

Supposing Physical Science to be Non-Existent: The Dominance of Humanistic

Atheism from 1770 to 1920

Zachary Smirin

The University of Chicago

History, Philosophy, and Social Studies of Science and Medicine(HIPS) Bachelor of Arts Thesis.

Submitted on April 15, 2024

Presented to:

Michael Rossi

Emma Kitchen

Robert Richards

Table of Contents:

Introduction.....3

Section One: The First Vocal Atheists.....11

Section Two: Bacon’s Two Books .....19

Section Three: Freethought and Feuerbach .....27

Section Four: The Inflection Point:.....32

Section Five: The Atheistic Platform.....40

Section Six: Fundamentalism .....51

Conclusion .....56

Bibliography .....58

Acknowledgements:

First, I’d like to thank Professor Ada Palmer for the conversations that provided the spark and starting point for this thesis. I’d also like to thank my advisor, Professor Michael Rossi, for invaluable feedback and for helping me shape the direction of my thesis from an interlinking network of facts about atheists spread over a hundred and fifty years into a clear and coherent story. Every time I sat down with him I came away with an increasingly clear understanding of what I fundamentally wanted to say with this paper. I’d additionally like to thank Professor Emma Kitchen for the incredible advice, guidance, and structure she provided during the research and writing process. It’s resulted in much greater clarity for many of my sections and I don’t know if I would have even been able to put this all together without it. Finally, I’d like to thank my classmates in Professor Kitchen’s thesis seminar for the feedback they provided which were vital for helping me provide my claims and evidence as clearly as possible.

## Introduction

In 1869, evolutionary biologist Thomas Huxley wrote “supposing physical science to be non-existent, would not the agnostic principle, applied by the philologist and the historian, lead to exactly the same results?”<sup>1</sup> By this Huxley meant that, regardless of any scientific result, a skeptical and rationalist approach to history would imply the necessity of at the very least agnosticism, uncertainty about whether or not there is a God. One hundred and fifty years later, evolutionary biologist Richard Dawkins said “Darwin has a...much better explanation for apparent design. It isn’t design at all. It’s produced by the random process called Darwinian Natural Selection. Once I understood that, there was no longer any need for God. God became positively superfluous, unnecessary and superfluous.”<sup>2</sup> By this Dawkins means that it was only evidence for a specific scientific theory that could shake his belief in a God. Both of these men were prestigious scientists in the same field, ardent darwinists, and vocal advocates for agnosticism and atheism. Given their professional similarities we would expect them to have similar arguments in favor of agnosticism or atheism. Instead their arguments are completely unrelated if not actively opposed. This significant difference in the beliefs two very similar scientists have about the relationship between science and atheism or agnosticism implies that there is much more to the history of that relationship than first meets the eye.

The relationship between *religion* and science throughout history has been thoroughly explored from every possible perspective by historians, scientists, and popular writers alike. This is likely due to the contentiousness of that relationship. The academic consensus in recent decades has been against the previously widely accepted or at least generally popular, “conflict

---

<sup>1</sup> Huxley (1889)

<sup>2</sup> Channel 4 News (2019)

thesis” or “conflict myth,” a nineteenth-century historiographical approach that frames religion and science as fundamentally at odds with each other. This thesis originated with Andrew Dickson White, historian and co-founder of Cornell, and was further popularized by John William Draper, a physician and chemist who made important contributions to photography and founded the New York University School of Medicine.<sup>3</sup> Neither of these men were atheists<sup>4</sup> but they were immensely hostile to most forms of organized religion. It is also significant that these initial framings of the conflict thesis were in terms of natural selection, with science superseding religion in the way that Draper and White understood one species might succeed another.

To the end of either countering the conflict thesis or more generally performing research into the history of the relationship between religion and science, there have been many phenomenal books and papers written about the complex relationship between science and religion. This includes works about the intense religiosity of many scientists and the scientific work of many clergypeople. Examples of this range from academic works such as the collection “God & Nature: Historical Essays on the Encounter Between Christianity and Science,” edited by historians of science David C. Lindberg and Ronald L. Numbers,<sup>5</sup> the measured *God’s Universe* by Owen Gingerich, professor emeritus of astronomy and of the history of science at Harvard<sup>6</sup>, to books like *Believing is Seeing*, which is by a Harvard Physics Professor about how “Science Shattered His Atheism and Revealed the Necessity of Faith.”<sup>7</sup> All this to say that the question of how religion and science interact and relate to each other is a well populated and rich field at all levels of rigor.

---

<sup>3</sup> White, p. 2

<sup>4</sup> Ibid

<sup>5</sup> Numbers, Lindberg(1986)

<sup>6</sup> Gingerich (2006)

<sup>7</sup> Guillen(2021)

The corollary to all this contemporary writing on the sometimes surprising or unintuitive compatibility between science and religion is the general assumption that atheism and science go hand in hand, with, as Dawkins claims, science implying atheism and atheism upholding science. There is a default belief that even though you can be religious and still “believe” in science, science still ultimately somehow promotes atheism—and that scientists either are largely atheists or should be. In popular culture this can manifest the myriad questions asked online about why so many scientists are atheists and the apparent necessity of an opinion piece published in *The Guardian* entitled “It’s a big, fat myth that all scientists are religion-hating atheists.”<sup>8</sup> The New Atheism movement that Dawkins is a part of does nothing to dissuade people of this notion. Historian of atheism Jerome P. Baggett describes Dawkins as only being able to conceive of God as “the so-called God of the gaps, an intellectual placeholder bound to shrink to extinction as the explanatory powers of science inexorably expands.”<sup>9</sup> In reality, fewer than half of American scientists are atheists or agnostics of any kind with similar numbers in the limited worldwide surveys that have been conducted.<sup>10</sup> However, that does not stop scientists from falling prey to this same notion of science implying atheism. Nobel prize winning evolutionary biologist Ernst Mayr said of religious fellow scientists that “I’ve never been able to understand it because you would need two totally different compartments in your brain, one that deals with religion and the other with everything else.”<sup>11</sup> The linking of science with atheism runs deep and is propagated by many of the most popular voices on the matter.

Almost none of the extensive literature on the history of atheism supports this view. Much of the academic work that seeks to chart out the origins of modern atheism see it as

---

<sup>8</sup> *The Guardian*, McLain (2013)

<sup>9</sup> Baggett, p. 124

<sup>10</sup> McCaig(2015) and Masci (2009)

<sup>11</sup> Shermer, Michael & Sulloway, Frank, p. 82

emerging from contradictions within theology and religious doctrine. Historian Michael J. Buckley describes this as “The Dialectical Origins of Atheism” where “Modern atheism took not only its meaning but its existence from the self-alienation of religion. In an effort to secure its basis, religion unknowingly fathered its own estrangement.”<sup>12</sup> Historian Ada Palmer makes a similar argument in “Humanist Lives of Classical Philosophers and the Idea of Renaissance Secularization: Virtue, Rhetoric, and the Orthodox Sources of Unbelief,” writing that pious attempts to use “the classics to strengthen and reaffirm Christian orthodoxy...paved the way for later deism” and through that atheism.<sup>13</sup> This process functioned by means of importing the classical focus on rationality and logic into renaissance and enlightenment era thought. This means that atheism was originally not the result of a scientific endeavor but a philosophical one.

However, at some point another strain of atheism emerged from the old, one that would eventually draw heavily on ideas like the conflict thesis. In his paper locating “New Atheism” in the context of a longer history of atheism, historian Stephen LeDrew describes two varieties of atheism which he calls “humanistic atheism” and “scientific atheism.”<sup>14</sup> LeDrew invokes these varieties in order to argue that New Atheism is functionally a descendent of scientific atheism but does not go into great detail on the nature of humanistic atheism nor the relationship between these two varieties. However, the dichotomy he establishes with those terms is incredibly useful. In this thesis I will demonstrate that, from the time of the first explicit atheists in the late 18th century to the buildup of the fundamentalism vs. modernist controversy in the early 20th century, a consistent form of humanistic atheism was dominant over scientific atheism. The broader implication of this dominance is that we ought to think of atheism as not just something that

---

<sup>12</sup> Buckley, p. 359

<sup>13</sup> Palmer, p. 935

<sup>14</sup> LeDrew, p. 71

*originated* in philosophical contradictions with religion and became mostly science focused but as something that, for 150 of the 250 years that atheism has been explicitly and publicly discussed and debated, remained grounded in philosophical or historical methods and, arguably more importantly, moral arguments.

Before continuing, I should give a full description of what I mean by “humanistic” and “scientific” atheism as well as “dominant.” By scientific atheism I mean arguments for atheism that, at their core, rely on specific scientific results, i.e. the ability of science to explain each and every natural phenomenon, in order to demonstrate that God does not exist. Dawkins’ approach is an example of scientific atheism and scientific atheism generally implies the view of God that Bagget described as the “God of the gaps.” Scientific atheism, therefore, also involves a great deal of scientism, the fetishization of some capital-S “Science” in-of-itself. This includes beliefs such as the idea that just through the “progression” of science life will improve for everyone. Scientific atheists rarely invoke philosophical arguments other than ones stemming from the position of materialism, the metaphysical claim that all that exists is an independently existing exterior world. Even then they argue for materialism via scientific results and mechanical descriptions of the universe rather than more abstract arguments like those we will see in the next section.

Humanistic atheists use a combination of philosophical and historical arguments, skepticism and rationality, and moral attacks against religious institutions in order to argue against the existence of God. Materialist metaphysical beliefs are still very common but science is never invoked to argue for it, instead higher level philosophical claims are made. Historical arguments can be anything from deconstructions of the text of the bible to claims about the historical origins of religion in general. The use of moral arguments is one of the most significant

features of humanistic atheism, with the amount of suffering such thinkers see religion as having caused the world being a large component of their arguments not just against religious institutions but the validity of religious belief as a whole.

This is not to say that humanistic atheists were uninterested in science nor is it to say that atheism and science are unrelated intellectual traditions. Both strongly emphasize skepticism and rationality. It is simply that science was neither sufficient nor necessary for arguing against the existence of God or other religious constructs. Many humanistic atheists had opinions on scientific developments and theories, some of which I will go describe, and atheist periodicals and publications usually included summaries of recent developments in science from an atheist perspective. However, before Darwin, scientific results were easier to muster in favor of God's existence and for the first few decades after the publication of *On the Origin of Species* there was a general consensus that a person could be, for example, both an evolutionist and a christian.

As I will demonstrate, scientific atheism did not emerge from the ether to challenge humanistic atheism but rather was an offshoot of humanistic atheism resulting from contact with other social trends such that scientism was introduced to and eventually outweighed the methods of humanistic atheism.

On that note, I should stress the extent to which humanistic atheists were more interested in social and political issues than scientific ones. Starting in the 18th century atheists and atheist organizations were deeply engaged in general political activism, usually from a radical liberal or socialist perspective. Additionally, the harms done by religious organizations were used as arguments against the legitimacy of religion as a whole and therefore of the concept of a God as well. During this time period being an atheist was an unambiguously philosophical and political position, not a scientific one.

When I claim that humanistic atheism was dominant over scientific atheism I simply mean that the majority of atheist thinkers, the most popular atheist thinkers, and the atheist thinkers that theists most frequently argue against were humanistic atheists. This period of dominance began in France in the 1770s with Baron d'Holbach's *The System of Nature* and continued until the fundamentalist vs. modernist controversy of the 1920s led to atheism and science being tied together too strongly for that dominance to continue. The inflection point of this trend was the publication of *On the Origin of Species* which provided enough scientific ammunition via the theory itself and ideological ammunition via constructs like the conflict thesis to give scientific atheists increasing strength and persuasive power. Throughout this one hundred and fifty year period I find that in addition to this consistent dominance there is a clearly visible intellectual tradition of humanistic atheism with each generation of humanistic atheists explicitly building on the prior and maintaining the same core arguments and approaches. In order to demonstrate the existence of this dominance and trend I will use many of the writings of atheist writers and speakers in Britain, the United States, France, and Germany. This selection of nations is due primarily due to the large amount of discourse between the four countries during the time period in question. Philosophers, scientists, and atheist movements from all four countries were constantly sharing ideas and translating each other.

In the first section of this thesis I will introduce the problem of identifying atheists due to the use of "atheist" as a fairly generic pejorative throughout history and the choices I've made to deal with this problem. Through this I will also justify my decision to start the history of explicit atheism with d'Holbach. Then I will introduce d'Holbach as well as some of the other early atheists of this time period and demonstrate the start of the trend of humanistic atheism. The next section will begin with the scientists of the late 18th century and using the case study of Laplace,

provide context and boundaries for the discussion of atheists by demonstrating that much of what can be called early atheism among scientists is both insufficiently likely to be genuine atheism and comes from a different intellectual history than any variety of atheism. I will conclude by moving into the 19th century to demonstrate how those arguing against atheism took humanistic atheism to be their target and actually used specific scientific results to argue against it.

