

## SCIENTISM AND ROMAN CATHOLIC THEOLOGY: TOWARDS EXORCISING THE ZEITGEIST OF INSTITUTIONALIZED TRUTH?

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*In a fable by Lincoln Steffens, he recounts the fate of a man, who, climbing to the top of a mountain, seizes hold of the Truth. Satan, suspecting mischief from this upstart, duly directs his underlings to tail him. When the demon reports with alarm the man's success – that he had indeed seized hold of the Truth – Satan remains unperturbed. 'Don't worry', he yawned. 'I'll tempt him to institutionalize it.'*<sup>1</sup>

*The purpose of this paper is to offer an exploratory critique of the concept of institutionalized truth, as it is postulated within the epistemic traditions of scientism and Roman Catholic theology. Drawing on examples from each of these paradigms, namely, the conclusions of scientism, and the doctrine of papal infallibility, this disquisition argues that immutable truths, as championed by both camps, are in fact, questionable constructs, open to interpretation and criticism.*

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### Introduction

We all succumb to the siren call of institutional truth at some point. All too often its spell proves too powerful and jettisons our critical faculties. But as Nietzsche cautions, 'convictions are more dangerous enemies of truth than lies'.<sup>2</sup> Wrestling with this phenomenon, luminaries from the world of literature, science, religion and philosophy have painstakingly chronicled this problem. Authors such as

Francis Bacon, Bertrand Russell, John D. Caputo, John D. Barrow, Paul Davies, Karl Popper and Ludwig Wittgenstein have spent their careers agonizing over their convictions and belief structures. They are not alone – theologians ranging from Aquinas to Polkinghorne to McGrath have similarly grappled with the complexities of cogently justifying their views. Despite their erudite deliberations, all that remains is, ‘the truth is rarely pure and never simple’.<sup>3</sup> Taking this as our starting point, this paper shall examine instances whereby ‘institutional truth’ (as an immutable, absolute construct), has been exploited by the institutions of scientism and Roman Catholicism in an effort to affix an unassailable certainty to all of their explicit knowledge-claims.

### What is Truth?

The most commonly held view of truth stipulates a belief is true *if and only if it corresponds to a fact*. This is widely known as the correspondence theory of truth. Proponents of this view subscribe to its core ontological thesis: a belief is true if there *exists* an appropriate entity – a fact – to which it corresponds. If there is no such entity, the belief is false.<sup>4</sup>

Although this definition appears relatively straightforward, unpacking the intricacies of truth remains an exceptionally complex undertaking. It is somewhat understandable then, when a jesting Pilate posed the *aporia*, ‘what is truth?’ Bacon insists, he ‘would not stay for an answer’.<sup>5</sup> To avoid the vagaries of perpetual obfuscation, pragmatists like William James insist, ‘truth is a property of certain of our ideas’. It means their ‘agreement – as falsity means their disagreement, with reality’. Ultimately this means, ‘true ideas are those that we can assimilate, validate, corroborate and verify. False ideas are those we cannot.’<sup>6</sup> Although this is the most popular concept of truth, it is not a universally accepted position.

Nietzsche, for example, is scathing of truth as an absolute. In his view, truth is nothing more than

[a] movable host of metaphors, metonymies, and anthropomorphisms: in short, a sum of human relations which have been poetically and rhetorically intensified, transferred, and embellished, and which, after long usage, seem to a people to be fixed, canonical and binding.<sup>7</sup>

Put simply, 'truth are illusions which we have forgotten are illusions'.<sup>8</sup> Nietzsche, for his part, is not alone in doubting the existence of truth. Other philosophers such as Ludwig Wittgenstein likewise question its existence. He asks us to consider, 'what does it mean: the truth of a proposition is certain?'<sup>9</sup> For Wittgenstein, if we cannot identify certainty, propositions are rendered meaningless. Since propositions merely express facts about the world, propositions in themselves are entirely devoid of value. The facts are simply just the facts. Everything else, everything about which we care, everything that might render the world meaningful, must reside elsewhere.<sup>10</sup>

Other contributors to the debate include Heidegger who, surprisingly enough, proffers a more intelligible account of truth. He insists truth is: '*veritas est adaequatio rei et intellectūs*.'<sup>11</sup> This can be taken to mean, 'truth is the correspondence (Angleichung) of the matter to knowledge'. But it can also be taken to mean, 'truth is the correspondence of knowledge to the matter'. Truth should therefore correspond to an external reality.

