), since betrayal was necessary to give the opportunity of sacrifice. Such atheological reflections are taken to a yet further extreme by Quentin Meillassoux, who argues that nihilist anarchy is religious in a way that scientific legalism is not, because in *some* possible world, otherwise ordered, we will indeed be resurrected.

Borges is only able to envisage the abolition of time because of Leibniz's identity of indiscernibles. *Exactly* the same object can exist in a labyrinthine cosmos because, without the eventfulness of time, spatial identities can be *precisely* replicated and repeated. In another universe, to invoke another famous Borges story, someone *other* than Cervantes has written exactly the *same* novel, *Don Quixote.*

But Borges did *not* clearly believe his own essay. It famously ends: 'Denying temporal succession, denying the self...are apparent desperations and secret consolations….Time is the substance I am made of. Time is a river which sweeps me along, but I am the river; it is a tiger which destroys me, but I am the tiger; it is a fire which consumes me, but I am the fire. The world, unfortunately, is real. I, unfortunately, am Borges'.

So it would seem that Bergson after all gets the last word for the Argentine writer: time is above all the mysterious mark of reality which we cannot really evade, even

though it seems less solid than space. In ‘The Garden of Forking Paths’ the protagonist, Yu Tsun, who is working as a secret agent for the Germans in WW1 but is the descendant of a Chinese ruler, Ts’ui Pên, who wrote a labyrinthine novel in which all possibilities of the plot are explored, finally shoots the British Sinologist Stephen Albert, to whom he is indebted for preserving the ancient novel in his Staffordshire mansion, solely in order to signal the word ‘Albert’ to the Germans as the name of a town which the British are about to bomb. But does this really means that Yu Tsun simply took one particular turn into one possible world out of the endlessly forking lanes that have led him to Albert’s house? To the contrary, we cannot make sense of his actions outside this particular temporal plot and the kind of character which he has become through time. Even if this reality be (within the story, if it adheres to the labyrinthine ontology) but a ‘fiction’, Borges’s implied point is that it is precisely ‘fiction’ which gives the lie to the denial of time. For suppose that time is itself but a fiction, fictionality and so coherent contrasting possibilities are only composed in a temporal way. Thus if Borges writes postmodern self-reflexive plots of interaction rather than modernist accounts of stream of consciousness, this does not really give the lie to time, but rather shows that time is as external as it is internal. Time, like the tiger, is inside us because we are inside time, as indeed Bergson suggests. Time forms habitual *patterns*, whether of things or of people. Both *are* these habits, which impose a kind of ‘actual necessity’ beyond the reign of mere logical possibility, whether or not this actual necessity is itself a mere accident. That question will be returned to in lecture six.

So far we have explored ontology built upon logical possibility. The other possibilist alternative is to build it on *mathematics*. What are the stakes between these

two options? What is the difference between logic and mathematics? Well, logic began in Aristotle as a simple theory about the predication of words in terms of the consistent implications of ascriptions of identity and non-identity. That gave us the theory of the syllogism, which always belonged to philosophy. Only in the 19th C, with the work of the Irishman George Boole, did logic get transferred from words to signs through his invention of logical symbols, and so from philosophy to mathematics. Once this had happened, an ironic consequence ensued: people tried to make logic the *foundation* of mathematics, and so, in a way, to verbalise number, or at any rate to algebraicise it. But mathematics is *not* about the predication of identity and non-identity: the basic operation of addition is not affirmation, just as the operation of subtraction is not denial. Rather, it is confusingly both a *construction* of an organised and self-consistent abstract spatial and temporal reality, and an *intuition* of this reality as existing although normally visible. One makes what one measures and measures what one makes. Thus 'the true is the made': the old medieval and Thomist transcendental *verum* is the also the new -- but in a Thomist, not Scotist or modern Kantian sense -- transcendental *factum,* as Vico put it, initially in the context of his philosophy of mathematics, before he applied this principle to human history. These two characteristics, of measuring and making, taken either combined or separately (for different mathematical philosophies) invoke a solid, substantial world that is intuitively quite different from the world of logic: it seems, by comparison, to partake both of 'art' and of external reality. It is for this reason that mathematics, all the way from Plato to Quine, has presented itself as a much more plausible candidate for ontologisation than has logic. This plausibility was augmented in Quine's case by the way in which science finds mathematics to be a better instrument in exploring reality than are logical devices.