My third section will follow the trend of dominant humanistic atheism across both the English channel in Britain and across the Rhine into Germany to show how the form of humanistic atheism that began in 18th century France took root in those countries. The fourth section will focus on the impact of Darwin on how scientists viewed religion. It will also introduce the first scientific atheists who became popular in Germany in the second half of the 19th century, although they remained overshadowed by their humanistic brethren.

The fifth section will focus on the most popular and vocal atheist activists and writers of late 19th century Britain and show how humanistic atheism was still dominant over scientific atheism despite the latter spreading and gaining some popularity in the wake of *On the Origin of Species*. This section will also elaborate on the theme of scientific atheism being an extreme offshoot of humanistic atheism rather than an external negation. The sixth section will briefly detail the tail end of this dominance in the United States before describing how it ended in the 1920s as the debate between fundamentalists and modernists led to atheism being identified with the defense of science more than their moral and social positions.

Ultimately this paper will show that the philosophical and political origins of atheism are more than just origins but constitute the majority of explicit atheism's existence and still influence the now dominant scientific form of atheism.

## Section One: The First Vocal Atheists

Defining atheism is not easy. Throughout most of history, determining whether or not a person is an atheist has been even harder. Spurious and politically motivated accusations of atheism began at least thousands of years ago with Socrates, who was accused of being a “complete and total atheist.”<sup>15</sup> Frequently, the people accused of being atheists were themselves fervent critics of “atheism”. In the late 16th century, a man from Orleans, Geoffrey Vallée, was executed on charges of atheism despite having published a book in which he criticized “atheism”(he also attacked all forms of Christianity, which might have had more to do with his persecution).<sup>16</sup> As historian David Wootton writes in his paper “New Histories of Atheism,” the term was “used recklessly, a fact that has greatly misled literal-minded historians.”<sup>17</sup> It is difficult to overstate the frequency of these spurious claims, which were generally shorthand for claims about the moral character of the target. These accusations were so frequent that writers would often preemptively ward them off. In the introduction to his essay “Anima Mundi”, Charles Blount, the English philosopher and deist wrote

“Methinks I already behold some haughty Pedant...damning [my text] by the name of an Atheistical, Heretical Pamphlet... But such a person understands not wherein the Nature of Atheism consists...the ignorant Vulgar People...are apt to think that every one they Hate, are God Almighty’s Enemies; and that whosoever differs from them in Opinion, (tho’ in never so trivial a matter) are Atheists, or Hereticks at least; Not rightly

---

<sup>15</sup> Plato, The Apology

<sup>16</sup> Wootton, p. 1-2

<sup>17</sup> Ibid, p. 4

considering the words of St. Peter, That in every Nation, he who feareth the Lord and worketh righteousness, is accepted with him.”<sup>18</sup>

In other words, he expects some “vulgar” and aggressive person to accuse him of atheism when he is nothing of the sort. For these reasons Wootton claims that histories of irreligion are night impossible until the late 17th century<sup>19</sup> and tries to provide a checklist for whether or not one should “read between the lines” when determining whether or not a figure was actually an atheist.<sup>20</sup> However, in my view the process of determining whether someone who has not referred to themselves as an atheist or agnostic is one remains too fraught. Beginning instead in the late 18th century, when people began seriously to call themselves atheists in public as well as private and question the existence of any kind of God, allows me to avoid those difficulties and ambiguities. This decision was not made solely to avoid a relatively intractable problem. By starting in this period, at 1770 to be precise, my first sources are the earliest instances of what historian of atheism Alan C. Kors termed “philosophical atheism.”<sup>21</sup> This term does not refer to either the “scientific” or “humanistic” atheism that I defined in the introduction. Instead Kors means clear and explicit “arguments against the very existence of God.”<sup>22</sup> This is different from earlier forms of non-belief that were more limited denunciations of Christianity or questioning the existence of hell or the immortality of the soul. What this means practically, is that when discussing promoters of atheism, I will only apply the descriptor “atheist” or “agnostic” to those who explicitly doubt the existence of God or describe themselves as an atheist or agnostic.

---

<sup>18</sup> Blount(1679,2011)

<sup>19</sup> Wootton, p. 4

<sup>20</sup> *ibid*, p. 15

<sup>21</sup> *ibid*, p. 8

<sup>22</sup> *ibid*

Throughout this paper I have done my best to only use either the public or private words of the subject themselves, the words of their spouse, or those of a close friend.

By the end of the 18th century French and British philosophy were in tight dialogue with each other. This, of course, influenced the development of atheism in both of these countries. The purpose of this section is to demonstrate the shared outlook of these first philosophical atheists and that said outlook was one of humanistic atheism. The most important feature of this shared outlook was a focus on reason and historically minded skepticism as a way to come to understand the nature of reality and thereby the un-reality of God. The second most important feature was a deep concern with happiness and human flourishing. When it came to science, while many early atheists were interested in the latest experiments, it was their beliefs that shaped how they interpreted experimental results more than the other way around.

One of the earliest atheists to make direct arguments against the existence of any sort of God or supernatural power was Paul-Henri Thiry, Baron d'Holbach. d'Holbach was an enlightenment writer and friend of other famed French enlightenment figures such as Denis Diderot.<sup>23</sup> d'Holbach also provides the justification for our starting point of 1770. In that year he, along with Jacques-André Naigeon, published *Système de la Nature* (*The System of Nature*) under the nom de plume Mirabaud. Alan Kors describes *The System of Nature* as “the first unambivalent, published, programmatic statements of...Enlightenment atheism.”<sup>24</sup> d'Holbach was not the first unambiguous atheist; earlier in the century a long screed against all forms of religion but especially Catholicism was found in the papers of the deceased French Catholic priest Jean Meslier.<sup>25</sup> However, d'Holbach's text was novel in both its philosophical rigor and

---

<sup>23</sup> Kors p. 1

<sup>24</sup> *ibid* p. 3

<sup>25</sup> *ibid* p. 2

actually being meant for publication and a public audience. Diderot described d'Holbach and Naigeon as having "rained bombs upon the house of the Lord."<sup>26</sup> While *The System of Nature* might have been titled as if it was a book about biology or ecology, it was primarily a work of metaphysics. Kors summarizes d'Holbach's metaphysical claims and their direct implications:

"The physical senses alone could be the ultimate sources of true knowledge of physical nature. For d'Holbach and Naigeon, we misunderstood all this and suffered terribly thereby. Absolute naturalism was at once our reality, the antithesis of theism, and the essential preamble to any achievement of the natural human agenda of increasing happiness and minimizing suffering...Ignorant of the real causes of our happiness or pain, we created Gods, superstitions, and myths as paths to well-being, increasing our misery in the process. Helpless and fearful, we trusted to authority that could justify itself neither by evidence, by reason, nor by moral consequence, but that based its claims of legitimate rule upon occult knowledge of, and relationships to, realms beyond experience...Naigeon, in support of such views, confronted his readers immediately with the sternest of his conclusions, that belief in God was the 'barrier' to all essential human progress."<sup>27</sup>

Fundamental to d'Holbach's atheism were a strong materialist metaphysics, empiricist epistemology, and the belief that religion, through its effects, was morally wrong. This is a decidedly humanistic form of atheism where it is not science that destroys God but a historical understanding of how God appeared in the first place and philosophical arguments against the coherence of belief in the first place.

---

<sup>26</sup> *ibid*

<sup>27</sup> *ibid* p. 3-5

Various combinations of these metaphysical, epistemological, and moral claims would define the tradition of humanistic atheism that would remain dominant for the next hundred and fifty or so years. d'Holbach himself summarizes his approach more briefly by describing himself as having “followed [his] compassion and reason” and having “been free, for a while, of [God’s] tyrannical yoke.”<sup>28</sup> Reason, compassion, and the (to d'Holbach) cruelty of belief in God. Those are what drove that early salvo of “bombs” launched against belief. The increase of human welfare is very important to d'Holbach. Kors writes that “absolute naturalism was at once our reality, the antithesis of theism, and the essential preamble to any achievement of the natural human agenda of increasing happiness and minimizing suffering.”<sup>29</sup> In this sense, humanistic atheism was not just a philosophical position implied by a materialist ontology but by moral necessity as well. The idea that atheism is necessary to take further steps to increase human happiness is something that will appear in the writings of many later humanistic atheist philosophers discussed in future sections.

Metaphysical materialism and empiricism are not unique to d'Holbach and Naigeon. They have all been held by other philosophers, not all of whom were atheist. Many deist, theist, and even traditionally religious philosophers have held those views. d'Holbach and Naigeon are unique in how far they take these ideas. As Naigeon later said they “atheized” these ideas and went so far as to argue that their strict physical empiricism meant that any idea that cannot be derived from the senses is literally ‘non-sensical’, which includes spiritual or religious experience.<sup>30</sup> This extreme empiricism led d'Holbach to an early materialist philosophy of science. d'Holbach believed in an eternal universe that had always existed and was not created

---

<sup>28</sup> *ibid* p. 16

<sup>29</sup> *ibid* p. 3

<sup>30</sup> *ibid* p. 6

by God and that “matter” was a fundamentally active substance rather than something that is acted upon from the outside or by immaterial forces.<sup>31</sup> In this view, d’Holbach was aligned with the Irish philosopher John Toland, who wrote that “Motion is essential to Matter no less than Extension.”<sup>32</sup> d’Holbach further argued that all phenomena, including thought itself, could be understood as effects of physical causes.<sup>33</sup> d’Holbach’s appreciation for Toland’s work, however, derived from him already possessing a metaphysical and epistemology that meshed well with Toland’s necessarily motive “Matter”.

Toland was also far and away not the largest English-speaking influence on d’Holbach. Much more significant to the actual development of d’Holbach’s beliefs were philosophers such as Locke, Hobbes, and Hume. d’Holbach, Naigeon, and their peers “accepted the broad outlines of Locke’s analysis of the origin of knowledge and his concomitant rejection of Cartesian notions of innate ideas.”<sup>34</sup> Once French translations of Hobbes appeared, they liked him even more, with d’Holbach endorsing “Hobbes’ argument that...cause and effect was a mere presumption, that ‘we make Remembrance to be the Prevision of things to come, or Expectation, or Presumption of the future.’”<sup>35</sup> With such a strong preemption of Hume’s work, d’Holbach was disappointed in Hume’s refusal to embrace full throated atheism.<sup>36</sup> It was the ideas of these thinkers on which d’Holbach and Naigeon based much of their sensationalist epistemology, not the scattered and controversial conclusions of natural philosophers such as Toland.

Back across the English Channel, twelve years after the publication of *The System of Nature*, a physician named Matthew Turner published the first work of avowed atheism in

---

<sup>31</sup> ibid p. 8

<sup>32</sup> ibid p. 13

<sup>33</sup> ibid p. 9

<sup>34</sup> ibid p. 5

<sup>35</sup> ibid p. 17

<sup>36</sup> ibid

Britain, “Answer to Dr. Priestley’s Letters to a Philosophical Unbeliever.” The Dr. Priestly in question was Joseph Priestly, probably best known for his discovery of oxygen, which he termed “dephlogisticated air.” Priestly was a successful scientist, inventor, writer, and radical liberal who supported both American and French revolutions.<sup>37</sup> He was also a devoted theist. He is just the first of many religious scientists we shall meet who are at the forefront of their field and comfortably maintain their belief in God. One of the many books he published to this end were the multi-volume *Letters to a Philosophical Unbeliever*, in which, among other things, he argued directly against the claims of *The System of Nature* and gave proofs of God using the argument from design.<sup>38</sup> In other words, he made an argument from science in opposition to a nascent humanistic atheism. Priestly was not a religious fundamentalist but a respected scientist and philosopher (albeit controversially liberal) arguing for a widely agreed upon conclusion based on the latest scientific results. Meanwhile, d’Holbach, Naigeon, and as I will demonstrate shortly, Turner made their arguments from “compassion and reason.”

In his response to Priestly, Matthew Turner began by admitting that when he first read Priestley’s *Letters to a Philosophical Unbeliever*, he was not himself an unbeliever. He only became one through the operation of reason, or thought: “it is thought, free thought upon the subject; when I began freely to think I proceeded boldly to doubt.”<sup>39</sup> He then proudly declared that “Being as an atheist, to put that out of all manner of doubt, I do declare upon my honour that I am one.”<sup>40</sup> He described his path to atheism as following upon a “common[ly] observ[ed]” path from deism to atheism via skepticism:

---

<sup>37</sup> McEvoy, J. G.