Naturally, this claim merits closer scrutiny. Should truth correspond to an external reality and beget correspondence of the knowledge to the matter, does this allow truth to evolve? Take for example the fact water boils at 100 degrees Celsius. Is this true? Well, yes and no. It boils at 100 degrees Celsius/212 degrees Fahrenheit, except when boiled at high altitude. There it boils at 85 Celsius/185 degrees Fahrenheit. How does Heidegger reconcile his

understanding of truth with this we may ask? Moreover, before this anomaly was discovered, was it true to assert water boils at 100 Celsius? Would Heidegger acquiesce to the notion that sometimes we have approximations of 'Truth' in the form of 'putative truths' and that 'Truth' as the 'totality of the facts' remains elusive? Should this be the case, such an analysis would appear to suggest that, in order to define and understand truth, we must first know and understand the totality of everything. As Wittgenstein states:

1 The world is all that is the case. 1.1 The world is the totality of facts, not of things. 1.11 The world is determined by the facts, and by their being all the facts. 1.12 For the totality of facts determines what is the case, and also whatever is not the case.<sup>12</sup>

We are not equipped with the 'totality of the facts'. Our understanding of the world is hence limited. So too is our understanding of truth. Truth as the 'totality of the facts' is therefore somewhat akin to playing 'Guess Who' without several of the characters. Even though our body of knowledge is steadily being added to, 'there is no way, to say it all. Saying it all is literally impossible: words fail. Yet it is through this very impossibility that the truth holds onto the real.'<sup>13</sup>

### **Institutionalized Truth**

Institutionalized truth is instances when, despite overwhelming evidence to the contrary, institutions declare that they alone possess truth. Based on this trenchant understanding, they refuse to ever question or revise their impression of what precisely truth is. Their perception of truth is consequently: stagnant, immutable and unassailable. In order to illustrate my point, consider this story from Aesop's Fables [530].

Aesop's Fables tells the story of Prometheus the master potter who decided one day to sculpt the form of Veritas [Aletheia, Truth], so that she [Veritas/Truth], would be able to regulate people's behaviour. As he was busy working, an unexpected summons from mighty Jupiter [Zeus] called him away. Prometheus duly departed, leaving the cunning Dolus (Trickery) in charge of his workshop. Dolus, having recently become one of the god's apprentices, was keen to impress. Fired by ambition, Dolus used the time at his disposal to fashion a figure of the same size and appearance as Veritas [Aletheia, Truth] with identical features. When he had almost completed the piece, he ran out of clay to use for her feet. A short time later the master returns, and with that, a rather coy Dolus hurriedly retreats to his seat, quaking with fear. Utterly awestruck, Prometheus was simply astonished at the similarity of the two statues and wanted it to seem as if all the credit were due to his own skill. Eager to accomplish this goal, he put both statues in the kiln and when they had been thoroughly baked, infused them both with life: sacred Veritas (Truth) walked with measured steps, while her unfinished twin stood stuck in her tracks. That forgery, that product of subterfuge, thus acquired the name of Mendacium [Pseudologos, Falsehood]. Even though she has no feet, it reminds us how every once in a while something that is false can start off successfully, but eventually with time, Veritas (Truth) is sure to prevail.

Those who imprison 'truth' within the confines of their institutions are not harboring truth, but rather its impostor falsehood. What they are left with is something that looks exactly like truth, with one notable exception – she has no feet. Generally people who subscribe to institutional truth are either unaware of how to spot her folly, or are perhaps beguiled by the idea, 'if you tell a lie big enough and keep repeating it, people will eventually come to believe it'.<sup>14</sup> Some may know it is a lie, but in the midst of repeating it *ad nauseam* quickly succumb: whilst others – sometimes from the cradle to the grave, blindly trust it is the truth.

Several examples of this phenomenon exist, for example, scientologists who base their religious beliefs on the fantastical sci-fi writings of their founder, L. Ron Hubbard. Alarming, Hubbard is even on record admitting it is not even a 'religion'.<sup>15</sup> The fact truth's unfinished twin is eternally stuck in her tracks, may suit 'religions' such as this when it comes to upholding matters of orthodoxy. For the purposes of this paper however, it is those who blindly believe, that we shall concern ourselves with here. This is the group that refuses to survey truth from head to toe; it is the instance where Dolus has emerged supreme.

### What is Scientism?

Scientism is the belief that science alone can render truth about the world and reality. It follows the same rubric as the well-established scientific method, whereby one starts with a question, formulates a hypothesis, tests the hypothesis under controlled conditions, collates data from the experiment, details their observations made during the experiment, and finally, formulates conclusions based on the data. As per the scientific method, scientism relies heavily on inductive methods. The precise point at which scientism deviates from the epistemic dictates of the popular scientific community boils down to its unshakable certainty in the reliability of its method. Predominantly it propounds,

Science provides all the significant truths about reality, and knowing such truths is what real understanding is all about. ... Being scientific just means treating science as our exclusive guide to reality, to nature – both our own nature and everything else's.<sup>16</sup>

Despite being a robust and rigorous position at first glance, scientism contends there is no such thing as truth outside this paradigm. It alone is the arbiter of truth. If you cannot

potentially establish it via the scientific method, it simply does not exist. In this way, scientism as an 'exclusive guide to reality', precludes other ways of knowing. This positivistic view is certainly not a mainstream one, and it is worth noting that most practising scientists allow for other epistemological frameworks and paradigms, including ones that seek to outline the limitations of their own methods. That said, there are several notable examples of scientists who have forged their careers on ridiculing those who do not accept the incontrovertible efficacy of the scientific method.

