

Science, Religion, and the Rise of Biblical Criticism

with James C. Ungureanu, "Introduction to the Symposium on Science, Religion, and the Rise of Biblical Criticism"; Paul C. H. Lim, "Atheism, Atoms, and the Activity of God: Science and Religion in Early Boyle Lectures, 1692–1720"; Diego Lucci, "The Biblical Roots of Locke's Theory of Personal Identity"; Jon W. Thompson, "The Naturalization of Scriptural Reason in Seventeenth Century Epistemology"; James C. Ungureanu, "From Divine Oracles to the Higher Criticism"; Andrew D. White and the Warfare of Science with Theology in Christendom"; Nathan Bossoh, "Scientific Uniformity or 'Natural' Divine Action: Shifting the Boundaries of Law in the Nineteenth Century"; Stuart Mathieson, "The Victoria Institute, Biblical Criticism, and The Fundamentals"; and Samuel Loncar, "Science and Religion: An Origins Story."

SCIENTIFIC UNIFORMITY OR "NATURAL" DIVINE ACTION: SHIFTING THE BOUNDARIES OF LAW IN THE NINETEENTH CENTURY

by Nathan K. C. Bossoh 

Abstract. In October 1862, the Duke of Argyll published an article in the *Edinburgh Review* entitled "The Supernatural." In it, Argyll argued that contrary to the prevailing assumption, miracles were "natural" rather than "supernatural" acts of God. This reconceptualization was a response to the controversial publication *Essays and Reviews* (1860), which challenged orthodox Biblical doctrine. Argyll's characterization of a miracle was not novel; a number of early modern Newtonian thinkers had advanced the same argument for similar reasons. New in this nineteenth-century reconceptualization, however, were (1) the recent geological, physical, and evolutionary developments and (2) the introduction of German higher criticism. Argyll and the neo-Newtonians thus attempted to construct a philosophico-theological alternative, which would constitute a middle-position between the traditional acceptance and liberal rejection of miracles. I argue finally that 21st-century debates on divine action in fact exist as part of a longer historical tradition that dates back to Augustine.

Keywords: Duke of Argyll; evidentialists; German higher criticism; miracles; neo-Newtonians; New Reformation; Baden Powell; rationalists; supernatural; John Tyndall

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Christians throughout Western history have always shared an awareness that the world runs according to certain regularities, which are sustained by God. Yet, Christians have almost always accepted that God is able to act *beyond* these regularities for specific purposes. By the seventeenth century, the concept of “laws of nature” had instantiated these universal regularities, although “laws” continued to be understood as upheld by God. By the nineteenth century, however, these laws were increasingly seen as fixed and unbending such that not even God could act beyond their prescribed limits. Thus, a persistent question for theists and nontheists alike was: *what was the place of miracles within this law bound world?* By 1865, the liberal Protestant historian William E. H. Lecky had identified at least three different interpretations from within the intellectual theistic worldview. The “Christian evidences” (or evidentialist) school consisting of traditionalists who readily acknowledged miracles as possible. The liberal (or rationalist) intellectuals who, although Christian, were highly skeptical toward supernatural intervention. They argued that miracles in fact could not occur due to the uniformity of nature. Lecky identified a third position that sat somewhere between the evidentialists and rationalists, which I will refer to as “neo-Newtonians.” The neo-Newtonians accepted the validity of miracles but applied a novel explanation to support their stance. A fourth, nontheistic group, the scientific naturalists/agnostics, also existed and was largely in agreement with the liberal position that miracles could not and did not occur (Lecky 1865, 194–96).

In exploring the history of divine action, I aim to expand on the work of Matthew Stanley, who examined the ways in which Victorian naturalists and theists could successfully argue *for* the justification of uniformity in nature in opposition to each other (Stanley 2011; Stanley 2015). Stanley included Victorian views on miracles; however, due to its brevity, his article was not able to account for the many nuances, especially in relation to the theists, and widely varied stances on the veracity of miracles. I should state here that any historically in-depth study on miracles will quickly present a narrative problem. That is, any attempt at a grand narrative might be possible in theory, but difficult in practice simply because such a wide variety of views have endured throughout history. It is not, however, impossible to uncover certain patterns, and as such, I will suggest one that has occurred since the time of Augustine.