<sup>38</sup> Schofield, Robert E. p. 39

<sup>39</sup> Turner, Matthew

<sup>40</sup> *ibid*

“deism...is...a belief in the existence of a Deity from natural and philosophical principles, and a disbelief in all immediate revelation by the Deity of his own existence...it is by degrees only, that...men...shake off one prejudice after another. They begin by getting rid of the absurdities of all popular religions. This leaves them simple deists, but the force of reasoning next carries them a step farther, and whoever trusts to this reasoning, devoid of all fear and prejudice, is very likely to end at last in being an atheist.”<sup>41</sup>

By distrusting and finding that there is no rational argument for various bits of superstition and religious belief a person can gradually become an atheist from a position of already skeptic belief. Next, Turner actually actively dismissed questions of creation by a deity. He wrote that “It is a question of little importance, merely whether a man had a maker or no.” His scientific view on nature as a whole was also somewhat unconcerned with specific mechanisms. “the universe and all other organised matter [is] a machine made or contrived by the arbitrary will of another Being...and my theory...admits no other God or designing principle than matter itself and its various organisations.” Turner spent but a few paragraphs of his essay on science and religious vs. atheist interpretations of the natural world.

Turner cared much more about questions of morality and human happiness than what a scientific explanation for any supposedly divine phenomenon would look like. He wrote “there is nothing in fact important to human nature but happiness, which is or ought to be the end or aim of our being. I mean self-happiness; but fortunately for mankind, such is by nature our construction, that we cannot individually be happy unless we join also in promoting the happiness of others.”<sup>42</sup> A predominant trope at the time was that atheism led to immorality and

---

<sup>41</sup> *ibid*

<sup>42</sup> *ibid*

Turner tries to argue against that, writing that “the bulk of the world has long believed, or long pretended to believe in a Deity, yet morality and every commendable quality seem at a stand...I am tempted to say, from observation, that the belief of a Deity is apt to drive mankind into vice and baseness.” This is an argument similar to d’Holbach’s and is also one that will be made time and time again by the vocal atheists and agnostics of the late 18th, 19th, and early 20th centuries. This is because Turner had read d’Holbach, although Turner refers to him under his pen name Mirabaud. In *A History of Atheism in Britain* David Berman writes that Turner “is quite explicit about his debt to this first work of avowed atheism.”<sup>43</sup> Berman similarly describes Turner’s writing as containing “the first published avowal of atheism in Britain.”<sup>44</sup> In under two decades, from 1770 to the publication of Turner’s piece in 1782, an international and consistent form of humanistic atheism had arisen, long before any other kind of broad atheistic movement would appear. Turner’s reply to Priestley is relatively brief but it contains every hallmark of the humanistic atheism of the coming era, from materialist metaphysics to generally skeptic mindset to the backseat role that science takes. It’s this form of humanistic atheism, concerned with rationality, social welfare, and morality, that I will demonstrate the continued dominance and consistency of into the late 19th century.

However, for the next section I will examine scientists during this period and how “atheism” is almost never an accurate description of their beliefs or relationship to religion, even for those who did the most to remove God from descriptions of natural phenomena. I will also discuss how science was more effective in arguing for belief than for atheism, and how this hampered early attempts at promoting scientific atheism.

---

<sup>43</sup> Berman, p. 111

<sup>44</sup> *ibid*, p. 3

## Section Two: Bacon's Two Books

Pierre Simon Marquis de Laplace was one of the most influential mathematicians and astronomers of the 18th century. He furthered the possible applications of Newtonian physics, making discoveries about the orbits of Jupiter and Saturn, proposed a mechanical explanation for the origin of our solar system, and advanced our statistical and probability theory.<sup>45</sup> He also was one of the largest players in the series of scientific developments that led historian of science Jacques Roger to write that “the eighteenth century thus witnessed a general tendency to transfer to Nature all the powers traditionally attributed to God.”<sup>46</sup> Historian Roger Hahn writes that Laplace “cast doubt on drawing conclusions about the Deity from natural knowledge.”<sup>47</sup> Laplace almost never mentioned God in his books and Napoleon claimed that Laplace once answered a question about where God fit into his mathematical work with “I have no need of that hypothesis.”<sup>48</sup> With this wealth of admittedly circumstantial evidence, Laplace is frequently “taken by many as the archetype of the atheistic scientist.”<sup>49</sup> However, I will argue that this characterization of Laplace and many of his fellow 18th and early 19th century scientists as atheists due to their secularism is based on insufficient evidence, conflates one of the only already well established secularism with atheism, and fails to account for an approach to conducting scientific research that was taken for granted by scientists since the start of the 17th century. Secularism being the view that religion should not interfere with non-strictly-religious affairs but not that the practice of religions should be constrained or fought against.

---

<sup>45</sup> Hahn, p. 259, 270

<sup>46</sup> Roger, p. 287

<sup>47</sup> Hahn, p. 272

<sup>48</sup> *ibid*, p. 256

<sup>49</sup> *ibid*, p. 272

Roger Hahn admits that the popular extreme characterization of the radical atheist Laplace is “excessive, obtuse, and biased,” and his essay “Laplace and the Mechanistic Universe” is an excellent overview of the unique and revolutionary nature of Laplace’s work.<sup>50</sup> Hahn also, helpfully for this thesis, points out that “Laplace's views about God did not derive either from the d'Holbach materialist group in France or from Hume across the Channel...He based his understanding on palpable evidence and calculation rather than metaphysical systems ...[he disentangled] his notions from traditional philosophy, all the while refusing to link them to personal, fideist convictions about Christianity.”<sup>51</sup> The “fideist convictions” that Hahn mentions are key to understanding what was really going on with Laplace —and key to understanding him at the extreme end of a spectrum of how scientists approached religion rather than someone who forged a “new position...for both philosophy and theology” as Hahn claims.<sup>52</sup> The story of Laplace that Hahn presents shows that Laplace was following, with much zeal and intentionality, Sir Francis Bacon’s doctrine of the “two books.” This was a doctrine set forth by Bacon in 1605 that the “book of God” and the “book of nature” should not be intermixed, and that scientists should study the “book of nature” as though it was the only book to exist.<sup>53</sup> Laplace grew up in an environment where “astronomers had vivid examples of the progress of their own discipline and confidence in the force of the human mind to settle the remaining riddles of celestial mechanics.”<sup>54</sup> It is more reasonable to suggest that Laplace, upon realizing just how much Bacon’s two books of God and nature could be separated, embraced that distinction with the utmost zeal than it is to suggest his view of the universe was radically novel.

---

<sup>50</sup> *ibid*

<sup>51</sup> *ibid*, p 273

<sup>52</sup> *ibid*

<sup>53</sup> Moore, p. 323

<sup>54</sup> Hahn, p. 258

In fact, late 19th century astronomer Hervé Faye argued that Laplace's remark to Napoleon was not about the hypothesis of the very existence of God but Newton's hypothesis of God's frequent interventions in the day-to-day functioning of nature.<sup>55</sup> This is not to downplay Laplace's contributions nor the more radical implications of his work nor is it to imply that he was a doctrinaire follower of Bacon's two books approach, simply that when he was removing God from descriptions of nature, he was *not* doing so with promoting atheism as a goal or even necessarily desired outcome. As to whether or not Laplace was an atheist in those moments when he allowed himself to dwell upon the book of God, the evidence does not pass the standard of verified personal admission I gave in the previous section, nor does Hahn seem particularly convinced seeing as he does not pass judgment as to whether or not Laplace was an atheist.

Although, as I have been arguing, this topic does not dwell directly on atheism, it is immensely valuable for circumscribing the domain of atheism. Not all attempts to remove God from descriptions of nature need to have been performed by atheists or if done by an atheist even intended to promote atheism. It's possible that the contemporary view of atheism and science as interlinked has biased many towards, as Hahn described, seeing scientists like Laplace as early scientific atheists. In reality the evidence points towards there being a category of secularly inclined scientists who do not fall into the broader category of atheist. Unless they explicitly state otherwise themselves.

The scientists of this era seem to have been, as a general rule, scientists before philosophers, theologians, or activists. Because of this, the most widely cited accusations of atheism come from anecdotal sources such as Napoleon, who also claimed that Lagrange and a few other of his and Laplace's peers were atheists.<sup>56</sup> Similarly, and more importantly, the best

---

<sup>55</sup> Herve, p. 109-111

<sup>56</sup> Baron Gaspard, Trans. Wormeley, 2017

textual evidence for whether or not many scientists are atheists comes from the lack of mentions of God rather than any positive evidence. I have come across one exception to the trend of following some form of the doctrine of the two books in the form of physician and philosopher Julien Offray de La Mettrie, who wrote that “Suppressing chance is not demonstrating evidence of a supreme Being, since there can be something else that would be neither Chance nor God, namely Nature.”<sup>57</sup> This, along with his argument that humans are nothing but machines is enough to make me fairly confident that he should be considered an atheist.<sup>58</sup> However, he died in 1751, twenty years before d’Holbach published *The System of Nature*, and almost nobody would take up his cause of reductionism until the second half of the 19th century. He is, in a way, the exception that proves the rule.

This strict adherence to Bacon’s doctrine of the two books was, of course, just as present in Britain, if not more so. Historian of science James R. Moore writes in “Geologists and Interpreters of Genesis in the Nineteenth Century” that “by observing the Baconian compromise...Geologists would gladly expound God’s word and exhibit God’s works if left to get on with their job.”<sup>59</sup> This compromise was not a rigid and awkward compartmentalization but a complex framework that was part “political compromise” and part deliberate and genuine religious view. The geologist Charles Lyell wrote *Principles of Geology* in order to “define what it would mean henceforth for geological explanations to be ‘scientific.’”<sup>60</sup> In doing so he contributed greatly to the professionalization and coherence of the field of geology and as part of that coherent model of practicing geology he inserted a version of the Baconian compromise. Lyell was a liberal Christian, no doubt about it, but in his scientific work “he practically ignored

---

<sup>57</sup> Roger, p. 288

<sup>58</sup> *ibid*

<sup>59</sup> Moore, p. 324

<sup>60</sup> *ibid*, p. 328

the Genesis stories,” and “those who failed to do so—or worse, tried to make Genesis teach geology—were treated with withering disdain.”<sup>61</sup> Lyell, like Laplace a few decades prior, was a fervent practitioner of the Baconian compromise not because of ardent atheism but because he viewed it to be the best way to go about conducting scientific inquiry. As we see strict interpretations of the Baconian compromise become more and more feasible and therefore more aggressively implemented, we see arguments for God’s existence from science weaken. As we shall see, this would only have serious consequences for theists in the second half of the nineteenth century. However, that does not mean that these people were atheists or active in discussions of atheism.

Having talked at length about scientists in general, and therefore primarily religious scientists, a brief detour back to atheists should be taken. Atheist scientists also adhered quite strongly to the Baconian compromise. In their case this seems to be due primarily to simply prioritizing practicing far above any religious concerns, as we shall see with Darwin. In some cases it was probably due to persecution, seeing as Scottish physicist John Leslie failed to receive a position at his university due to accusations of atheism, but it is important to stress that this is not a necessary explanation for the lack of writings by scientist atheists about atheism.<sup>62</sup> Sometimes a scientist such as Matthew Turner or Thomas Huxley, who I began this paper with a quotation from, will value arguing for atheism or agnosticism enough to write at length about it. However, most of the examples from the 18th and early 19th century are more like that of Jérôme Lalande, an 18th and 19th century French Astronomer, who was known to be atheist because he "incurred Napoleon's wrath" because in 1805 he had "privately printed his second supplement to the Dictionnaire des athées," a dictionary of atheists written by a poet and

---

<sup>61</sup> *ibid*

<sup>62</sup> ed. Harrison(2004)

journalist friend of his.<sup>63</sup> Amusingly, the dictionary contains some fairly absurd mentions such as "Arabs," "St. Augustine," and the biblical figure of "Jacob."<sup>64</sup> Those mentions are also why I completely discount its mention of Laplace. It seems that atheists were not immune to spurious accusations of atheism themselves.

Meanwhile, among the clergy and in popular discourse, the argument from design remained quite strong indeed. This is part of why "scientific atheism" had such a hard time getting off the ground even as scientists like Laplace unknowingly made room for them. While various 18th century scientists found ways to prop up and defend arguments from design, it was also brought to bear directly against atheism. In 1833, Benjamin Godwin, the British Baptist minister and fervent abolitionist,<sup>65</sup> was living in Bradford, Bradford, "one of the most populous manufacturing districts of this kingdom,"<sup>66</sup> in other words an early beneficiary of the industrial revolution. In Bradford he found that among the "population, in general,...assuming a great degree of boldness...had, to a considerable extent, not only rejected the truths of the revelation, but even denied or questioned the being of a God."<sup>67</sup> It's not clear to what extent how many people were doing this and to what extent but Godwin felt that he needed to do something. In response to a particularly stirring challenge was shouted out at the end of a Methodist sermon:

"[clergymen] will only assert the truth of Christianity where their dogmas cannot be gainsayed! If, however, they be sincere in their declaration, that such a doom, as they

---

<sup>63</sup> Mannucci p. 85

<sup>64</sup> trans. Sylvain (2005)

<sup>65</sup> As much as atheists skewered religion for its moral failings, there were what we would consider progressives or radicals in both camps, and it's important to mention this so as to at least avoid casting the conflict between them as one of old conservatives versus young free thinkers.