Proponents of scientism frequently sneer at those who profess a belief in God, or indeed, anything that cannot be tested and verified under controlled conditions. One such example is the biologist Richard Lewontin. In his view, 'in order to properly understand the universe, people should reject irrational and supernatural explanations of the world and accept a social and intellectual apparatus, science, as the only begetter of truth'.<sup>17</sup>

Lewontin is not alone. For example, the distinguished chemist Peter Atkins in his article, 'Science as Truth' states: 'I consider it to be a defensible proposition that no philosopher has helped to elucidate nature; philosophy is but the refinement of hindrance.'<sup>18</sup> Hawking is equally dismissive when he says, 'there is a fundamental difference between religion, which is based on authority, and science, which is based on observation and reason. Science will win because it works.'

Hawking and Lewontin present rather a compelling case. However, perhaps it is a tad unhelpful to exclusively picture religion and science in terms of warring tribes, both of whom speak different languages and cannot broker peace. Former scientist and Anglican priest John Polkinghorne, for instance, contends that science and religion are actually searching for the same thing – namely, truth. He states, 'I think of science and religious faith as being two eyes. Both are looking for truth. I can see with more depth and accuracy using both eyes together, like binocular vision, than if I use either eye by itself separately.'

## Critiques of Scientism

There are of course several objections to scientism and its epistemic stance. Critics gleefully ask scientists to irrefutably prove that a happily married couple are in love with one another. Is it a chemical response? Is love merely the product of oxytocin in our bloodstreams? Will blood tests help measure my love for my wife for example? Perhaps we can be brought into a lab and subjected to MRI scans? Surely our brain's activity will prove we are in love? To date, science has failed to convincingly resolve any of these questions.

Another example of where scientism is perhaps found wanting lies in the field of Quantum Mechanics. Here we have what is known as Heisenberg's Uncertainty Principle. The Heisenberg Uncertainty Principle states that you can never know a particle's exact position and momentum simultaneously. In order to establish the velocity of electrons, we must first measure them. However, the only act of measuring we have at our disposal, (bombarding them with photons/light), affects how the particles behave. Thus, by observing what is going on, we are directly affecting the result. The same goes for observing an object's position. Uncertainty about an object's position and velocity makes it difficult for a physicist to determine much about the object. Effectively what this means is that the essential aspects of a particle (position, velocity, momentum, energy) can never be precisely measured at once, because the mere act of observation distorts at least one of these quantities. Despite such obvious limitations, CERN's large Hadron Collider, effectively a 10 billion dollar 27-kilometre ring of superconducting magnets, aims to prove *exactly* how our universe came to be. The assumption (Newtonian Determinism) that building the Hadron Collider, recreates conditions *exactly* as they were at the Big Bang moment is arguably a questionable jump.

First of all, this presupposes that the leading scientists know *precisely* what happened at the point of the Big Bang



and indeed, all the variables that go along with it. Notwithstanding Heisenberg's cautionary counsel, this appears to be weak reasoning. Because the Hadron Collider is essentially constructed on foot of mathematical formulae, it presupposes mathematics can explain the universe satisfactorily. Consider the problem of infinity in mathematics. When we think of infinity we instinctively think big – galaxies, stars and the dizzy vastness of unending space. But in view of the fact we cannot measure infinity, we tend to subdivide, in an effort to find the smallest piece – an indivisible building block at the bedrock of things. The Hadron Collider is one such example of this quest in science.

Take a piece of A4 paper and try folding it in half more than seven times. You won't be able to do it. After a few goes, the thickness of the paper becomes the same size as the diameter. Now try cutting the paper in half, time after time. After a while you will get to around 22 cuts and then start to struggle. Eventually the size of the cutting instrument starts to be the limiting factor. Since the Hadron Collider is largely an instrument that attempts to subdivide the possible infinite origins of the universe, it takes what is possibly infinite (both mathematically and spatially) and puts it in a finite box. This short exercise demonstrates how the mechanics of subdivision quickly bring you face to face with the limitations of the actual, no matter how much you think the process may go on forever. It also leads us to question whether the 'cutting instrument', in this case, the Hadron Collider, is a limiting factor in its quest to explain the origins of the universe.