There has been some, although not much, work on the complicated and widespread debates surrounding miracles particularly in relation to nineteenth-century scientific developments alongside the influx of German critical approaches to the Bible within Europe and America. Robert Bruce Mullen’s focused study *Miracles & the Modern Religious Imagination* is one excellent example. Historians have recently devoted attention toward the scientific naturalists during the latter half of the nineteenth century. It is well known that the scientific naturalists quickly became

a powerful cultural force in Britain challenging what they saw as Anglican dogmatism and clerical authority. In their fight for recognition, one of their main targets was belief in miracles. Historians of science taking their cue from this approach have focused on how liberal/broad church members either agreed with the scientific naturalists, or how orthodox Christians disregarded them and opted instead to hold to the traditional position on miracles (Turner 1993; Barton 2018, 185–97). But between these polarized positions, a continuum of views always existed. Utilizing a microhistorical approach, this article documents one lesser-known school of thought that developed in response to the polarizing positions of the evidentialists and rationalists during the late nineteenth century.

Of course, any discussion on miracles usually invokes the ubiquitous presence of David Hume and his conception of a miracle as a violation of the laws of nature. Presupposing this definition, however, has often come at the expense of more in-depth examinations of how miracles might be accounted for. One recent example of Hume's implicit influence is with the Divine Action Project (DAP) that lasted from 1988 to 2003. Scholars contributing to this project—consisting of scientists, theologians, and philosophers—sought to develop a novel account of God's interaction in the world and with humans in relation to modern scientific knowledge. Almost all scholars on this project, however, unanimously agreed on a noninterventionist model of divine action in which God does not “Suspend, or ignore created structures of order and regularity within nature”—that is, God never breaks his own laws (Wildman 2004, 38). A number of scholars critical of the DAP have responded with updated models that take a sort of intellectual middle-ground approach in that they accept that God does not break the laws of nature, yet do not see this as a barrier to divine action. Jeffrey Koperski and Sarah Lane Ritchie have probably produced the most recent and detailed work in this area currently. Koperski offers an alternative to noninterventionism, which he calls the *neoclassical model*, while Ritchie provides three different alternatives, including Thomism, Panentheistic naturalism, and Pneumatological naturalism (Koperski 2019; Ritchie 2019). From a historical vantage point, however, these contemporary conceptions reveal something very peculiar. That is, the varying intellectual positions on divine action that have emerged today are in fact part of a longer historical tradition (or pattern) in the West that dates back to at least the fourth century. Consequently, my article has three aims. First, it will bridge the gap between the “Newtonians” of the late seventeenth century and the “neo-Newtonians” of the late nineteenth century. Second, through the intellectual work of the eighth Duke of Argyll (1823–1900), it will highlight the specific challenge faced by the neo-Newtonians, namely the rise of German higher criticism. And third, it will summarize the wider implications of this historical trend.

PROTESTANT MIRACLES AFTER THE REFORMATION?

The subject of miracles has, since the sixteenth century, occupied much Protestant thought. What constitutes a miracle? What is their purpose? Such questions were frequently asked by men and women of all theistic and nontheistic leanings. Protestant reformers of the sixteenth century attempted to delineate the role of miracles in opposition to Catholics who continued to accept them. The reformer John Calvin, for example, argued against Catholics that the New Testament was clear that the miraculous signs which followed the gospel message of the apostles “were wrought in confirmation” of the message. Therefore, since the gospel had been established through the wonders of the apostles and Early Church, what was the need for present day miracles anymore except to produce “wavering in minds otherwise well disposed”? (Calvin [1536] 2008, XXIV). The reformers argued that the age of miracles had effectively ceased; while they could accept Biblical and patristic miracles, they were certain that modern miracles did not take place. Despite disagreement on many points, this was settled as the Protestant theological view going forward. In practice, however, it was rather quickly questioned, and in many cases, altogether abandoned. Modern historians, such as Jane Shaw and Peter Harrison, have done much to reveal this trend. Shaw argues that, despite the popular narrative, miracle claims actually *increased* alongside the rise of the new experimental philosophy in Protestant Europe a century after the writings of the Reforming fathers, and so the aims of the Reformation were never truly fulfilled, especially in England. Shaw also argues that it is more accurate to say that Hume’s devastating critique arrived at the *end*, not the beginning, of the English philosophical debates on miracles. In effect, she argues that the Enlightenment debates on miracles were not derived purely from philosophical discussion; rather, they were a response to the “lived religious” experiences of all sorts of English men and women claiming to have seen and/or preformed miracles themselves (Shaw 2006, 144–45, 160). As we will see, German historical criticism and the developing sciences would constitute novel challenges to belief in miracles.