However, apart from Quine and a few others, something in modern times usually holds people back from building an ontology upon mathematics. What is this exactly? The answer is that it is the way in which modern maths, ever since the work of Georg Cantor in the 19th C, has tended to throw up paradoxes and apparent irrationalities. To cure mathematics of these things, it was first subjected to a formal logical policing by Frege and Russell, and, when this failed, to an internal mathematical axiomatisation by Ernst Zermelo and others, but at the price of rejecting Euclid and making many axioms merely arbitrary and conventional. This positivist formalisation was itself but a continued logicisation by other means, and indeed came itself partially unstuck with the work of Kurt Gödel and Paul Cohen.

Yet is paradox really such a problem? Does not modern science exploit the mathematics that engenders paradox and throw up paradoxes of its own? Moreover, the one recent thinker, who, beyond Quine's gestures has attempted a systematic mathematical ontology, namely Alain Badiou, has embraced it *precisely because* he is attracted by the paradoxes. For it is the latter, he suggests, which allow a mathematical ontology to be non-reductive: by exposing the holes, gaps or cracks in ontological reality they suggest the obscure spaces in which both phenomenal and the subjective realities can emerge into being: singular, self-founded realities 'beyond being' in the sense of the ontological repertoire, and so themselves not subject to any mathematical accounting.

Badiou therefore seeks to be the modern atheist Plato by erecting an entire metaphysics based upon set-theory, which has been the main – and yet sometimes

bitterly disputed – vehicle for modern mathematical theorising. But to get a very fast handle on set theory in order to make some sense of Badiou, we need to take an exceedingly rapid trip through the history of the infinite.

First recall your classroom days in High School. The teacher introduced you to πr^2 and informed you that it can be given no exact value, as if sums themselves suddenly couldn't do their own sums properly. The good children wrote it all down in neat writing in their exercise books and the difficult ones cried out 'but Miss! Isn't that a problem, doesn't that make all this maths stuff we're doing nonsense? Can we go and out and play instead then?', while the Sunday-School going ones wondered whether this *mystery* was good or bad news for religion. (I was naturally a combination of the last two infant categories). They were right to wonder, for in this 'irrational number' lurks the first inkling of the problem of *transfinites*, of mathematical realities between the infinite and the finite because they are all equally infinite and yet come in different sizes. Different sized infinites: that is what seems to be suggested by the fact that infinite decimalisation never reaches π, which therefore remains infinitely beyond it. The natural numbers or 'integers' (1, 2, 3, 4, 5, 6……) never catch up with the so-called 'real ones', which include the irrationals, over the course of an infinite transit.

But Aristotle evaded this Pythagorean difficulty by having no truck with actual infinity at all, even for the first mover. For him infinity was only *possible* even within mathematics, despite the fact that Euclid had proved that there is an infinite number of primes. So for Aristotle there would be no actual infinite progression to π, and so no *aporia*. Where the Greeks did envisage an actual infinity, they tended to associate it

with chaos: only after Plotinus and some of the Church Fathers did the unbounded become an attribute of the absolute, with the general late antique exaltation of mystery. However, this development made actual infinity respectable, and slowly it began to creep in to the immanent sphere also. This was *not, contra* to many facile history books, at first a secularising development. Several of the scholastics already intimated transfinites, because they observed, for example, that the infinite series of even numbers is equal in length to the infinite series of prime numbers, even thought the latter must be in absolute size. Robert Grosseteste, the 12th C English Franciscan and Statesman, even constructed an ontology of light which construed it as mediating in a series of transfinite descents between the infinite God and finite creation. Nicholas of Cusa (followed later by Blaise Pascal) finally embraced the infinity of the universe, making way for Giordano Bruno to declare that it too, like God, was 'an infinite sphere whose centre is everywhere and circumference nowhere'. But in the former case there was no blasphemy, because Nicholas effectively saw this infinity as transfinite: it is extended or 'explicated' and not 'simple' or 'complicated', meaning 'infolded' in Cusan terminology. There are, moreover, different degrees of infinity in respectively the intellectual, the psychic and the material spheres. In this way we can see that the positive consideration of the actual infinite in Bruno and Spinoza is, once more, like the secular, the autonomy of philosophy and nihilism, a *post*-Christian development.