Secondly, there is a body of literature currently devoted to whether scientists are even in agreement over whether there was a big bang, or rather, a series of big bangs (see Bernard Carr, 'Universe or Multiverse?'). Should one subscribe to the theory that there was an infinite series of big bangs, which 'big bang' does the Hadron Collider seek to emulate? Assume it mirrors the last 'big bang'. What about all the other 'big bangs' before that? Maybe in

the midst of those 'big bangs' something changed which then led to X and Y being the case instead of A and B as previously thought? Whatever your view may be, the question remains: is there sufficient evidence for these conclusions?

These short examples reveal, the more you chip away at scientism, the weaker its foundation becomes. Its foundation is based on the presupposition that the scientific method is the only way to achieve knowledge – in other words – it deems its epistemic method as being effectively bulletproof. Given that it is often declared by the scientific community that it is, 'wrong always, everywhere, and for anyone, to believe anything upon insufficient evidence',<sup>19</sup> there is no substantive reason why scientism should be an exception to this rule.

Scientism is so convinced of its own truth, it is oftentimes scathing of theism. Scientism dismisses religious experience outright as an explainable neurological phenomenon. For those who claim to have experienced '*mysterium tremendum [et fascinans]*'<sup>20</sup>, scientism retorts, '*si Dieu n'existait pas, il faudrait l'inventer*'.<sup>21</sup> Belief is powerful. It can play tricks on the mind. The only thing that matters is what one can prove via the scientific method. Besides, a sense of the other is hardly conclusive grounds for believing in God. After all, in matters of faith, 'there is enough light for those who want to believe and enough shadow for those who don't'.<sup>22</sup>

### Scientists Skeptical of Scientism

Further objections to scientism arise from amongst the scientific community itself. Whilst they contend the scientific method is the best way we have of approximating reality, they readily acknowledge that there are other ways of knowing and that there are also many flaws in the epistemic paradigm employed by the sciences.

The physicist, Paul Davies in his book *The Mind of God* reminisces about his childhood and his obsession with asking 'why'. He recalls:

When I was a child I used to infuriate my parents by continually asking 'why?' Why can't I go out to play? Because it might rain. Why might it rain? Because the weatherman said so. Why has he said so? Because there are storms coming in from France. Why are there storms coming in from France? And so on. These relentless interrogations normally ended with a desperate 'because God made it that way, and that's that!' My childhood discovery (deployed more out of boredom than philosophical acuteness), that the explanation of a fact or circumstance itself demanded an explanation, and that this chain might continue indefinitely, has troubled me ever since. Can the chain of explanation really stop somewhere, with God perhaps, or with some super-law of nature? If so, how does this supreme explanation itself escape the need to be explained? In short, can 'that' ever be 'that?'...can one ever be truly satisfied with a 'that's that' explanation?<sup>23</sup>

The final line deserves closer attention. Given that the question of truth, belief, justification, causality, interrogating inferences, verification, and cogent reasons for one's beliefs, thoughts and actions are all crucial components of epistemology, can one ever be 'truly satisfied' with a 'that's that' explanation? If the answer is yes, science cannot explain everything (why is there something rather than nothing and how can something come from nothing for example?), and therefore cannot claim to be our sole guide to explaining reality.

If the answer is no, how does science, and indeed, all forms of knowledge, avoid an *ad infinitum* chain of circular reasoning wherein each explanation of a fact demands a further explanation? The upshot of Davies' thought-provoking

analysis is that even the scientific method – and it must be said – all forms of acquiring knowledge, whether it be inductive, deductive, *a priori* or *a posteriori*, make certain assumptions about their methods in order to avoid an unending chain of circular reasoning stultifying the accretive nature of knowledge.\*

With regard to the efficacy of the scientific method, principally, in view of the limitations of induction in establishing certainty, Richard Feynman tells us:

The scientist has a lot of experience with ignorance and doubt and uncertainty, and this experience is of very great importance, I think. When a scientist doesn't know the answer to a problem, he is ignorant. When he has a hunch as to what the result is, he is uncertain. And when he is pretty damn sure of what the result is going to be, he is still in some doubt. We have found it of paramount importance that in order to progress, we must recognize our ignorance and leave room for doubt. Scientific knowledge is a body of statements of varying degrees of certainty – some most unsure, some nearly sure, but none absolutely certain. Now, we scientists are used to this, and we take it for granted that it is perfectly consistent to be unsure, that it is possible to live and not know. But I don't know whether everyone realizes this is true. Our freedom to doubt was born out of a struggle against authority in the early days of science. It was a very deep and strong struggle: permit us to question – to doubt – to not be sure. I think that it is important that we do not forget this struggle and thus perhaps lose what we have gained.<sup>24</sup>