<sup>66</sup> Godwin, p. IV

<sup>67</sup> Ibid, p. X

assert, awaits those who differ from them in opinion and belief, is it not their duty to hear and answer the reasons assigned for such difference?"<sup>68</sup>

In response to this, Godwin decided to give a series of lectures arguing against atheism, taking as his opponent to be arguments "principally, though not entirely, taken from 'The System of Nature.'" This decision was made for one of the same reasons that we focused on it in the previous section: "its containing a more full and complete exhibition of the atheistic philosophy, than any one work with which the author is acquainted."<sup>69</sup> It's very significant that a humanistic atheist like d'Holbach is seen as the type of atheism that the common atheists Godwin is addressing subscribe to.

After his first two lectures, "Preliminary Remarks" and "Atheistic Hypothesis Examined," he embarked on his third, fourth, and fifth lectures, the actual arguments against atheism. These lectures were entitled "Proofs of the Existence of God from the Works of Nature," "Proofs of the Existence of God From the Works of Nature Continued—Objections Answered," and "The Views Which Nature Teaches Us to Form of the Supreme Being." This is a complete reversal of the 20th and 21st century stereotype of the theist arguing for God with mere philosophy and moral arguments in the face of the atheist scientist armed with the latest facts. Godwin was using contemporary scientific results to construct a relatively sophisticated 'debunking' of atheism. A good sample of his argumentative style can be found in a passage on carbon in the blood. First he presents an astounding biological fact, sometimes about plants and "germs" but in this case about humans:

"By innumerable minute ramifications the blood is thus spread through every part of the lungs, and, coming into chemical action with the air which has been inspired, the oxygen

---

<sup>68</sup> Ibid p. XI

<sup>69</sup> Ibid p. XVII

of the atmosphere, uniting with the carbon of the blood, forms carbonic acid gas, which at the next expiration is thrown out of the system, and the blood regains its power of stimulating the heart, and is again prepared for circulation. A celebrated chemist has calculated that, in twenty-four hours, nineteen thousand two hundred cubic inches of carbonic acid is given out, which contains more than five troy ounces of carbon.”<sup>70</sup>

Godwin receives that number from one of the Bridgewater Treatises, a series of books published by the Royal Society, also in 1833, in defense of the argument from design. Darwin begins *On the Origin of Species* with a quotation from one of them.<sup>71</sup> Godwin then goes on to ask how such a wondrous thing is possible and how it could have come about concluding that the only possible answer is by God’s design. As fraught as some of the logic of this argument might be, Godwin is using the contemporary scientific consensus to make his argument. Even by the 1830s science was just as well suited to arguments for God than against God, if not better. Scientific atheism is not only nowhere to be found, scientific results are, at this moment, a potential enemy of atheism.

These discussions of secular and religious scientists are important to establish the long-lasting and deep aversion scientists felt during this time period, at least in England and France, towards speaking at length about religious matters—regardless of whether or not they were atheists or espousing radical views. Understanding how science was used to counter the arguments of humanistic atheists such as d’Holbach well into the 1830s is vital for understanding the dominance of humanistic atheism among atheists in this time period as well. A few of the only scientific atheists of the pre-Darwinian era will be introduced in a future section, though they were easily overshadowed by contemporary humanistic atheists.

---

<sup>70</sup> *ibid* p. 161

<sup>71</sup> Darwin (1859)

### Section Three: Freethought and Feuerbach

With this section we continue to follow the strain of humanistic atheism begun by d'Holbach in 1770. We begin on the British Isles. For some time after Turner's response to Priestly, both atheism and deism continued to grow in popularity in the United Kingdom, especially deism. As I described in the first section, atheism's origins lie in contradictions arising from attempts within religion to reform itself or accommodate new principles. These contradictions also aided the growth of atheism. Berman writes that the success of deism in the late 18th century "meant at least a logical weakening of the orthodox position and, one would suppose, an encouragement to the rise of atheism."<sup>72</sup> In this fertile ground, British atheism continued to grow. A perfect example of this is Percy Shelley, who was "the second open avower of...atheism in Britain."<sup>73</sup> Berman argues that Shelley's move from deism to atheism was brought about by the "principle that belief is an involuntary passion," something that, along with already existing resentment towards religious intolerance of some of his family members, led Shelley to reject belief entirely.<sup>74</sup> Berman also writes that "Shelley would...have been pondering the formidable array of arguments of Hume and d'Holbach. And his belief in the value of reason would have enforced both his growing rationalism."<sup>75</sup> Shelley does not provide extensive theoretical backing for his atheism nor was he an atheist firebrand who dedicated much of his life to arguing for it. However, that he was avowed at all means he is the next British link in the chain of humanistic atheism from d'Holbach onwards.

---

<sup>72</sup> Berman, p. 170

<sup>73</sup> *ibid*, p. 179

<sup>74</sup> *ibid*, p. 138

<sup>75</sup> *ibid*, p. 185

The next link in this chain was the publication of the *Analysis of the influence of natural religion on the temporal happiness of mankind* in 1922 by one George Grote, a close associate of utilitarian Jeremy Bentham. In the second half of the 19th century, atheist journalist J.M. Robertson described it as “the most stringent attack made on atheism between d’Holbach and Feuerbach.”<sup>76</sup> Feuerbach will be covered at the end of this section and Robertson’s contemporaries in section five but this quote both speaks to Grote’s significance and presages the coherence and continuity of this strain of humanistic atheism. While Grote, like d’Holbach, did not attach his real name to published works of avowed atheism, he did write atheist texts and advocated for atheism in his personal letters. In these letters Grote’s avowedly humanistic atheism comes out. He wrote that “where there is a grain of misery existing - a single grain - this must be because the Maker of it (granting the hypothesis) either wants the will or wants the power to prevent it. The evil that exists is a plain proof that there is no being existent...an aching finger proves that there can be none such.”<sup>77</sup> This is a purely moral, specifically utilitarian, argument against the existence of God. No reference to science necessary. In fact, Grote implicitly rejects the entire idea that science is usable to disprove God by describing God as “extra-experimental” since belief in God can not be “founded on experience.”<sup>78</sup> This is very similar to d’Holbach’s view of belief because it is a descendent of it.

At this point I should note two things. The first is that not every argument for atheism that we have seen or will see is necessarily un rebutted by religious arguments nor particularly logically sound itself. Grote is not a uniquely gross offender but theodicy is an entire field of theology that works to rebut his argument. The second is that just as religion is not atheism but

---

<sup>76</sup> *ibid*, p. 191

<sup>77</sup> *ibid*, p. 195

<sup>78</sup> *ibid*, p. 194

aspects of it made atheism more possible, these humanistic arguments are not arguments from science but their focus on materialism and empiricism will eventually be a large part of what makes scientific atheism possible. When we finally meet our first scientific atheists at the end of the next section I will go into this in more detail.

The next standard bearers of humanistic atheism were the infinitely more vocal Charles Southwell and George Holyoake. Southwell is the first working class atheist of this story. The son of an anticlerical piano maker, he became a militant atheist in his teen years and was a talented public speaker and advocate for “freethought” in the 1830s.<sup>79</sup> Southwell founded the first atheist periodical, *Oracle of Reason* and was sentenced to thirteen months in jail for blasphemy after a deliberately incendiary edition of *Oracle of Reason*. The editing of the periodical was then taken over by George Holyoake, another influential freethinker and atheist who coined the terms “secularism” and “jingoism.” While *Oracle of Reason* was hardly the most popular paper in the United Kingdom, among the relatively few atheists of the time, the humanistic atheism that it represented was effectively the only game in town for British atheists.

When the *Oracle of Reason* sets to justifying and arguing for atheism, it does so in a way that is very similar to that of d’Holbach, Turner, and to some extent Grote. In a column written by Southwell himself entitled “The Free Inquiries Why And Because,” he explains that “some philosophers [have] assumed that matter is capable of thought” because they “hold it as an incontrovertible axiom, that nothing can come of nothing, and contend that we have an idea of matter, but none of spirit or soul, distinct from matter.”<sup>80</sup> This is an argument against the soul from a materialism that prioritizes direct sense experience above all other speculation, just like the French materialist atheists did starting over half a century earlier. A similar argument is made

---

<sup>79</sup> Stenhouse, p. 757-8

<sup>80</sup> Southwell, Holyoake, p. 245

in an article entitled "Is There a God" written by G. J. H., presumably George Jacob Holyoake. Holyoake writes that "we conclude, since matter plainly *is*, that it always *was*. If we really had to choose between the absurd and the unfathomable it would be rational to choose the latter, as ignorance is better than folly. But it is not so. The theist, upon the question of creation, has the absurdity. The atheist only deals in plain, clear, comprehensibility."<sup>81</sup> This is not necessarily the cleanest argument against the creation of the universe from nothing, but it is a skeptic and materialist argument rather than one based on "facts or probabilities."<sup>82</sup> Not all the articles in *Oracle of Reason* are about atheism and some are about religion in general, the latest science, and Southwell's hobbyhorse: promoting early theories of gradient descent, usually with a racist and eugenic bent. It would be amiss of me to not make it clear that when I speak of the social, political, and moral claims of atheists I speak of the things *they* believe to be the best for society and in the 18th and 19th centuries those are frequently, but not always, things like eugenics and scientific racism. Despite that, *Oracle of Reason* still displays all the tendencies of atheism during this period, continuing the trend of humanistic atheism begun by d'Holbach.

Meanwhile, in Germany, a materialist and socially radical form of humanistic atheism was also developing. This was the Feuerbach that J.M. Robertson mentioned in relation to d'Holbach and grote. Feuerbach was a German philosopher who had been made a "convert to Heglian philosophy in the early 1820s."<sup>83</sup> Eventually Feuerbach became disillusioned with Hegel's "esteem for the Christian religion," and in 1841 wrote a Hegelian in structure critique of religion: *The Essence of Christianity*. Feuerbach claims that "Religion is the disuniting of man from himself...God is not what man is — man is not what God is."<sup>84</sup> Feuerbach also had moral

---

<sup>81</sup> *ibid* p. 243

<sup>82</sup> *ibid*

<sup>83</sup> Hipwell, p. 424

<sup>84</sup> *ibid* p. 428

objections to faith. He "censures faith for being destructive of the natural moral solidarity of mankind, through its promotion of a particular supernatural unity of believers."<sup>85</sup> This moral objection evolved into a political one to the point that he saw the failure of the revolutions of 1848 as due to the failure to dissolve Christianity.<sup>86</sup> None of these objections to religion rely on science. Feuerbach's views are similar to Grote's in their concern with harms of religion to human wellbeing albeit via a moral system different from Grote's utilitarianism.

Feuerbach was also a materialist and described nature in "terms of the material world, or as 'bodily...sensuous existence'."<sup>87</sup> This claim that sensory experience is the only access we have to a material world is very similar to that of d'Holbach. Feuerbach also developed a model of cause and effect in nature that did not allow for the concept of a first cause or effects "caused by an agency outside the system."<sup>88</sup> Seventy years after *The System of Nature*, atheists were still arguing for their beliefs with primarily metaphysical and moral claims rather than scientific ones.

One of the most famous atheists of the 19th century was Karl Marx. Marx was, like Feuerbach, a materialist Hegelian, albeit one who placed much more emphasis on the political. Marx essentially agreed with Feuerbach but believed he did not go far enough. Marx states that while Feuerbach was right that religion divided the world into a "religious, imaginary world, and a real one," its dissolution was not the main goal. Marx points out that "after completing this work, the chief thing still remains to be done," and sees religion as a symptom of a larger "self-contradictoriness of [the] secular [kind]."<sup>89</sup> This German materialist atheism was interested in science but did not base its atheism off of it. The strand of it that comes from Marx was, of

---

<sup>85</sup> *ibid* p. 435

<sup>86</sup> *ibid* p. 437

<sup>87</sup> *ibid* p. 440

<sup>88</sup> *ibid* p. 441

<sup>89</sup> Lobkowitz, p. 321

course, highly influential, spread among most communists of the 19th century, and will appear briefly in a future section.

All of these immensely influential atheists were writing at least two generations after the death of d'Holbach but continue to maintain aspects of the variety of humanistic atheism that he laid out. Over the past three sections I have shown how the first vocal atheists in multiple languages were all humanistic, how it was that same humanistic atheism that religious orators saw the most need to argue against, and how those humanistic arguments continued to thrive well into the 19th century. Science was primarily a tool of religion and scientists, while often secularist, were rarely atheists and certainly not vocal ones.

In the next section we will return to the subject of scientists, looking at the impact of *On the Origins of Species*, a few religious Darwinists, Thomas Huxley (the evolutionary biologist whose quotation began this paper), and the appearance of the first somewhat popular scientific atheists in Germany.