But Cusa, Pascal, Bruno and Spinoza still left actual infinity as something to do with either a transcendent or a pantheist deity; it had not yet invaded the domain of human mathematics. That began to happen after Descartes had algebraicised geometry and Leibniz and Newton were then able to algebraicise and numerise in

their ‘Calculus’ the ‘fluxions’ of curves as tending to straight lines or perfect circles, even though they do so by infinitesimal degrees. We need however to note here that the link between the downgrading of geometric *construction* and the invocation of abstract infinity is not so obvious as many historians think. For in the case of both Proclus and Cusa, the neoplatonic glosses on Euclid had always located the abyssal mysteries and paradoxes of the metaphysical as reflected in the arithmetic one and the drawn point, line and circle. Thus in Naples Giambattista Vico and Paulo Mattia Doria were still able to give neoplatonic renderings of the new incorporations of the infinite while *defending* the primacy of geometry over algrebra. The *genuine* Platonic tradition in mathematics (as opposed to the ‘Platonism’ that analytic philosophy goes on about), because it believes, after Plato, that mathematical realites only dimly invoke the forms and require the use of the senses, sustains *both* intuition or *theoremata, and* construction, or *pragmata.*

Partly because of the tension between a Cartesian formalist and pragmatic attitude to the calculus, and this more realist, ultimately Platonic metaphysical interpretation, there were heated debates in the 18th C about the ‘infinitesimal’ or an infinitely small number that is still more than zero. The formalist view was that it was a convenient fiction; the realist view was that the infinitesimals really exist. That would give us other examples of transfinites. This same spectre hovered over the new application of infinitesimal calculus to number theory in the 19th C by Bernhard Riemann and others.

But all this held-back mathematical hot-air was as nothing to the gas-clouds released in the same century by Cantor. He broke with the intuitive primacy of ordinal

numbering in time by making spatial cardinality central: not the series 1, 2, 3…… but, for example, the number 'three' standing alone and indicating the 'set' of all things that contain three items. This new move has proved incredibly ambivalent. Was it about ending mystery or provoking it? It would seem to be the former, because it subordinates number to logic which is about identity (ie 'three or not three' instead of addition to three) and allows one to remain totally vague about the actual content of sets (which does not seem at all like the kind of things that maths teachers in school tended to tolerate). Sets seem thereby to allow us to stop thinking of numbers as either artful constructs or strange intuitions -- and divert us from various serial mysteries like that of Goldbach's unprovable conjecture in the 18th C that every even number up to infinity is the sum of two primes.

Yet on the other hand, Ludwig Wittgenstein often fumed in his notebooks that Cantor had invented sets precisely because he was a mystery-monger -- in love, like part of Borges's self, with the pseudo-religious consolation of paradox.

How can this accusation be half-plausible? How can sets favour mystery as much as series? Or mystery lurk in space as much as time? How can sets prove to be just as primitive and indefinite as serial numbers? These strange circumstances arise because Cantor discovered two key contradictions. First, the set of all sets contained within a set, the so-called 'power-set', is bigger than the original set. All the fractions of three are more than three; all the complexities of a seed exceed its visible oneness. Secondly, he vastly exacerbated the medieval examples of transfinitude. At least the series of all even and the series of all prime numbers are 'denumerable' in the sense that we can draw a series of lines between each step of the two advancing series:

2,4,6,8,10,12 *ad infinitum* can be made in this way equivalent to 2,3,5,7,11,13 *ad infintium.* [A prime number is an integer greater than 1 that has no divisors other than itself and unity.] So in one sense they are the same size after all.

But Cantor now showed that, in the case of infinite sets, all the endlessly diminishing or advancing series which we can display in a square diagram, and which should be exhaustive, are always 'exceeded', since a diagonal series drawn across them evokes the possibility of a reversely ordered series to that of the diagonal (for example inverting the order of two contrasting symbols used to compose every sequence of the set) which, it turns out, cannot be matched with any of the infinitely advancing horizontal or diagonal series.

In consequence the evoked series contains something 'other' than the total content of the infinite square and 'more' than this total content. One can perhaps express this (at least metaphorically) in the geometric terms that the invocation of a 'diagonal' seems automatically to require. Thus in the case of a square a diagonal is always longer than the two sides extending from the same corner from which it emerges at any given point of comparison – thereby infinitesimally dividing what should itself be an infinitesimal division. In any case the upshot is that there are now different-sized infinities that are 'non-denumerable': we can no longer draw in that series of linking vertical lines in every instance. Cantor dubbed this phenomenon 'diagonalisation', and people have sometimes used this term also for the 'diagonalising out' of the power set over the original set.