Feynman is clear about how big a role doubt plays in the life of a scientist. In his view it is necessary, healthy, and in many ways, the catalyst for all endeavor. Without doubt, the pursuit for certainty is meaningless. Doubt is the key to

knowledge after all. In this way, 'in so far as a scientific statement speaks about reality, it must be falsifiable; and in so far as it is not falsifiable, it does not speak about reality'.<sup>25</sup> This is the tightrope scientists must walk on a daily basis. Their theories and methods must remain open to being corrected, revised, usurped and discarded – all in the name of truth. Often it is only the theories that scientists operating out of a scientific framework acknowledge need to change, especially in light of new evidence, but never the methods they employ in deriving new knowledge. This is where scientism exhibits its folly. It never questions its method and refuses to embrace doubt as the key to knowledge. In this way, scientism engenders institutionalized truth.

### Theology and Institutionalized Truth

The problem of institutionalized truth is not confined to the arena of scientism. Entrenched religions, for example, Roman Catholicism, continue to employ it in matters of heresy. In John's Gospel Jesus tells us, 'I am the way and the truth and the life. No one comes to the Father except through me' (Jn, 14:6). And in (Mt, 16:18), Jesus tells Peter, 'And on this rock I will build my church, and the gates of hell shall not prevail against it.' Scripture is suitably vague though when it comes to the particulars of what shape this constructed authority should take. Certainly all institutionalized religions need some authority, an accepted *modus* of resolving major questions regarding orthodoxy. In the case of Roman Catholicism, one of these measures is papal infallibility.

Infallibility implies not only the absence of actual error, but also the fundamental inability of erring. Although, strictly speaking, infallibility is attributable to God alone, in all other instances, it is understood as a divine gift that is only operative under certain specified conditions. In this respect, Vatican I teaches that 'according to the gospel evidence, a primacy of jurisdiction over the whole Church of God was

immediately and directly promised to the blessed apostle Peter and conferred on him by Christ the Lord'. Through the act of succession, the Roman Pontiff thus assumes this role.

The teaching of infallibility is declared in *Pastor Aeternus* in Vatican I, (1870) and *Lumen Gentium*, (1964) in Vatican II. The first Vatican Council describes the infallible magisterium of the Roman Pontiff as follows:

The Roman Pontiff, when he speaks *ex cathedra*, that is, when he discharges his office as pastor and teacher of all Christians, and, in virtue of his supreme apostolic authority, defines a doctrine concerning faith or morals that is to be held by the universal church, through the divine assistance promised him in St. Peter, exercises that infallibility with which the Divine Redeemer willed to endow his Church. (D.S. 3074)

There is justifiably quite a bit of confusion as to what infallibility entails. With respect to this, the council is quite clear it is not advocating papal infallibility, but rather the 'infallible magisterium of the Roman Pontiff' (PA, Ch, 4). Principally this affirms that 'infallibility is not a personal attribute, but a temporary assistance divinely bestowed on him precisely in his capacity as universal pastor and authoritative leader' (Ch 4).

Vatican II's teaching on infallibility is proclaimed in *Lumen Gentium*, 25. In this document infallibility is extended to bishops, when, in instances whereby they are dispersed throughout the world, 'they are in agreement that a particular teaching is to be held definitively and absolutely' or 'when assembled in ecumenical council, they are for the universal church, teachers of and judges in matters of faith and morals' (LG, 25). Such decrees, must of course, *ex cathedra*, first garner the assent of the Pontiff.

Unsurprisingly, the doctrine of infallibility is a contentious issue in theology. One such vocal dissenter is the theologian Hans Küng. In his seminal work *Infallible? An Enquiry*,

he excavates the theological cornerstones underpinning infallibility. Küng proclaims infallibility is irreconcilable with factual errors popes have made in the past. By virtue of this, ‘the traditional doctrine of the Church’s infallibility...rests upon foundations which can no longer be called certain and impregnable, if indeed they ever could’.<sup>26</sup> Another point Küng makes, concerns the biblical justification for infallibility. With regard to this he maintains such evidence is shaky and at odds with modern biblical scholarship. Further scrutiny exposes the fact that all doctrinal statements are also historically conditioned. Küng proposes, that in light of these considerations, infallibility should be replaced by ‘indefectibility’ or ‘perpetuity of truth’. This would allow the Church to be a learning church, a church whose authority is continually being guided by the light of the Holy Spirit.