#### Section Four: The Inflection Point:

Charles Darwin's *On the Origin of Species* was a landmark text in the history of biology and the proposed system of natural selection within it was incredibly novel to many of its readers. Historian A. Hunter Dupree wrote that it led to "scientists who [had] never risen above the level of taxonomic detail [began] to talk of philosophy; religion; the nature of man, and the shape of the cosmos."<sup>90</sup> However, its contents were not wholly unprecedented. As we've seen, work by scientists like Laplace and the early geologists showed that more and more natural phenomena could be explained without direct reference to the supernatural and certain theories

---

<sup>90</sup> Dupree, p. 353

of evolution had already appeared. Some philosophers also saw Darwin in earlier philosophical works. In Germany, the protestant theologian Martin Kähler made the exaggerated claim that it was easy for German theologians to become Darwinists because "we were already Hegelians and Hegel anticipated the whole of Darwin."<sup>91</sup> Of course, as confident as some German theologians might have felt, its publishing still "forced scientists and theologians to reassess the limits of their respective territories" and led to great leaps in biology and new social movements.<sup>92</sup> The Baconian compromise had begun to break down by the middle of the nineteenth century and the relationship between scientists and atheism had slightly changed and should be elaborated upon again before continuing. As Dupree wrote, the publication of *On the Origin of Species* helped scientists to become more and more comfortable discussing science and religion in the same sentence. This trend was not purely caused by Darwin, similar discussions had begun in Germany over a decade before the publication of *On the Origin of Species*, but the debates around Darwin demonstrate the ways that in the two or so decades after 1859, neither Darwinism nor any other branch of Science provided sufficient support for nascent scientific atheism

To begin with, there were many debates about the actual scientific merits of Darwinism. While the arguments against Darwinism would ultimately fail, the arguments against it were not all rooted in religion. While many Americans might have seen scientist Louis Agassiz' arguments against Darwinism as a "defense of biblical as well as scientific creationism...this easy rationalization of Agassiz' anti-Darwinian position...does not stand to close examination...he was interested in developing a consistent scientific system rather than a theological position."<sup>93</sup> On the other side of things, there were deeply religious Darwinists like

---

<sup>91</sup> Murphy, p. 9

<sup>92</sup> Frederick, p. 372

<sup>93</sup> Dupree, p. 357

American botanist Asa Gray. Darwin described Gray's position as the proposition that "natural selection not inconsistent with natural theology."<sup>94</sup> In fact, Gray described himself as orthodox in both religion and science. However, he spent most of his time and energy on science, specifically his work on taxonomic botany. Much of the reasoning that allowed scientists like Gray to maintain the gap between scientific practice and religious beliefs was that it was very easy to, as historian A. Hunter Dupree wrote, "push back the chain of secondary causes in nature a very long way." By this he means that no matter what there is still something that a God could have designed and set in motion with deliberation and intention. Much of this came down to the lack of evidence available at the time, for example "lacking all evidence, Gray felt free to assume that variations had been led along certain beneficial lines."<sup>95</sup> However, even if there had been evidence for the randomness of the mutations that drive evolution that does not mean that Gray would be forced to renounce his belief.

Even when, in his later years, Darwin admitted that he was an agnostic, he still did not see his theories as necessarily implying atheism or agnosticism. For most of his life he had an almost ideological dislike of discussing religious matters. In *The Life and Letters of Charles Darwin*, a collection composed and written by his son, Francis Darwin, Francis writes that his father "was reticent on the matter of religion, and what he has left on the subject was not written with a view to publication...He felt strongly that a man's religion is an essentially private matter, and one concerning himself alone."<sup>96</sup> Evidence for this view is contained in a letter he sent in 1879: "What my own views may be is a question of no consequence to any one but myself."<sup>97</sup> However, because the letter he was responding to was directly inquiring about his religious

---

<sup>94</sup> *ibid*, p. 358

<sup>95</sup> *ibid*, p. 361

<sup>96</sup> Darwin(Francis), p. 304

<sup>97</sup> *ibid*

views, he did add that “I think that generally (and more and more as I grow older), but not always, that an Agnostic would be the more correct description of my state of mind.”<sup>98</sup> Even as an agnostic Darwin was not remotely dogmatic on the question of religion. A family member answered a letter from a German student in his stead writing that “He considers that the theory of Evolution is quite compatible with the belief in a God; but that you must remember that different persons have different definitions of what they mean by God.”<sup>99</sup> Darwin simply did not believe that evolution or a particular set of scientific results were sufficient to make a good argument against the existence of God.

He elaborated on all of this at greater length in 1881 when he was interviewed by Edward Aveling, a British socialist, comparative anatomist, and atheist, and German scientist and atheist Ludwig Büchner. Büchner was also at this time the president of “The International Federation of Freethinkers” and their convention in London was why he was able to meet Darwin. This was only a year before Darwin’s death. Even when interviewed by two famed atheists, Darwin preferred to speak about science, bringing up what would be his final book on “Vegetable Mould and Worms.”<sup>100</sup> When finally pressed on the subject of religion he said that “I should prefer the word Agnostic to the word Atheist” and that he “never gave up Christianity until [he] was forty years of age.” Interestingly, Büchner was an early scientific atheist who I will describe in greater detail at the end of this section and Aveling a similar albeit later kind of scientific atheist whose writing will appear in greater length in the next section.

Now we arrive at the man who coined Darwin’s preferred term “agnostic” and whose words began this paper. Huxley, despite being a successful scientist and ardent early Darwinist,

---

<sup>98</sup> *ibid*

<sup>99</sup> *ibid*, p. 307

<sup>100</sup> Aveling(1883)

was not especially wealthy and, being a very talented speaker, supplemented his income through public speeches on his other passion: atheist activism. Thomas Huxley coined the term agnostic in 1869 but twenty years later, in 1889, gave a speech titled “Agnosticism” explaining what he meant by the term. Huxley was an almost textbook humanistic atheist and presents an argument against a belief in God that, while not the same as d’Holbach or Turner or Southwell or Holyoake’s arguments, uses the same methods: skepticism, rationalism, history, and metaphysics. Huxley began his speech by saying that “the question as to what Jesus really said and did...is capable of solution by no other methods than those practised by the historian and the literary critic.”<sup>101</sup> Much of the first section of his speech is about the evidence for the man-made nature of early religion, saying that “there is no proof, nothing more than a fair presumption, that any one of the Gospels existed, in the state in which we find it in the authorised version of the Bible, before the second century, or, in other words, sixty or seventy years after the events recorded,” which in turn he uses to argue, using almost Humean reasoning and skepticism, that it is unlikely the events described within, especially the supernatural ones, are described accurately.<sup>102</sup> About the first third of his speech is him making historical and historiographical arguments as to the unreliability of certain stories in the gospels and how that unreliability implies further the unreliability of all aspects of the gospels. This is not an argument that relies upon a knowledge of history or science that was only available in the latter half of the 19th century.

Huxley described his first intellectual interests as a child to be “Philosophy and history,” leading to an abiding interest that even “has not unfrequently disputed my proper work-time with my liege lady, Natural Science.” Huxley did not see his historical and philosophical interests -

---

<sup>101</sup> Huxley(1889)

<sup>102</sup> *ibid*

and therefore his agnosticism - as functioning hand in hand with his scientific work. They are not contradictory but there is a separation between the two. Huxley then described what he means by agnosticism, whereby agnosticism is “not a creed, but a method, the essence of which lies in the rigorous application of a single principle.”<sup>103</sup> This principle, he claims, is as old as Socrates, was the foundation of The Reformation, the principle of Descartes, and “the fundamental axiom of modern science...the principle may be expressed: In matters of the intellect, follow your reason as far as it will take you, without regard to any other consideration. And negatively: In matters of the intellect do not pretend that conclusions are certain which are not demonstrated or demonstrable.”<sup>104</sup> This formulation of agnosticism is clearly detached from specific scientific results In fact, Huxley saw science as something that could use the agnostic principle to prove that “which is unproven today...by the help of new discoveries to-morrow.”<sup>105</sup> To Huxley, atheism and agnosticism did not, could not, be derived from scientific results. Instead both belief in scientific results and the belief in agnosticism or atheism derived from this agnostic principle.

Huxley also rejected the notion that agnosticism is merely another form of religion. He gave his dual rebuttal to the claims that agnosticism is the religion of a reductionist physicist and that science is necessary for agnosticism in the following passage:

[A critic of agnosticism has said that] "Agnosticism is a stage in the evolution of religion, an entirely negative stage, the point reached by physicists, a purely mental conclusion, with no relation to things social at all" (p. 154). I am quite dazed by this declaration. Are there, then, any "conclusions" that are not "purely mental"? Is there "no relation to things social" in "mental conclusions" which affect men's whole conception of life? Was that

---

<sup>103</sup> ibid

<sup>104</sup> ibid

<sup>105</sup> ibid

prince of agnostics, David Hume, particularly imbued with physical science? Supposing physical science to be non-existent, would not the agnostic principle, applied by the philologist and the historian, lead to exactly the same results?...And if so, how can agnosticism be the "mere negation of the physicist"?<sup>106</sup>

This is a powerful statement of humanistic atheism whereby he did not seek to replace religion with some form of agnosticism or atheism nor did he see science as a weapon to chip away at religion.

Here I arrive at the reason this section is entitled "The Inflection Point." While the peak of humanistic atheism will be discussed in the next section, it is during this period that, both through responses to Darwin and otherwise, scientific atheism first appeared in a consistent form. The earliest scientific atheists were three Dutch and German scientists: Carl Vogt, Jacob Moleschott, and the aforementioned Ludwig Büchner. These three men, in addition to their scientific work, were very active in politics and atheist activism, really gaining steam in the 1850s. In a paper contrasting their views with those of Feuerbach and the later historical materialists Marx and Engels, historian Frederick Gregory wrote that they were "well known in the second half of the nineteenth century in Germany as popularizers and materialists."<sup>107</sup> This is also where we see how scientific atheism is an offshoot of humanistic atheism rather than some different form. These men were materialists who had read Feuerbach, and it was materialism that made the arguments typical of scientific atheism possible: that chipping away the realm of things that could only be explained by the divine was equivalent to chipping away at the possibility of the divine itself. However, unlike the more philosophically minded humanistic atheists, "the scientific materialists...looked almost exclusively to Feuerbach's book on religion...Vogt was

---

<sup>106</sup> Ibid

<sup>107</sup> Gregory, p. 208

not at all interested in philosophy.”<sup>108</sup> In their works and public lectures, Büchner, Moleschott, and Vogt promoted a “sensationalized materialism” and claimed that “mechanical determinism...seemed to negate the very existence of the soul.”<sup>109</sup> These men were unambiguously scientific atheists and Gregory says as much writing that “through an appeal to alleged scientific facts, they were attempting to replace the authority of the church with the authority of science.”<sup>110</sup> This attempt to *replace* rather than destroy the authority of the church is a common theme among scientific humanists and will appear in the next two sections as they gain popularity. It also goes strongly against the form of humanistic atheism promoted by Huxley. For now, these men were some of the only scientific atheists to gain real popularity and even then remained overshadowed by their humanistic counterparts. All the same, their arrival in this story marks the inflection point in the spread of humanistic atheism.

The existence of these early scientific atheists also shows why lack of evidence is not the only reason why scientific atheism failed to take off. As many humanistic atheists have helpfully pointed out, science is not necessary to argue for atheism. Scientific atheism also requires the confrontational (dare I say dialectical?) mindset that these German materialists held that allowed them to make statements about the *replacement* of the church with science. In the next section we will see both the peak of humanistic atheism’s political relevance as well as the introduction of that confrontational approach to Britain.

---

<sup>108</sup> *ibid*, p. 210

<sup>109</sup> *ibid*, p. 209

<sup>110</sup> *ibid*

## Section Five: The Atheistic Platform

Although the inflection point occurred around 1859, humanistic atheism in Britain and the United States peaked later in the nineteenth century as the freethought movement on both sides of the Atlantic gained steam. In this section I will demonstrate how during this peak humanistic atheism remained dominant. However, I will also show how scientific atheism was still on the rise and that it was not hostile with humanistic atheism. In order to demonstrating this I will analyze the publications of Charles Bradlaugh, heir to the humanistic atheist tradition via George Holyoake and first atheist member of parliament. Bradlaugh was born in 1833 to a poor family and became associated with freethought as a teenager. He wrote his first pamphlet, "A Few Words on the Christian Creed," when he was sixteen years old. It was around this time that he met George Holyoake,<sup>111</sup> the early British secularist and freethinker who was one of the foci of section four. He continued writing secularist and atheist pamphlets and in 1858 held his "first public formal theological debate with the Rev. Brewen Grant, B.A." During that same year he was elected president of the London Secular Society, succeeding George Holyoake.<sup>112</sup> In 1866 he founded the National Secular Society which is an activist organization that generally promotes political and social secularism. From then on he continued writing and speaking in favor of atheism and secularism as well as making many forays into politics both in giving commentary on foreign affairs as well as as an advocate for the working class although falling short of being a socialist. He was elected to parliament in 1880 as the first openly atheist member. However, he was only able to take his seat in 1886 due to controversies arising from his refusal to swear his oath specifically on the bible. A lecture by Bradlaugh also provided J.M.

---

<sup>111</sup> Bradlaugh(1874)

<sup>112</sup> ibid

Robertson with his introduction to the freethought movement; J.M. Robertson being the atheist journalist who described Grote's work as the midpoint between d'Holbach and Feuerbach.