But oddly enough, Cantor wanted to treat these infinite cardinal numbers in an inappropriately ordinal and serial fashion. For this reason he argued that one can *arrange* different sized infinites in a regular sequence *without gaps*, called 'the continuum', just like 1, 2, 3, 4, 5. This really does of course sound crazy, and one can understand some of Wittgenstein's impatience. But *why* did Cantor want to do this? The answer seems to be something to do with his intense Catholic piety and respect for the scholastic legacy. Here he saw himself as faced with a dilemma. On the one hand, the existence of transfinites seems to head off the threat of finitist materialism, whether mechanical or vitalist. In this respect Wittgenstein's suspicion of 'mystery-mongering' seems well-founded. On the other hand, he wished to make new transfinites do the apophatic work of old potential infinity in Aquinas, by guarding against any confusion of mathematical with divine infinity: and if there were mysterious gaps in the continuum, that possibility he thought (I think erroneously) might seem to arise. But Cantor was never able to *prove* his continuum hypothesis. Eventually, this fact drove him mad, and he landed up in an asylum where he so forgot his catechism as to write a book purporting to prove that Jesus was the natural son of Joseph of Arithmathea. It is only in A. Doxiadis and C.H. Papadimitriou's graphic novel *Logicomix* that Bertrand Russell seeks him out at the asylum to discuss set theory and is dismayed to hear instead these Rosicrucian ravings. It is tempting to hope that that is true in some other reality, but, like Borges, we need to stay real……

Russell himself, along with Frege, tried to logicise maths in terms of sets, while eliminating paradox. But as is well known he himself, to his own discomfiture, compounded these. Not only are there sets bigger than their containing set, there are

also sets where this is undecidable: is the set of all sets inside its own set? It is and it isn't. Is the set of all sets not containing itself as a member inside its own set? It is and it isn't. Russell tried to solve these problems in terms of the theory of types, or of a hierarchy of sets, that avoided recursion, because a set of a superior type to the set it contains, can no longer itself figure as one of those sets. One can note the echo here of Plato's attempts to escape the third-man argument by denying that the form of, for example, a stone it itself a kind of super-stone. But everyone soon agreed that the notion was an arbitrary move in terms of mathematics rather than metaphysics, and that it served no genuine mathematical purpose.

Compromise was soon reached in the 1900's *inside* mathematics with Zermelo: sets from henceforwards cannot prove paradoxical or undecidable because, by the merely conventional 'axiom of foundation', it is decreed that every 'well-made' set contains at least one member that has no sub-sets, thereby rendering each set in some sense unique and not able to be subverted by recursion. But this of itself engenders the further paradox that a set is founded upon a sheerly singular element with which it enjoys nothing in common: an element which then, it would appear, *does not need to be setted at all* even though sets are supposed exhaustively to comprise all mathematical realities.

The final development in this potted history of the infinite takes us up to modern times: Cohen, building on Gödel, showed that the continuum hypothesis is inherently undecidable – as the layperson might always have suspected. There may or there may not be an ordinal continuity of transfinite numbers. If an immanent God lurks in these gaps, as Cantor feared, then there is nothing that mathematics can do about it.

But do we need to take any of this seriously or not? Some of the intuitionists and constructivists, who favoured time, series and ordinality, thought not. These included Brouwer, Poincaré and Bergson. But also Wittgenstein, who heard Brouwer lecture, with approval. (There is here a strange link of Wittgenstein to vitalism, which connects also to his interest in Schopenhauer.) Wittgenstein, however, in order to reject Cantor and Gödel had to go to very extreme lengths. There is for him (at times) no potential infinite for mathematics, never mind any actual one. Nor, once a theorem is constructed, is there anything 'lurking' within the theorem waiting to be discovered, never mind the idea that the theorem itself was 'lurking' in the first place. This ultra anti-Platonism – which rejects even 'a Platonism of the second phase', demands that 2 plus 1 = 3 in no way follows consistently from 1 plus 1 = 2, except by adopting the same merely conventionally transcendental rule of 'count one', which one has to keep reiterating at various stages of the counting process because every rule admits of some ambiguity. (See *Philosophical Investigations,* 185.) Though we happen to build 2 plus 1 = 3, upon 1 plus 1 = 2, we might build something else incompatible with 2 plus 1 = 3, under another schoolmaster who might even keep changing the rule at every step. One can see why Badiou regards Wittgenstein as a sophist. For surely the *content* 1 plus 1 = 2 is already itself the patterned rule that leads next to 3, since 1 remains 1 as a transcendental reality in the Older Medieval, not Scotist-Kantian sense with every arrival at a new unity? Just to make/envisage the number '1' is already to envisage that 1 plus1 makes 2, 2 plus 1 makes 3 etc. The endless sequences simply require an elaborative 'unfolding'.