Consider the infallible papal proclamation pertaining to the Assumption of Mary (1950). This belief in the corporeal assumption of Mary is founded on the apocryphal treatise *De Obitu S. Dominae*, attributed to St. John, dating from the fourth or fifth century. It is also found in the book *De Transitu Virginis* and in a letter attributed to St. Denis the Areopagite. It is likewise mentioned in the sermons of St. Andrew of Crete, St. John Damascene, St. Modestus of Jerusalem, St. Gregory of Tours and others. Yet, despite the ‘evidence’ contained within these texts, it was not until November 1, 1950 that Pope Pius XII solemnly defined Mary’s bodily assumption into heaven as a dogma of faith in the apostolic constitution *Munificentissimus Deus* (MD):

We pronounce, declare and divine it to be a divinely revealed dogma: that the Immaculate Mother of God, the ever Virgin Mary, having completed the course of her earthly life, was assumed body and soul into heavenly glory. (DS. 3903)

Taken together, the biblical corroboration and papal decree *ex cathedra*, seems to be persuasive. But allow us to

scrutinize the evidence more closely. Should we examine apocryphal works in more detail, particularly those that do not fall into the deuterocanonical category, we would discover texts like the Gospel of Mary and the Gospel of Thomas. For obvious reasons these gospels are *anathema* and ex-canonical. Take for example the following story from the Gospel of Thomas (2:1–3):

And the son of Annas the scribe had come with Joseph. And taking a willow twig, he destroyed the pools and drained out the water which Jesus had gathered together. And he dried up their gatherings. And Jesus, seeing what had happened, said to him, 'Your fruit (shall be) without root and your shoot shall be dried up like a branch scorched by a strong wind.' And instantly that child withered.

In evaluating this historical primary source evidence, it becomes painfully apparent the entire foundation of Christian belief, the Jesus of Faith that Christians follow and wish to emulate, would be pulled asunder if this text were accepted into the canon of scripture. One must ask the question then – why is the Vatican selectively judicious with its choice of evidence for the Assumption? The same principle applies to some of its other teachings, namely a male only priesthood. Are such instances glaring examples of institutionalized truth? Does this approach propagate an *à la carte* approach to religion? Truth walks with 'measured steps' after all and is not 'stuck' in her tracks. It could be argued the Roman Catholic Church wishes to avoid doubt spreading like a virus. This is why it turns to dogma, in the form of institutionalized truth. Dogma staves away uncertainty and yokes together the flock. Regrettably, in inoculating against doubt, the church guarantees her 'truth' is always stuck in its tracks. Should the church be truly convinced of the need to move away from institutionalized truth, it would embrace the maxim, 'doubt isn't the opposite of faith; it is an element of faith'.<sup>27</sup>



## A New Synthesis: Neurotheology-Towards Marrying Theology and Science?

One example of science and theology collaborating in an effort to avoid the perils of institutionalized truth is in the area of neurotheology. One of the leading pioneers in the scientific study of religious experience is Dr. Andrew Newberg. He is the foremost expert in neurotheology: the study of prayer, transcendence and meditation on the brain. The *raison d' être* of this organisation is to determine how science might develop a sophisticated capacity to comprehend and interact with religious views. In this capacity, Dr. Newberg has been studying Buddhist and Franciscan monks/nuns and their prayer lives. His research looks at the long-term effects of meditation, and how these practises might change the brain. The results of his work have led to some startling results:

When we were looking at how prayer might change the brain, I scanned the brains of a group of Franciscan nuns before and during their prayers. We found that certain physiological changes took place in the brain, and research into other forms of meditation has shown similar effects. The brain's frontal lobe was activated and the parietal lobe was de-activated, leading to a loss of the sense of self and a sense of connectedness with God.<sup>28</sup>

Admittedly, this 'sense of connectedness with God' is a *non-sequitur* jump and next to impossible to prove.<sup>29</sup> Nonetheless, there have been some interesting developments vis-à-vis self-transcendent experiences and the presence of certain genetic markers.<sup>30</sup>

Twin studies conducted in Minnesota indicate there is a genetic contribution to the likelihood of church attendance or the propensity toward having self-transcendent experiences. Consistent with these studies, experiments comparing genes and behavior have found a correlation between

the presence of a gene variant called VMAT2 and a self-report test of transcendence.<sup>31</sup> Similar findings pinpoint a correlation between measures of self-transcendence and a genetic marker for the dopamine transport molecule.<sup>32</sup> Following these findings, there are geneticists who unwaveringly believe we are hardwired for religiosity. And more importantly, they insist they can prove as much. Although this raises some interesting questions around one's predisposition for being a religious person, or indeed, having experiences of a transcendent nature, it fails to address the question of whether we are merely determined by our genes. It also fails to provide a control group of non-religious persons who may also experience self-transcendent moments in their lives. According to this logic, non-religious people who experience transcendent episodes should not have this marker. But if they do, how does this explain why they are non-religious? Surely the opposite should be the case?