Bradlaugh's significance in the British atheist movement means that his writings and the writings he published are an ideal case study in the dominant atheist views of the time. The best overview of the perspectives and interests of Bradlaugh, the National Secular Society, and thereby British atheist activists in general is *The Atheistic Platform*, a collection of twelve essays published in 1884 written by Bradlaugh, Besant, Bradlaugh's Daughter, Edward Aveling, and a few others. Of these twelve essays, six are about atheism and religion, five are about British politics and policy, and one is a summary of a contemporary scientific theory with little mention made of religious or atheistic topics. The diversity of subjects is explained by the preface to the collection, which states that "Any question may be selected, provided that it has formed the subject of a lecture delivered from the platform by an Atheist. It is desired to show that the Atheistic platform is used for the service of humanity."<sup>113</sup> This goes beyond merely using moral claims to argue for atheism to implying that the platform of the atheist is based around the benefits to the world atheism engenders rather than any specific argument against god's existence. While each of these writers originally wrote or delivered their essays to an atheist audience, the phrase "it is desired to show that the Atheistic platform," implies that the collection has the purpose of convincing non-atheists that something is true about atheism—and "for the service of humanity" implies that that something is not the truth of atheism itself. Of course, the writers featured still believe the atheist position to be factually correct and in these texts and elsewhere argue for it fiercely but this framing demonstrates the continuation of the trend of atheism being a moral movement as much as a philosophical position.

---

<sup>113</sup> Bradlaugh, Besant, Bradlaugh, Moss, Cattell, Standing, Aveling p. preface

The titles of the essays concerning religion and atheism are:

1. “What is the Use of Prayer?” by Annie Besant
2. “The Gospel of Evolution” by Edward Aveling.
3. “Nature and the Gods” by Arthur B. Moss
4. “Is Darwinism Atheistic?” by Charles Cockbill Cattell
5. “The Myth of the Resurrection by Annie Besant”
6. “Why Should Atheists Be Persecuted?” by Annie Besant

In going through these texts we will see that, although everyone has been deeply impacted by Darwinism, even essays like “The Gospel of Evolution,” while maybe straying from a perfectly rigid atheism, does not invoke evolution as a set of scientific results.

The first essay of the collection, “What is the Use of Prayer?” was written by Annie Besant. Besant was close friends with Charles Bradlaugh for many years starting in 1874. They did not just publish atheist texts but also works such as Charles Knowlton’s “The Fruits of Philosophy” which promoted birth control. Besant and Bradlaugh were both fined and sentenced to six months imprisonment for this. It’s important to mention this because it underlines the extent to which under humanistic atheism, atheism was a social and moral movement just as much as a philosophical one. Atheism was not the only controversial means of improving people’s wellbeing that atheists promoted. Besant eventually became a theosophist and in the early 20th century was one of the strongest British advocates for Indian home rule. However, at the time of writing “What is the Use of Prayer?” she was still an ardent atheist.

The essay is part historical claims and part scriptural analysis. First Besant claims that prayer originates in early humanity facing a confusing and uncaring world, “[Prayer] is the cry of ignorance, of helplessness, of fear, to wisdom and strength greater than its own...The wind levels

his harvest; the lightning strikes his house. He cries out for mercy.” This explanation of the origins of religion is a common trend among atheists that we have seen before in earlier sections and will see again in this section. Besant then goes on to elaborate on the history of prayer as implied by the old and new testaments, making frequent reference to specific passages. She argues that "prayer and sacrifice have always joined together...Jacob puts the matter in the frankest possible fashion. He has just succeeded in cheating his blind father and in defrauding his absent brother...he finds Jahveh[sic] at the top of "a ladder set up on the Earth"...and [Jacob] makes the following bargain: "If God will be with me, and will keep me in this way that I go, and will give me bread to eat and raiment to put on...then shall Jahveh be my God...and of all that thou shalt give me I will surely give the tenth unto thee." She goes on to point out the bad faith inherent in this arrangement, the bulk of the essay is her providing examples such as this either from the bible or from how her contemporary Britons engage in prayer and pointing out the contradictions inherent in the premises of prayer.

Besant admits that prayer might be justified in simply providing some emotional succor but counters this with a bit of materialist philosophy and inductive logic that is a perfect example of the positive claims and views made by atheists, rather than just the negative ones: “I have found that to go out at evening-tide under the splendor of the stars...to go and gaze at a great picture...that any of these things sent me back calmed and steadied...encouraging me to face the difficulties. Yet these are not prayers...what is then this effect which follows actions...so different? A well known rule of inductive logic says that if [in two unlike sets of events, there are two similar circumstances common to both sets while all other circumstances differ] then those two circumstances are causally connected.” This appeal to both direct experiential evidence and a rational approach to understanding the mental effects of a set of actions is consistent with the

appeals to the same principles made about one hundred years earlier by d'Holbach, as well as the more recent ones by prior 19th century atheists described in section four. Besant completes the full house of atheist arguments at the very end of the essay: "I read a letter from the Dean of Peterborough, asking for £40,000 for the repair of Peterborough Cathedral. And men, women and little children are rotting in cellars in the very city wherein that letter was published. And he will get it." This cry of wasted wealth and resources has been a major angle of attack against religious organizations since Martin Luther, who was certainly no atheist but its continued use by atheists is another reminder of their priorities of viewing the pursuit of social and political changes to be as significant as spreading atheism itself.

"Nature and the Gods" takes a similar approach to "What is the Use of Prayer?" Moss begins the essay with two definitions of "'nature,' when used by a materialist". The first being John Stuar Mill's definition: "The sum of all [phenomena], together with the causes which produce them," but also includes the more common but "rightly used" form meant to "distinguish the 'natural' from the 'artificial' object."<sup>114</sup> However, Moss defines art as "the molding into certain forms of the things of nature, and therefore...are included in the [first] sense of the term."<sup>115</sup> With these definitions in hand Moss posits that "nearly all the mistakes of theology have arisen from the ignorance of man in regard to Nature and her mode of operation."<sup>116</sup> At first this seems to imply that Moss will provide a series of explanations based on recent developments in biology and chemistry that contradict scriptural or more general religious claims. However, he spends the first six out of fourteen pages of the essay recounting the same history the Besant recounted, one where humans were afraid and lost in nature and imagined gods to soothe themselves, gradually

---

<sup>114</sup> *ibid* p. 83

<sup>115</sup> *ibid*

<sup>116</sup> *ibid* p. 84

moving from worshipping things like fire and water to animals to human-like entities as their societies developed<sup>117</sup>. Moss writes that ““all ideas of god were born in the fertile imaginations of men, and a man's idea of god is invariably the exact measurement of himself, morally and intellectually.”<sup>118</sup> In telling this story, Moss makes use of scripture to back this up, arguing that, for example, “Jahveh [was] a material being” saying "he made very frequent visits to earth. Once he walked in the garden of Eden 'in the cool of day' or 'his voice' did for him (Gen. iii., 8)."<sup>119</sup> This is the same tool we have seen Besant use as well as previous atheists in the prior sections: using historiography and a knowledge of scripture to point out the very human origins of religion.

The rest of the essay contains a well reasoned response to the use of "a 'first cause' to account for the existence of Nature"<sup>120</sup> and the claim that Nature was designed. Moss' response to the first makes the then-radical metaphysical claim that, since "cause and effect apply only to [phenomena, and] each effect is a cause of some subsequent effect, and each cause is an effect of some antecedent cause, [therefore] the [phenomena] of the universe form a complete chain of causes and effects, and in an infinite regression there can be no first cause."<sup>121</sup> This is not a scientific claim about nature but a purely metaphysical one. Just as d'Holbach argued that any information not derived from the sense is “non-sense,” Moss argues against all abrahamic religions that there can not have been an “in the beginning moment.”<sup>122</sup> Here we once again see a rational argument used to back up a metaphysical claim to be used against belief in a creator.

---

<sup>117</sup> Although Moss does not single any group of people out as primitive, I feel compelled to acknowledge that for all the progressiveness displayed by the essays in this collection on some social matters, the views therein are still those of 19th century British people and to that extent, involve some fairly simplistic and racist-in-implication historiographies by today's standards.

<sup>118</sup> Bradlaugh, Besant, Bradlaugh, Moss, Cattell, Standing, Aveling p. 87

<sup>119</sup> *ibid*

<sup>120</sup> *ibid* p. 89

<sup>121</sup> *ibid*

<sup>122</sup> *ibid*

Moss even says that this “a priori method” of arguing either for or against god’s existence is “an altogether unscientific method.”<sup>123</sup> In the next section of the essay he responds to what he describes as the “a posteriori” and “scientific” argument for god, that of the argument from design. but his argument against this “scientific” claim made by the religious begins on a non-scientific note, pointing out that “The design argument...is purely an argument drawn from experience. But what experience has man of god? Speaking for myself I can say that I have absolutely no experience of him at all...Man does not know god as a designer or constructor.”<sup>124</sup> This argument does not contradict that a designed watch could be taken to be alive by one who has never seen a watch before but instead makes an argument not just similar to but this time almost identical to d’Holbach’s.

When he comes to the famous argument that the eye’s complexity belies a designer, Moss once again does not make recourse to a Darwinist account of the eye’s development but instead makes an argument by metaphor. If he holds a glass in his hand and releases it, with the glass falling instantly to the ground, that does not prove that he was designed to hold up “that glass or that the glass was designed to fall on withdrawing my grasp from it.”<sup>125</sup> However, while this is not a rebuttal using a specific scientific result, it does still mark a change in how atheism is argued for. The reasoning that Moss uses to point out this fallacy is still evolutionary reasoning, a development can be eventually used for purposes not related to those that initially formed it. Just as the eye might have evolved from a single light-sensing cell and eventually, bit by bit, came to be a cluster of cells under an organic lens that can detect shapes and color. Moss has incorporated evolutionary thinking into his skeptic and rationalist toolkit. That move is

---

<sup>123</sup> ibid

<sup>124</sup> ibid p. 91

<sup>125</sup> ibid

something in between the traditional relationship between skepticism and the scientific method and atheists actively adopting science as an argumentative tool.

Moss ends the essay with a typical atheist-reformer appeal to the working class, that “the world is indebted far more to those who built houses, made clothes, navigated ships, made machinery, wrote books, than to all the gods and their clerical representatives the world has ever known...Man's necessities allured him on to all these achievements...An infinite and all-powerful god cannot need the assistance of man; but man needs the assistance of his brothers and sisters to..alleviate suffering, to remove injustice, and secure the possibility of freedom and happiness for all.”<sup>126</sup> From this perspective the fundamental benefit of science is not that it disproves the existence of god, the admission that it is capable of doing that does not even figure into Moss’ conclusion. Instead science is the force that makes further human flourishing possible if put into practice through hard work and a desire for justice.

“Is Darwinism Atheistic?” and “The Gospel of Evolution” are both examples of a more confident post-Darwinian scientific atheism. “The Gospel of Evolution” was written by Edward Aveling who, along with Ludwig Büchner, conducted the interview of Darwin described in the prior section. Aveling was a socialist and treats evolution as the successor to religion the same way a relatively crude Marxist might treat communism as the successor to capitalism. Aveling writes that “Christianity, having no scientific and indeed no natural basis, has been Protean in its forms.” This claim is not in of itself unique to scientific atheism, humanistic atheists have made similar claims. What makes Aveling’s claim one of scientific atheism is the contrasting of religious belief with scientific basis rather than a more generally empirical and sense-based framework. In science, Aveling and other scientific atheists saw a specific structure to replace

---

<sup>126</sup> ibid p. 96

religion with. Despite this focus on science, Aveling's definition of evolution is vague and clearly not wholly related to biology. He wrote "Evolution is the name for the idea of the unity and continuity of phenomena."<sup>127</sup> Evolution needs to be vague because it seems to be the doctrine of Aveling's new religion of science: "The Gospel of Evolution is replacing that of Christianity. Science is taking the place of Religion and yielding to mankind the poetry that its forerunner missed."<sup>128</sup> These ideas are not those of humanistic atheism. Humanistic atheists frequently support and adore the fruits of science but they do not see it as some sort of replacement for religion, a way to structure society.