It is this same arbitrary transcendentalism about rules which disqualifies Wittgenstein's argument against set-theory in general. He thought that Cantor had confused the deliberate 'intension' or meaning-input involved in constructing a set -- as when one puts only recyclable items in the eco-green rather than the grey bin -- with *ad hoc* extension -- as when one 101 random items go in the any-old grey bin in order to form the set that, without female supervision, might be my weekly unsorted planetarily-irresponsible male human rubbish…He considered that Cantor had confused a set made by the rule of intension with a set composed by extension which could then contain unknown infinite things which we have not really selected. The numbers in a set are only there for Wittgenstein because of the 'rule' of inclusion: 'A picture is conjured up which appears to fix the sense *unambiguously.* The actual use, compared with that suggested by the picture, seems somewhat muddied. Here again we get the same thing as in set theory….In the actual use of expressions we make detours, we go by sideroads. We see the straight highway before us, but of course we cannot use it, because it is permanently closed' (*Philosophical Investigations,* 426).

Wittgenstein here wishes to contrast what he takes to be a vicious dualism of set-theory between un ambiguous meaning and impossibly infinite application with a pragmatist use of *ad hoc* initial definitions ceaselessly governed yet qualified by realistic rules that take us down the 'forking paths' which we can take, while the 'dead end' which we cannot take is paradoxically construed as sublime absolute openness.

Yet one could argue, just to the contrary, that while pragmatism still has a duality of rules such as 'go there' over against the content of 'where you can really, finitely

get to', that set-theory in its full-outworkings implies no such duality. This is partly because the invoked or mentioned 'picture' is no less ambiguous and indeterminate than a rule for usage, as the paradoxes resultant from apparently clear definitions expose. Some of these paradoxes, as we have seen, result from recursion and not from infinitude, and so it is not manifestly the case that the problem is always the projection of a limited sense upon an unlimited referent whose meaningful scope one can therefore never determine. To the contrary, the problem is often that one cannot readily fix the intensional sense, and that this cannot be done at all without trying to determine' its extent of referential relevance. This circumstance is what occasioned the need for Zermelo to define a 'well-made' set extensionally under an 'empirical' rule of inclusion, whereas the sheerly intensionally-defined Cantorian sets *of themselves* open up into a recursive abyss.

In fact, set theory does not really tolerate the duality of intension and extension that Wittgenstein imposes on it. Despite its initial logicist aspirations, it confirms that, as just stated, a number is itself both a content and a rule: the number one, for example, has cardinal content, but also orders us ordinally to 'count one' in subtraction from the numerical pluriverse. Thus it is the very extension of number itself as a 'picture' which exposes – as for neoplatonic geometry – the prospect of extension to the infinite, not the illegitimate breaking of the bounds of an arbitrary transcendental rule, as Wittgenstein supposed. If '1' denotes a single set, then this can legitimately be a set of an infinite number, while an ordinal series -- like a series comprised by constant doubling -- of itself must invoke infinity and therefore point to the fact that the series is also a set: otherwise it is *not* a series – defined for example

by doubling, not by any limit of the items to be doubled -- and there is no rule, which derives from the content of seriality.

So if not all the paradoxes of number arise from the contagion of the infinite, then equally it is numbers, not hubristic over-reaching, that incites this contagion. *Only* quantification leads us to the unquantifiable, and without this approach we would not be able to envisage the unconstrained power to quantify. We take the marked turnings one by one *because* we forever proceed up the open road.

Moreover, the attempt to treat set-theory merely intensionally, as with Frege and Russell's use of logical quantifiers (Boole's 'or', 'and' and 'if', plus Frege's own 'for every' and 'there is a') lamentably failed, as we have seen, to banish paradox, because it turned out that the ambitions of a neo-Leibnizian *mathesis universalis* (explicitly envisaged by Russell, as equally by Husserl with his 'phenomenology') which tries to extend logic into existential adjudication, cannot even deal comprehensively with the most abstract level of objective reality, which is the mathematical.