There is a real danger that this approach will result in reductionism. If religiosity is reduced to neurophysiology, and in turn to the activity of neurons and neurochemistry, thereupon to atomic and subatomic particles, science runs the risk of reducing personhood to the subatomic world. At the end of the day, 'we are not human beings having a spiritual experience. . .we are spiritual beings having a human experience.'<sup>33</sup>

### Dawkins and the 'God Helmet'

Richard Dawkins attempts to elucidate how religiosity can be explained on a neurological level by conducting his own experiment. He wears, what he affectionately calls, 'the God Helmet'. The function of this helmet is to manipulate the neural electrical activity of his brain using a weaker variant of Transcranial Magnetic Stimulation (TMS). In previous experiments, TMS applied over the right temporal lobe in non-epileptic individuals results in reports of a 'sense of presence' which was described religiously by some (e.g., as the presence of God or angels).<sup>34</sup> Based on these studies,

some scientists concluded that all religious experiences must be the result of abnormal activity (microseizures) of the right temporal lobe. In line with this theory, Dawkins wanted to test whether an ardent atheist, under set controlled conditions, could experience a sense of the 'other' or 'religiosity'.

During the course of this experiment Dawkins describes his thoughts and emotions. He describes some 'dizziness' and 'twitching' but not 'the sensation of a presence'. Consistent with Dawkins' findings, other independent studies found no evidence that TMS of the right temporal lobe increased reports of sensed presence or mystical experiences.<sup>35</sup> This data would appear to indicate that TMS of the right temporal lobe does not in itself induce 'religious' experiences. According to this evidence, suggestibility is the key factor in artificially producing these 'mystical' experiences. Thus, suggestibility, and not the application of the trans-cranial magnetic field, (as originally thought) is the primary cause of eliciting these experiences.

The central difference between Newberg and Dawkins' approach is how they view the reliability of their methods. Dawkins appears to be utterly convinced that should this experiment be conducted with people of faith (suggestible test cases), it would effectively refute the arguments of religious experience. To his mind he has demonstrated that 'religious experiences' can be artificially constructed without the need to invoke the influence of a divine being. Of course, as evidenced by his attempt, suggestibility is key. If the subject is not 'suggestible', the experiment will simply not work. Newberg, for his part, embraces a far more measured position. He freely accepts that whilst his studies are inconclusive, 'doubt is not a pleasant condition...but certainty is an absurd one'. Certainty presupposes we are in possession of the totality of all the facts. This is simply not the case. As Daniel J. Boorstin points out, 'the greatest enemy of discovery is not ignorance, it is the illusion of knowledge'.<sup>36</sup> T. S. Eliot likewise remarks, 'all our knowledge brings us nearer to our ignorance'. These insights exemplify why it is incumbent on science and theology to dispel this illusion of

knowledge, as it evolves under the guise of certainty. This is the future of all epistemological endeavors.

## Concluding Remarks

Throughout this paper we have wrestled with how both scientism and Roman Catholic theology have institutionalized truth. Parallels were drawn between Truth (Veritas) and Falsehood (Mendacium). The argument was advanced, that in order to recognize truth, one must first survey her from head to toe. With this in mind, scientism's conviction it is the sole arbiter of truth was discussed. Various limitations pertaining to the epistemic methods employed in scientism were then duly considered and evaluated. Following this discussion, we moved to the example of institutionalized truth in theology. The theological underpinnings of Papal infallibility were outlined and critiqued. A new model incorporating theology and science, otherwise known as neurotheology was proposed as a bridge, whereupon both domains could coexist and compliment each other. In conclusion, perhaps the most important thing to remember is that we are all working towards Truth. The fact remains – we must, at all times, vigorously resist the temptation to institutionalize it.

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## Notes

\* See Agrippa's *Trilemma* for a more thorough analysis

<sup>1</sup> Huston Smith, *The World's Religions* (San Francisco: Harper-San Francisco, 1991), 5.

<sup>2</sup> Friedrich Nietzsche, *Human, All Too Human* (Cambridge Press, 1996), s.48, 264.

<sup>3</sup> Oscar Wilde, *The Importance of Being Earnest*, Act I, (Dover Publications, 1990).

<sup>4</sup> Russell, B., 'The Nature of Truth', in *The Collected Works of Bertrand Russell*, vol. 4, ed., by A. Urquhau (London and New York: Routledge 1994), 492–506.

<sup>5</sup> Francis Bacon, *Of Truth*, in 'The Oxford Book of Essays' (OUP, 1991), 1.

<sup>6</sup> William James, *Pragmatism*, in *Pragmatism and The Meaning of Truth* (Harvard University Press, 1975), 96.

<sup>7</sup> Frederick. Nietzsche, *On Truth and Lies in a Nonmoral Sense: Collected Works* (Random House, 2001), 123.

<sup>8</sup> *Ibid*, 123.

<sup>9</sup> Ludwig Wittgenstein, *On Certainty* (Harper Perennial Press, 1972), 193.

<sup>10</sup> Ludwig Wittgenstein, *Tractatus Logico-Philosophicus* (Dover Press, 1998), 6.4.