There was a group of people other than scientific atheists who do see science in this way. That group were the deist progenitors and promoters of the "conflict myth." I briefly mentioned this intellectual trend in the introduction but it's worth going into a bit more detail. As the nineteenth century progressed and Darwinism became more accepted, scientists and philosophers began to embrace the application of Darwinian evolution to other concepts, this led to Social Darwinism. Among anticlerical deists such as the chemist John William Draper and historian Andrew Dickson White, this led to the idea that science would succeed christianity. Draper published *History of the Conflict Between Religion and Science* in 1874 and White published *The Warfare of Science* also in 1874. This was ten years before the publication of *The Atheistic Platform*. Both books were popular and influential. Draper wrote that "Faith must render an account of herself to reason," and that positive science would eventually prove the existence of the soul.<sup>129</sup> Draper and White framed evolution as a major source of the conflict between science and religion.<sup>130</sup> This kind of worship-like relationship to evolution and positioning science as a

---

<sup>127</sup> *ibid* p. 37

<sup>128</sup> *ibid* p. 36

<sup>129</sup> White, p. 2

<sup>130</sup> *ibid* p. 3

successor to religion is very similar to what Aveling does in this essay. Obviously since Bradlaugh still published the essay, it must not have been actively offensive to his atheist sensibilities, but as I will show when describing the less theological essays in *The Atheistic Platform*, Bradlaugh was more than willing to platform those he disagreed with, so long as they were atheists. The decline of humanistic atheism and rise of scientific atheism was not due to infighting within atheist organizations.

The other essays that concern religion and belief are ultimately similar to those by Besant and Moss. However, the five other essays in the collection are on political matters. Two of them, "England's Balance Sheet" by Charles Bradlaugh and "Does Royalty Pay?" By George Standring have almost nothing to do with atheism except for its implicit relationship to criticisms of the Crown, with the English Monarch being the head of the Anglican church. Instead they are about how the U.K.'s government wastes money on pointless ventures and projects such as the royalty and all the obsolete offices and positions that come with that institution.<sup>131</sup> Bradlaugh goes into detail on things such as duties on stamps but also points out the absurd cost of the various wars Britain has engaged in over the past two centuries.<sup>132</sup> The essay on science entitled "Mind Considered as a Bodily Function" was written by Alice Bradlaugh, Charles' daughter, and is only a lecture on recent scientific developments in the study of the nervous system. The one line notable for the purposes of this section is that "Our scientific thought is only just growing out of its theologic swaddling clothes," a line that implicitly embraces the increasingly popular conflict thesis that poses science as a successor to religion, but does not do so outright.<sup>133</sup> Besant's essay "The Story of the Sudan" is a scathing critique of British imperialist policies in Sudan, which

---

<sup>131</sup> Bradlaugh, Besant, Bradlaugh, Moss, Cattell, Standring, Aveling p. 51, 147

<sup>132</sup> *ibid*

<sup>133</sup> *ibid*, p. 26

Besant decries as unjustified and cruel.<sup>134</sup> This anti-imperialist position presaged her tireless efforts for Indian home rule later in her life. The two remaining essays are Charles Bradlaugh's "Some Objections to Socialism" and "The Curse of Capital" By Edward Aveling. Aveling acknowledges his position to be possibly too extreme for his audience. He writes "You [Radicals] are an advance upon Liberalism, as Liberalism is an advance upon Whiggism, Whiggism on Conservatism, Conservatism on Toryism...the next step from Radicalism is Socialism. The difference, however, between the position of Radicalism and that of Socialism is much greater than [the other differences]" and makes the very Marx-like claim that although "there are two great curses under which the present society is laboring—the one is Christianity, and the other is Capital. I look then upon Christianity as a minor curse to Capitalism."<sup>135</sup> Bradlaugh, on the other hand, argued that reform was needed but through local operatives. He put forward many of the classic arguments against revolution and for reform. "Each annual period shows some progress some advance secured, and though there is much sore evil yet, much misery yet, much crime yet, much—far too much—poverty yet, to day's progress from yesterday shows day-gleam for the people's morrow."<sup>136</sup> The point of bringing up all these essays generally unrelated to atheism is that, even when Bradlaugh disagreed with a fellow atheist, the movement still fundamentally conceived itself as a *humanistic* movement to improve people's material lives, not just amending, or removing, their spiritual ones.

As a whole the essays contained within *The Atheistic Platform* paint a picture of a thriving and energetic largely humanistic atheist movement that is concerned with bettering the world through political and social action just as much as through proselytization, if not more so.

---

<sup>134</sup> *ibid*, p. 65

<sup>135</sup> *ibid*, p. 165

<sup>136</sup> *ibid*, p. 112

The arguments that are made for atheism continue to be focused on materialist metaphysics, a skeptical history of religion and scripture, and general rationality. This is best evidenced in the essays written by Besant where she expertly uses those tools to build a positive vision of a rational atheism that seeks to help people just as much as she uses them to tear down what she perceives as religion's misapprehensions or misdirections. At the same time, the movement was starting to change as the powerful idea of Darwinian evolution captured the imaginations of many British intellectuals, some of whom were atheists. While this explosion shifted the beliefs of some atheists such as Aveling, it had not *yet* led to scientific atheism overtaking the humanistic form in popularity and influence.

In the next section we will move into the 20th century and across the Atlantic Ocean to the United States where the reaction to the spread of freethought was strongest. There I shall show how the rhetoric adopted in the debates of the Fundamentalist–Modernist Controversy forced atheism to retreat from its humanistic roots and embrace scientism.

## Section Six: Fundamentalism

As the nineteenth century drew to a close, a very similar story played out in the United States. By the 1920s scientific atheism, bolstered by the relative popularity of the conflict thesis, constituted a larger and larger part of the atheist community. However, what ended the dominance of humanistic atheism that had lasted for a hundred and fifty years was the outbreak of the Fundamentalist–Modernist Controversy. This controversy was a schism in American Protestantism that had been a long time coming and while the Modernists ultimately won, the types of arguments used led many atheists who participated in the broader social discussions to adopt positions of scientific atheism. By the 1930s the freethought movement had lost most of its steam and atheism as a major social movement faded to the background in the wake of the Great

Depression and World War Two. In this section I will cover American atheism and rising scientific atheism in the late 19th century before moving to the 20th century to focus on the controversy and its impact on atheism.

Bradlaugh's closest analogue in the United States was probably Robert J. Ingersoll. Ingersoll was a lawyer and orator who was dubbed "the Great Agnostic." Ingersoll split the foci of his lectures similarly to how Bradlaugh and Besant split the focus of *The Atheistic Platform*. His topics of interest ranged from praising Shakespeare, Walt Whitman, and Lincoln (one speech has the wondrous title of "Simultaneous Birth of Lincoln and Darwin—Heroes of Every Generation") to moral critiques of religion such as "The Idea of Hell born of Ignorance, Brutality, Cowardice, and Revenge."<sup>137</sup> In that essay he decried the very idea of hell as immoral and a mark against religion, saying that "the God of Hell should be held in loathing, contempt, and scorn."<sup>138</sup> He backed up this detestation of God and the concept of Hell with a historical argument that we are now very familiar with: "our barbarian ancestors knew but little of nature...They could not divest themselves of the idea that every-thing happened with reference to them...They made up their minds that at least two vast and powerful beings presided over this world."<sup>139</sup> So far it seems like Ingersoll is just like all the atheists we've spoken of before, combining moral or political and theological claims, discussing the greatness of Lincoln's actions as president in one speech and what he perceives as the absurdity and cruelty of at least the Christian notion of God in another.

However, despite his continued focus on moral subjects, Ingersoll was effectively a scientific atheist in how he argued for atheism itself. In fact, he explicitly adopted the notion that

---

<sup>137</sup> Ingersoll(1915)

<sup>138</sup> *ibid*

<sup>139</sup> *ibid*

with each increase in scientific knowledge the possibility for the existence of God diminishes rather than just the domain of things *directly* controlled by God: “We are explaining more every day. We are understanding more every day; consequently your God is growing smaller every day.”<sup>140</sup> He also said that “There is an "irrepressible conflict" between religion and science, and they cannot peaceably occupy the same brain nor the same world.”<sup>141</sup> While Ingersoll was still somewhere between humanistic and scientific atheism, he certainly leaned towards the latter.

Higher criticism was a kind of literary criticism in bible studies that analyzed the bible as a historical document. It had been developed in Germany in the first half of the 19th century and gained popularity elsewhere in the second half. During the 1873 New York international meeting of the Evangelical Alliance, European delegates “warned of the need to defend the fundamentals of the faith against higher critics.”<sup>142</sup> By the early 1910s, American orthodox christianity had come to share this concern. Evolution, on the other hand, was a relatively minor issue. While the “intellectual elite of the late Victorian era” might have generally accepted some form of Darwinian evolution, the majority of Americans remained “loyal to the doctrine of special creation.”<sup>143</sup> Even *The Fundamentals*, a series of booklets published between 1910 and 1915, are not concerned with evolution as a major threat.<sup>144</sup> However, World War One changed all of this. Leaders of the fundamentalist movement, such as three time presidential candidate William Jennings Bryan, saw Darwinism and evolution as having brought about the mindset that made the war possible and believed it to be causing unbelief in the students of the United States. This belief was driven by books such as Vernon Kellogg’s *Headquarters Nights*, a 1917 book which

---

<sup>140</sup> *ibid*

<sup>141</sup> *ibid*

<sup>142</sup> Gregory, p. 375

<sup>143</sup> Numbers, p. 392

<sup>144</sup> *ibid*, p. 393

“revealed the role Darwin’s biology had played in persuading the Germans to declare war.”<sup>145</sup>

Another similar book was *Science of Power* which was published in 1918 and demonstrated “the historical and philosophical links between Darwinism and German militarism.”<sup>146</sup> To combat this threat, Bryan began a movement to ban the teaching of evolution: “The movement will sweep the country...and we will drive Darwinism from our schools.”<sup>147</sup> While this at first seems like a dispute about scientific facts or physical reality, the fundamentalists saw this as a moral crusade. Bryan claimed that Darwinism was a threat to religious morality because it “weakened the virtues that rest upon the religious ties between God and man” by connecting men with animals.<sup>148</sup> This movement marked the start of the Fundamentalist-Modernist Controversy and framed the conflict as one of good morals versus science (While the modernists certainly saw the fundamentalists as not only anti-science but also socially regressive, it was not the main focus of their response to the anti-evolution crusade).<sup>149</sup> It is difficult to follow the path of atheism during this period but what ultimately happened is that atheists took the side of the Modernists and in doing so focused more on defending science than clinging to their prior humanistic approach, allowing scientific atheism to become the dominant form.

One of the most famous atheists in the United States during the 1920s was Charles Lee Smith, the founder of the American Association for the Advancement of Atheism. In a 1929 debate entitled “God Versus Atheism” Smith began with a conventional humanistic approach that in later replies to his interlocutor veered into a wholly scientific one. “Let us consider the five fundamentals of atheism,” he said, “The first is Materialism...The second is

---

<sup>145</sup> *ibid*, p. 395

<sup>146</sup> Numbers, p. 395

<sup>147</sup> *ibid*, p. 394

<sup>148</sup> White, p. 113

<sup>149</sup> *ibid*, p. 112

Empiricism...Our third basic doctrine is that of Evolution...Our fourth fundamental is...the doctrine that happiness here and now should be the motive of conduct...the last fundamental of atheism is the Existence of Evil.”<sup>150</sup> However, it is this third doctrine that he is by far the most concerned with. Smith spoke of synthetic chemistry building up “materials such as alcohol which were once thought to be producible only by the vital activity of plants and animals,” he continued: “The creation of life by chemists in the laboratory would cause no great excitement. It is expected.”<sup>151</sup> Even when discussing the moral benefit of atheism he brings in scientific claims: “If materialistic mechanism were not true, if man were not a machine, there would be no rational basis for effort. It would not be worthwhile to teach your child to be honest.”<sup>152</sup> This is not just an appeal to metaphysical materialism but to a specific theory of how animal life functions. Smith contrasts the way of religion not with an agnostic principle or general rationality but with “the way of science...science is born of experience; religion is made of deductions from assertions.”<sup>153</sup> The transformation of science into a battleground *by different factions in religious groups* meant that even generally humanistically minded atheists adopted scientific atheism in defense of atheism and agnosticism.

Even Bertrand Russell, pacifist philosopher, had come to place science as the mechanism by which people could be freed from religion. In “Why I am Not a Christian” he wrote that “Science can help us to get over this craven fear in which mankind has lived for so many generations. Science can teach us, and I think our own hearts can teach us, no longer to look round for imaginary supports, no longer to invent allies in the sky, but rather to look to our own efforts here below to make this world a fit place to live in, instead of the sort of place that the

---

<sup>150</sup> Oliphant, Smith, p. 27

<sup>151</sup> *ibid*, p. 51

<sup>152</sup> *ibid*, p. 60

<sup>153</sup> *ibid*, p. 61

churches in all these centuries have made it.”<sup>154</sup> The cure was not general rationality or the study of history or philosophy or even simple compassion. To Russell, science was the mechanism that would oppose religion and free humanity from its supposed shackles.

This binding of atheism to a fetishization of the products of and value of science represents the victory of scientific atheism over humanistic atheism. It is not a victory that erased the values of the conquered system but it did gradually come to overshadow them. With the US becoming such a cultural powerhouse similar transformations occurred elsewhere in the world or these kinds of debates were simply overshadowed by the many crises of the 1920s, 30s, and especially 40s. The association of atheism with communism also did not help by the time various red scares began to roll through the United States. One hundred and fifty years of activist humanistic atheism gradually ended as the fetishization of “science” and “evolution” gained steam and atheism itself gradually moved into the background. When it reappeared as New Atheism in the late 20th and early 21st centuries it emerged as even more centered around science and an obsession with its particular results as evidence against religious belief.