It is for this reason that, after Zermelo, set-theory has been ordered more randomly within the grey bins of extension. But we have seen how these, as Wittgenstein rightly feared, are unable to dump paradox and infinitude either. It is in fact most of all mathematics itself that should suggest to us that there is no warrant for the intension/extension duality any more than there is for the almost identical dualities of sense and reference and mention and use, since here what we intend by making so exactly coincides with the truth that we 'see'. In keeping with this mathematical paradigm of *verum-factum* (after Vico) one can suggest, indeed in concurrence with

Wittgenstein, that we can only *refer* to what has a locatably different *sense* for us. On the other hand, still with Vico and also with Wittgenstein for much of the time, one can inversely and additionally suggest that the specific meanings of things out there in the world only disclose themselves to us in endlessly different *aspects* of real extension. The senses of 'evening-star' and 'morning-star' alone locate the referent Venus, but it is Venus *herself*, along with the entire cosmic order, who shows herself to us as the sense-referents 'evening star' and 'morning star' equally.

However, it would seem that Wittgenstein did not entirely subordinate his account of 'rule' to his crucial account of 'aspects' – thereby permitting a lingering absolute, transcendentalist divide between rule and content, that is still an echo of the sense/reference divide which sustains the Fregean logicist programme of extension to the existential, and which is genealogically linked (as with the Husserlian notion of what is 'intended') to the Scotist isolation of a known 'object' between the cognising subject and reality, in contrast to the Thomistic view that what we know *is* the known reality in a transmuted, ontologically 'intellectual' guise. (This is why Geach and Anscombe's Fregean and logicist reading of Aquinas is highly debatable.) The more they invoke knowledge as knowledge of 'aspects' of the real, the more both Husserl and Wittgenstein veer towards a kind of more relativistic construal of an Aristotelian-Thomist theory of understanding, but the more they qualify 'aspects' as tied to controlled, fully-surveyable intention (Husserl) or as subordinate to an imposed transcendental rule (Wittgenstein), then the more a 'Scotistic' perspective is to the fore. (This set of issues will be returned to in lecture five.)

It is in terms of this perspective that, in his philosophy of mathematics, Wittgenstein exhibits a lingering Fregean, positivist and transcendentalist conservatism *en dépit de tout.* For all his apparently drastic refusal of all mathematical formalisation, and all reduction of maths to logic, the retained intension/extension duality remains the ghost of this programme. It is because of this retention, I would argue, that Wittgenstein erroneously tried to contradict the (perhaps authentically) Platonising Gödel's demonstration of mathematical incompleteness. For this retention led Wittgenstein to deny in general (indeed in a disappointingly Lockean fashion) that are any real ontological conundra, or openings for unavoidable speculation, if ordinary language is well-policed and we realise that there is no evading the ineluctable bounds of 'language games' and 'forms of life'. This is one reason why his finitism – which infects his entire philosophy – is now somewhat out of favour within the analytic domain. For even if his transcendental 'rules' in language games other than that of maths are by no means so 'fixed' in distinction from the content they govern, they still, as Conor Cunningham has argued, close themselves against speculation in a way that suggests an immanently controlling or regulative boundary (however impossible actually to trace on Wittgenstein's own mostly excellent premises) whose supposition is unjustifiable because of the elusive obscurity of this boundary – which, could it *be* identified, would thereby have been transgressed.

There seems then to be no constructivist-intuitionist warrant against Badiou attempting a mathematical ontology. How does he do so? Very summarily: For Badiou reality is not a labyrinth, nor is it Bergson's cone, but rather it is an inverted cone. At the pointed bottom, as for all set-theoreticians, lies the empty set of pure possibility, from which all else is composed – for Badiou however not just

mathematically, but also ontologically. After this empty unity, in an inversion of Platonism, the mathematical many are primary: all the sets that can be envisaged possess the actuality of fundamental ontological items. The various paradoxes of set theory which I have just enumerated allow Badiou to think of the phenomenal and cultural world as the work of escaping singularities. In particular, political formations within geographical terrains can be understood in terms of the 'diagonalising out' of the power-set – as 'states' exceeding 'situation' -- while more revolutionary cultural processes, involving fully-fledged 'events', can be construed as the 'escape' of Zermelo's aberrant founding member of every well-made set, augmented by Cohen's space for the 'forcing' exerted by the indeterminable.