<sup>11</sup> Martin Heidegger, *On the Essence of Truth*, trans. John Sallis (London: Routledge & Kegan Paul, 1993), 117–41.

<sup>12</sup> Wittgenstein, *op. cit.*, *Tractatus Logico-Philosophicus*.

<sup>13</sup> Jacques Lacan, *Television, A Challenge to the Psychoanalytic Establishment* ed. Joan Copjec (New York: W. W. Norton, 1990), 3.

<sup>14</sup> Joseph Goebbels, 'Aus Churchills Lügenfabrik', *Die Zeit ohne Beispiel*, (January 12th 1941).

<sup>15</sup> See: <http://www.ezlink.com/~perry/CoS/Theology/barwell2.htm>.

<sup>16</sup> Alex Rosenberg, *The Atheist's Guide to Reality* (W. W. Norton, 2012), 7–8.

<sup>17</sup> Richard Lewontin, *It Ain't Necessarily So* (New York Review of Books, 2001), 74.

<sup>18</sup> Peter Atkins, 'Science as Truth' in *History of the Human Sciences* (May 1995: 8), 99.

<sup>19</sup> W. K., Clifford, *The Ethics of Belief* (Prometheus Books, 1999), 295.

<sup>20</sup> Rudolph van Otto, *The Idea of the Holy* (Trans. John W. Harvey. OUP, 1923), 12–23.

<sup>21</sup> François-Marie Arouet (Voltaire), *Epître à l'auteur du livre des Trois imposteurs (Oeuvres complètes de Voltaire*, ed. Louis Moland [Paris: Garnier, 1877–1885], 402.

<sup>22</sup> Blaise Pascal, as quoted in Peter Kreeft, *Christianity for Modern Pagans: Pascal's Pensees Edited, Outlined and Explained* (San Francisco: Ignatius Press, 1993), 69.

<sup>23</sup> Paul Davies, *The Mind of God: The Scientific Basis for a Rational World* (Penguin Press, 1993), 14.

<sup>24</sup> Richard P. Feynman, *What Do You Care What Other People Think?* (W. W. Norton, 1988), 22.

<sup>25</sup> Karl Popper, *The Logic of Scientific Discovery* (London & New York, Routledge, 2002), 316.

<sup>26</sup> Hans Küng, *Infallible? An Enquiry* (Continuum, 1971), 100.

<sup>27</sup> Paul Tillich, *Dynamics of Faith* (New York, Perennial Classics Edition, HarperCollins Publishers, 2001), 29.

<sup>28</sup> Newberg, Andrew, *Principles of Neurotheology* (Ashgate Press, 2013), 36.

<sup>29</sup> For an alternative viewpoint, see Matthew Alper's 'The God part of the Brain: A Scientific Interpretation of Human Spirituality and God'.

<sup>30</sup> Neils G. Walker, Brian A. Kojetin, Thomas J. Bouchard, David Lykken, and Auke Tellegen 'Genetic and environmental influences on religious interests, attitudes, and values: A study of twins reared apart and together', *Psychological Science*, Vol. 1138, 42.

<sup>31</sup> Dean Hamer, *The God Gene: How Faith is Hardwired into Our Genes* (New York: Doubleday, 2004), 59.

<sup>32</sup> Comings, D. E., N. Gonzales, G. Saucier, J. P. Johnson, and J. P. MacMurray. 2000. 'The DRD4 gene and the spiritual transcendence scale of the character temperament index', *Psychiatric Genetics* 10 (4), 185–9.

<sup>33</sup> Pierre Teilhard de Chardin, *The Phenomenon of Man*, (Harper Press, 2008), 32.

<sup>34</sup> Persinger, M.A., Makarec, K. 'Temporal lobe epileptic signs and correlative behaviors displayed by normal populations', *Journal of General Psychology* (1987), 1114: 179–195; and M. A. Persinger, K., Makarec, 'Complex partial epileptic signs as a continuum from normals to epileptics: Normative data and clinical populations', *Journal of Clinical Psychology* 49: (1983), 33–45.

<sup>35</sup> Granqvist, P., M. Fredrikson, P. Unge, A. Hagenfeldt, S. Valind, D. Larhammar, and M. Larsson. (2005). 'Sensed presence and mystical experiences are predicted by suggestibility, not by the application of transcranial weak complex magnetic fields', *Neuroscience Letters*, 379 (1): 1–6; and Granqvist, P., and M. Larsson (2006). 'Contribution of religiousness in the prediction and interpretation of mystical experiences in a sensory deprivation context: activation of religious schemas', *Journal of Psychology* 140 (4), 319–27.

<sup>36</sup> Daniel J. Boorstin, *The Discoverers* (Doubleday Books, 1985), 15.