## Conclusion

Throughout this paper I have followed one hundred and fifty years of a continuous intellectual tradition of atheism. We have seen how, starting with d’Holbach and Naigeon in 1770, this tradition of atheism was just as concerned with moral and social issues as it was with purely religious ones. They saw themselves as guided by “compassion and reason” and sought the end of religious dogma rather than its replacement with some new dogma. Atheists of this tradition emphasized methods such as historical analysis, a general skepticism, philosophical and

---

<sup>154</sup> Russell (1927)

metaphysical arguments, and moral critiques of religion in order to argue for both atheism itself and their social and political goals.

This form of atheism was popular throughout Europe with slightly different varieties developing in France, Germany, and Britain. Despite these differences, the fundamental approach and values of these atheists remained similar and within the broader tradition began by d'Holbach. However, as the 19th century progressed and the visibility of science and discussions of the relationship between science and religion increased *among religious writers and thinkers*, some atheists began to try to use specific scientific facts to make their case. These new scientific atheists also began to fetishize science in of itself, seeing it as an alternative to religion. A new dogma. Throughout the 19th century, the humanistic atheist tradition remained dominant and aside from some arguments within Germany,<sup>155</sup> humanistic atheists did not actively oppose this offshoot of their group.

During this period, scientists themselves generally stayed out of these discussions. In the 18th and early 19th centuries this was because of them adhering to the Baconian Compromise to separate the “book of God” from the “book of nature.” As the nineteenth century continued most scientists were not atheists and of those who were, most remained humanistic atheists or agnostics, such as Darwin and Huxley.

In the 20th century conflicts between religion and science fostered by the deist proponents of the conflict thesis continued to grow and after the first World War a crusade against evolution was launched in the United States. This explicit conflict of religion against evolution forced atheists to align themselves more closely with a defense of science, solidifying the image of the atheistic scientist and science obsessed atheist we have today.

---

<sup>155</sup> Marx frequently critiqued the German scientific atheist Vogt.

This paper seeks to tell the story of that humanistic atheist tradition in order to reframe that current view of atheism. Having a better understanding of how atheists made their case and what they cared about for the majority of the history of avowed atheism also presents today's atheists with alternatives to the scientific atheism of New Atheism. Instead of the options either being a quiet casual atheism or an atheism focused on scientism and replacing religion with science, atheists can use their atheism as motivation for more general social activism, justifying their beliefs with metaphysics and moral philosophy. In a time of resurgent religious fundamentalism, atheists should have more options for how they organize themselves. It's possible that in the future atheists will reject the scientism that has come to define the largest atheist movement and adopt the approach of d'Holbach, Feuerbach, or Bradlaugh and make a case for their beliefs without needing to use a stiff notion of science as the arbiter of absolute truth.

## Bibliography

Aveling, E. B. "The religious views of Charles Darwin." London: Freethought Publishing Company. 1883. [http://darwin-online.org.uk/converted/Ancillary/1883\\_Aveling\\_A234.html](http://darwin-online.org.uk/converted/Ancillary/1883_Aveling_A234.html)

Baggett, Jerome P. "The Varieties of Nonreligious Experience." New York: New York University Press, 2019

Berman, David. "A History of Atheism in Britain." Routledge, 1988

Blount, Charles. "Anima Mundi" (London: Printed, and are to be sold by Will. Cademan ..., 1679.; Ann Arbor: Text Creation Partnership, 2011)  
<http://name.umdl.umich.edu/A28430.0001.001>

Bradlaugh, Charles. Besant, Annie. Bradlaugh, Alice. Moss, A. B. Cattell, C. C.,  
Standring, G. Aveling, Edward. "The Atheistic Platform: Twelve Lectures." London:  
Freethought Publishing Company. 1884

Bradlaugh, Charles. "A Few Words About the Devil, and other Biographical Sketches  
and Essays." New York: A. K. Butts & Co. 1874

Channel 4 News, "Richard Dawkins on scientific truth, outgrowing God and life beyond  
Earth" 2019, <https://www.youtube.com/watch?v=RKjiSu4zD5Y>

Darwin, Charles. "On the Origin of Species." New York: D. Appleton and Company,  
1859

ed. Darwin, Francis. "The Life and Letters of Charles Darwin" London: John Murray.  
1887

Davis, Edward B. "Science and Religious Fundamentalism in the 1920s: Religious  
Pamphlets by Leading Scientists of the Scopes Era Provide Insight into Public Debates about  
Science and Religion." *American Scientist* 93, no. 3 (2005): 253–60.

<http://www.jstor.org/stable/27858580>.

Dowd, D. F.. "Robert Owen." *Encyclopedia Britannica*, November 13, 2023.  
<https://www.britannica.com/biography/Robert-Owen>.

Dupree, A. Hunter "Christianity and the Scientific Community in the Age of Darwin" In  
*God & Nature: Historical Essays on the Encounter Between Christianity and Science*, Edited by  
David C. Lindberg and Ronald L. Numbers. Berkeley: University of California Press, 1986.

Faye, Hervé. "Sur l'origine du monde: théories cosmogoniques des anciens et des  
modernes." Paris: Gauthier-Villars, 1884

Gingerich, Owen. "God's Universe." Cambridge, Harvard University Press, 2006

Godwin, Benjamin. Lectures on the Atheistic Controversy: Delivered in the Months of February ... Hilliard, Gray, 1835. <http://archive.org/details/lecturesonathe00andrgoog>.

Gourgaud, Baron Gaspard. Trans. Latimer, Elizabeth Wormeley. "Talks of Napoleon at St. Helena with General Baron Gourgaud." Pickle Partners Publishing, 2017.

Gregory, Frederick. "The Impact of Darwinian Evolution on Protestant Theology" In God & Nature: Historical Essays on the Encounter Between Christianity and Science, Edited by David C. Lindberg and Ronald L. Numbers. Berkeley: University of California Press, 1986.

Gregory, Frederick. "Scientific versus Dialectical Materialism: A Clash of Ideologies in Nineteenth-Century German Radicalism." Isis 68, no. 2 (1977): 206–23. <http://www.jstor.org/stable/230071>.

Guillen, Michael. "Believing Is Seeing: A Physicist Explains How Science Shattered His Atheism and Revealed the Necessity of Faith." Tyndale House Publishers, 2021

Hahn, Roger. "Laplace and the Mechanistic Universe" In God & Nature: Historical Essays on the Encounter Between Christianity and Science, Edited by David C. Lindberg and Ronald L. Numbers. Berkeley: University of California Press, 1986.

Hipwell, V.B. "TAKING 'THINGS AS THEY ARE': THE BASIS OF LUDWIG FEUERBACH'S OBJECTION TO THE CHRISTIAN RELIGION." History of Political Thought 14, no. 3 (1993): 421–53. <http://www.jstor.org/stable/26214407>.

Ed. Hunter, Michael. Wootton, David "Atheism from the Reformation to the Enlightenment." Oxford, Clarendon Press, 1992

Ingersoll, Robert G. "The Works of Robert G. Ingersoll In Twelve Volumes. Volume I" New York: The Dresden Publishing Company, 1901.

Ingersoll, Robert G. "The Works of Robert G. Ingersoll In Twelve Volumes. Volume III"  
New York: The Dresden Publishing Company, 1915.

Kors, Alan Charles. "The Atheism of d'Holbach and Naigeon." In *Atheism from the Reformation to the Enlightenment*, edited by Michael Hunter and David Wootton, Oxford University Press, 1992. <https://doi.org/10.1093/acprof:oso/9780198227366.003.0011>.

LeDrew, Stephen. "The Evolution of Atheism: The Politics of a Modern Movement."  
Oxford: Oxford University Press, 2015.

Lobkowitz, N. "Karl Marx's Attitude toward Religion." *The Review of Politics* 26, no. 3 (1964): 319–52. <http://www.jstor.org/stable/1405231>.

Mannucci, Erica J. "Marie-Armande Gacon-Dufour: A Radical Intellectual at the Turn of the Nineteenth Century." in "Political Ideas of Enlightenment Women: Virtue and Citizenship" ed. Curtis-Wendlandt, Lisa. Gibbard, Paul. Green, Karen. Routledge: New York. 2016

Maréchal, Sylvain "The Dictionary of Ancient and Modern Atheists" trans. Abidor, Mitch. Marxists.org, 2005.

<https://www.marxists.org/history/france/revolution/marechal/1799/atheists.htm>

Masci, David "Scientists and Belief" Pew Research Center, 2009.

<https://www.pewresearch.org/religion/2009/11/05/scientists-and-belief/>

Ed. Matthew, H.C.G. Harrison, Brian "Oxford Dictionary of National Biography Volume 33." Oxford University Press: Oxford. 2004

McCaig, Amy "First worldwide survey of religion and science: No, not all scientists are atheists," Rice University Religion and Public Life Program, 2015.

<https://news.rice.edu/news/2015/first-worldwide-survey-religion-and-science-no-not-all-scientists-are-atheists>

McEvoy, J. G.. "Joseph Priestley." Encyclopedia Britannica, March 9, 2023.

<https://www.britannica.com/biography/Joseph-Priestley>.

McGowan, Dale. "Voices of Unbelief: Documents from Atheists and Agnostics." Oxford, England. Praeger, 2012

McLain, Sylvia. "It's a big, fat myth that all scientists are religion-hating atheists," The Guardian, 2013. <https://www.theguardian.com/science/occams-corner/2013/mar/04/myth-scientists-religion-hating-atheists>

Moore, James R. "Geologists and Interpreters of Genesis in the Nineteenth Century." In God & Nature: Historical Essays on the Encounter Between Christianity and Science, Edited by David C. Lindberg and Ronald L. Numbers. Berkeley: University of California Press, 1986.

Murphy, Tim. "THE CONCEPT 'ENTWICKLUNG' IN GERMAN RELIGIONSWISSENSCHAFT: BEFORE AND AFTER DARWIN." Method & Theory in the Study of Religion 11, no. 1 (1999): 8–23. <http://www.jstor.org/stable/23549683>.

Numbers, Ronald L. "The Creationists" In God & Nature: Historical Essays on the Encounter Between Christianity and Science, Edited by David C. Lindberg and Ronald L. Numbers. Berkeley: University of California Press, 1986.

Oliphant, W. L. Smith, Charles. "Oliphant-Smith Debate 1929." Nashville: Gospel Advocate Company, 1952

Palmer, Ada. "Humanist Lives of Classical Philosophers and the Idea of Renaissance Secularization: Virtue, Rhetoric, and the Orthodox Sources of Unbelief." Renaissance Quarterly 70, no. 3 (2017): 935–76. <https://www.jstor.org/stable/26560470>.

Roger, Jacques. "The Mechanistic Conception of Life" In *God & Nature: Historical Essays on the Encounter Between Christianity and Science*, Edited by David C. Lindberg and Ronald L. Numbers. Berkeley: University of California Press, 1986.

Russell, Bertrand. "Why I Am Not a Christian by Bertrand Russell - The Bertrand Russell Society." Accessed October 5, 2023. <https://users.drew.edu/~jlentz/whynot.html>.

Schofield, Robert E. *The Enlightened Joseph Priestley: A Study of His Life and Work from 1773 to 1804*. University Park: Pennsylvania State University Press, 2004. ISBN 0-271-02459-3.

Shermer, Michael & Sulloway, Frank (2000). *The Grand Old Man of Evolution: An Interview with Evolutionary Biologist Ernst Mayr*. *Skeptic*. 8. 76-82

Simmonds, Erin. "Battling 'The Other': Atheism's Dual Role in the Evolution Debates of the 1920s."

ed. Southwell, Charles. Holyoake, George J. "Oracle of Reason: Or, Philosophy Vindicated. Vol 1" London: Thomas Paterson, S, Holywell-Street Strand, 1842

Stenhouse, John. "Imperialism, Atheism, and Race: Charles Southwell, Old Corruption, and the Maori." *Journal of British Studies* 44, no. 4 (2005): 754–74.  
<https://doi.org/10.1086/431940>.

Thomas Huxley, "Agnosticism (1889)." Accessed October 5, 2023.  
<http://aleph0.clarku.edu/huxley/CE5/Agn.html>.

Turner, Matthew. "Answer to Dr. Priestley's Letters to a Philosophical Unbeliever," 1780. Project Gutenberg, 2004. <https://www.gutenberg.org/cache/epub/14120/pg14120-images.html>

White, Edward Arthur. *Science and Religion in American Thought; the Impact of Naturalism*. Stanford, Stanford University Press, 1952.

<http://archive.org/details/sciencereligioni0000whit>.

Wootton, David. "New Histories of Atheism" In *Atheism from the Reformation to the Enlightenment*, edited by Michael Hunter and David Wootton, Oxford University Press, 1992.

<https://doi.org/10.1093/acprof:oso/9780198227366.003.0011>