But there are in fact two levels to this process of exiting from ontological sets in Badiou's most recent thought contained in his *Logic of Worlds.* First, there is the realm of appearances which is the realm of nature. Beyond the solipsism and democracy of sets, this realm is organised relationally (in keeping with mathematical 'category theory') and in terms of the local hierarchical dominance of some elements over others: as, for example, there are only manifest items situated in relation to a wall because of the overwhelming presence of the wall as compared to the less intense presence of the items. Moreover, the endless tending of relations to further points (the wall to the room, the room to the house, the house to the road and so forth) and the consequent 'triangulation' of relations by inclusion in further relationships sets up a temporal dynamism whose Bergsonian character, after all, Badiou freely admits. It is this dynamic which finally gives rise to the human realm of *events* where cultures, like religions, are constituted by their fidelity to contingent occurrences which can nonetheless assume various degrees of 'universal' value. Much of the time though,

according to Badiou, cultures are sunk in a mechanical repetition which is disloyal to their origins. When this occurs, then what is reflected from the ontological level is simply the most routine, mechanical procedures of mathematical settings. Above all, capitalism is the reign of this aspect of number and a suppression of numerical paradox: 'the reign of the unthought slavery of numericality itself' (*Number and Numbers,* p. 213). Today we are tyrannised by number: but Badiou unusually suggests that a true thinking about number allows us to escape this grip at the most fundamental level.

In this way he very curiously blends formalism with a kind of revived existentialism. (Brunschvig plus Sartre, as he confesses.) But he attempts to stabilise this blend by exploiting the idea of holes in mathematical reality that allow a subjective escape from it.

However, this entire hybrid is haunted by a vast ambiguity. For one reading of Badiou it may seem as if we can push both appearances and subjective processes back into the holes: that indeed the 'holes' are all they really are. The apparent real relations of appearances are accordingly but the pre-established harmonic expression of the varying intensities enforced by underlying monadic sets, whose members never communicate in a relational fashion. The unique excitement of truth-processes can likewise be reduced to the anarchic expression of cosmic emptiness, rendering Samuel Beckett's the most authentic cultural gesture.

Yet Badiou is scarcely coherent: *in contrast to* the pluralist postmodernists like Derrida or Lyotard, Badiou wishes us to stick absolutely by certain universal truths,

even though they rest only upon the irruption of events: for example the decoded atheist truth of Christianity, the truth of the French revolution, the truth of artistic modernism, the truth of non-Euclidean geometry, the specific truth of your own Parisian love-affair – echoing the unique fourfold scope of post-Socratic Western philosophy. But how is this compatible with the sucking-back of events into the holes? And indeed Badiou himself clearly indicates that one can read all this the other way around: that the mathematical ontology *only exists* because of the historical event of Cantor and Badiou himself; that the primacy of the Many rather than the One is the result of a *decision*, and that the ontology of the many can be considered as a kind of degree- minimum of appearance. Sometimes Badiou says they *everything* – sets, appearances and events themselves -- derive from the self-supporting actuality of the event which he is accordingly forced to describe in religious language as 'grace' and gift' without God.

Two interpretative possibilities seem to follow from this. Increasingly, Badiou cannot keep Hegel at bay: it seems as if (as he is aware) the mathematical sets are like Hegel's Trinitarian philosophical account of the Paternal source, the appearances like the Filial expression, the event like the Spirit's truth of love and community – remembering that for Trinitarian theology oneness (of essence) is as much an upshot of plurality (of persons) as it is coincident with it. What is more, he is nearer to Christian orthodoxy than Hegel insofar as he rejects both agonistic dialectical progression or Hegel's finitised infinite. It would therefore appear that if the event 'invokes' the infinite as received gift, but without comprehending it, that the sheer actuality of the event must return to the thought of a transcendent infinite after all, just as the relations of appearance and the traditional unity of fidelity to the event return

after all to the primacy of the One over the Many. It might be the case, as Badiou appears to imply, that the non-finite infinite is merely posited by our divine-human decision (or to be more precise the decision of the truth-process that situates us as subjects), such that the gift gives the infinite along with itself and not the infinite the gift. But then it would be hard to see how the infinite is not finitely 'outside' this decision, as for Hegel. If, instead, the infinite gives also our decision for the event with its infinite significance along with the infinitely open content of the event, then it would seem to follow that this infinite cannot be merely immanent to the eventful truth-processes that generate all immanent reality.

This conclusion can be underscored by the fact that Badiou regards St Paul's founding of the Church as the very emergence of the paradigm of all events as such, which ideally concern a true universality that can only be produced by allegiance to the singular, not by being part of an abstract whole, which really always divides us into classes, genders, opinions and so forth by 'keeping us in our place'. Badiou wishes however to distinguish between the Christian 'mythical' version of the truth-event (which still surpasses all the merely local mythical founding events which preceded the arrival of Christianity) and a real political, artistic or scientific or erotic truth-event. But how can one require a concrete eventful paradigm for the event as such, if one discounts the concrete content of that event? In doing so, Badiou presents an abstract, non-eventful account of the event as such after all, and accordingly lapses disappointingly into postmodern talk of the formal co-existence of many truth-processes, rather than their integration, which any claim to overarching truth would require.

So Badiou *can* be read as inviting a further step towards orthodox Christianity. *Or* he can be read as offering yet another sterile example of immanentist mystery in which the appearances-plus-the event sink back into the nullity of the empty set, while inversely this set and all the sets are only 'set up' by the subjective action of the event. Then one has the mutual-nullification, duck/rabbit logic of all nihilisms once again.

But to take the former option suggests that we cannot evade Cantorian paradox by reading it, like Badiou, in merely 'generative' terms. To exploit a mystery existentially is not to resolve it, even by intimation. Instead, like the analytic philosopher Graham Priest, we need to face up to the fact that dialethism, or the reality of contradiction, might be true. Priest shows how this possibility haunts all post-Kantian transcendentalist philosophy: Kant is only able to establish closure on the bounds of knowledge because he has transcendentally stepped outside them. Closure and transcendence, legal forbidding and transgression of this law therefore coincide as opposites and are the conditions of each other.

But Priest only offers us another variant of immanence. Unlike Badiou, he is prepared to rest content with Hegel's immanentised infinite, whereby the infinite we can think of is 'outside' the finite and therefore itself after all limited. But this resignation expresses in different terms nihilist mutual abolition: the two opposites coincide in cancelling each other out.

But if we invoke transcendence, *then* we have the meta-paradoxical chance of *both* entertaining dialethism and *yet* sustaining the principle of non-contradiction.

What do I mean by this? I mean that the haunting of finitude by a passage into the infinite and the paradoxes of infinitude is, as for Plato, a *sign* that indeed in time we only shadow eternal truth. For, as Nicolas of Cusa makes clear in his sequel to *De Docta Ignorantia*, the *De Coniecturis,* the transgression of identity is in part a transitional *confusion* that belongs to the intellectual, intuitive realm of intellect, situated beyond the mere realm of ratiocination but below the supra-level of the divine. The need we find, as with set-theory, to invoke the coincidence of opposites, is certainly a sign that they coincide in God, and yet they only do so because God is absolutely simple and therefore transcendentally singular. For Cusa, as for the entire tradition of neoplatonic and Christian philosophy, God is alone purely self-identical and therefore alone secures ontologically the principle of non-contradiction which is the guarantor of truth. Yet he does so precisely by exceeding in infinite unity the paradoxes thrown up by the participation of the finite in the infinite. Thus Cusa, echoing Dionysius the Areopagite, says that God equally 'is' and 'is not' and yet that he also *is not* the coincidence of 'is' and 'is not'. Thus he is self-identical beyond and not *on this side of* the coincidence of opposites.

In the same work, *De Coniecturis*, Cusa has a diagram that he calls *Paradeigmata* of the whole of reality. It is the intersection of an inverted cone from God with an ascending cone upwards from the material realm. This well illustrates how Transcendence allows us to have both Bergson's upright cone and Badiou's inverted cone both at once – so long as we now invert their vertical order and put the inverted cone at the top to represent the unified manyness of spirit and the upright cone at the bottom, to represent the becoming unified of matter. Then, instead of the immanent double abolition of the transcendental in what it governs and vice-versa, we have the

sustaining by the transcendent God of all things and the return of all things to God via inclusion in his own ever-realised ‘return’ upon himself.

Since God is, as for St Paul, ‘all in all’, it follows that there is no divine replete simplicity without this universal return of everything else and that a non-idolatrous monotheism rigorously requires *apocatastasis.* Transcendence saves both all cognitive appearances and all ontological realities. By contrast, atheist immanentism is the doctrine of damnation of some for a while and in the end the eternal damnation of all and everything.