NEWTONIANS AND THE MIDDLE POSITION

Isaac Newton is often regarded as the emblem of science, reason, and rationality and so it is worth noting that Newton did far more work on theology than he ever did on science (Robertson 2015; Iliffe 2017, 23, 3). One area where we can see Newton engaging in both science and theology is on the subject of miracles. After the English Civil War and Commonwealth, the establishment of a new learned society—known as the Royal Society of London—followed swiftly. Members of the new Royal Society—pioneers of the experimental approach to natural philosophy

(mostly Anglicans with latitudinarian leanings)—tended to view contemporary miracles as possible, given enough reliable evidence. In their estimation, any confirmed miracle was God violating or superseding the laws of nature, but this was not problematic since God created those laws. Following Lecky's categorization, Royal Society members, such as Robert Boyle and Thomas Sprat, represented the evidentialist position. Soon, however, a number of contemporaries, such as Newton, Thomas Burnet, Samuel Clarke, and William Whiston, mostly liberal or unorthodox Anglicans, would begin to challenge this understanding. In anticipation of the logical difficulties that this view posed (brought to fruition by the deistic critiques on miracles that developed from the late seventeenth century onward in the writings of Matthew Tindal, Thomas Chubb, Thomas Woolston, and others), the Newtonians opted to redefine the meaning of a miracle. Peter Harrison points out that for the Newtonians, adopting an Augustinian framework, miracles had an epistemological rather than ontological status. This is to say that, for the Newtonians, miracles were not violations of the laws of nature because there was no well-defined "course of nature." Every occurrence was via the hand of God and so in some sense, "miraculous," even the law of gravity. On this view then, miracles were only miracles because of our subjective perception, that is, their unusualness *to us*. In reality, a "miracle" was simply an infinite God utilizing higher natural laws that finite humans could not grasp (Harrison 1995, 535).

It is intriguing, then, that two centuries later, these arguments would again be adopted, with some modifications, by Argyll and other nineteenth-century intellectuals (thus revealing the emerging historical pattern). These Victorians, I argue, were neo-Newtonians, because they took on the same Augustinian framework as the Newtonians for similar reasons. However, their intellectual context differed greatly from their early modern predecessors due in part to the widespread critical works of influential Enlightenment thinkers, such as Conyers, Middleton, and Hume. In addition, by the nineteenth century, advances in geology, physics, and biology would radically alter perceptions of the physical world. Finally, and most crucially, German higher criticism would also drastically change how the Bible itself was read. These novel factors, then, constituted difficult challenges not faced by the seventeenth and eighteenth-century Newtonians.

HIGHER CRITICISM: FROM GERMANY TO BRITAIN

The British novelist Mary A. Ward contended in an 1899 article entitled "The New Reformation" that the "Christianity which has shaken itself free of miracles, and allied itself with modern philosophy for the creation of a new dogma, has the support of 'German criticism.'" Ward was

responding to the orthodox commentator Lord Halifax, who had suggested that German criticism actually assisted in proving the traditional dating and authorship of the gospel accounts. Ward proceeded to demonstrate the rift that German criticism had caused between orthodox and liberal minded Christians, first in Germany since the eighteenth century and then in Britain in the following century. Finally, she shifted focus to her own assessment of three major doctrines in the New Testament showing how each was fraught with error and contradiction (Ward 1998). If there was any immediate obstacle to orthodox belief in Christ's divine nature and the place of miracles, Higher criticism was for many far more of a threat than the advances of modern science (Mathieson 2020). Indeed, by the mid-eighteenth century, German theologians had adopted highly critical approaches to the Bible. At Göttingen, Halle, Altdorf, and Tübingen, pioneering theologians—including Johann Eichhorn, Friedrich Schleiermacher, Johann Semler, and Johann P. Gabler—had begun to question the plain reading of scripture, asking why, if the Bible was put together by humans, should it not be read like any other ancient document? Although Biblical miracles were not as fundamental a concern for German critics as they had been in England, a by-product of this new method *was* the questioning of traditionally accepted miracle claims in scripture. Theologians and historians now felt they had the responsibility to try to understand the cultural context behind the miraculous reports. That is to say, the world *behind* the explicit words. In sum, during the late eighteenth century, German scholarly interest in the Biblical texts would provide the impetus for what came to be the modernization of Western theology. Miracles too would be modernized and this process ultimately equated to the dispossessing of their supernatural underpinnings (Frei 1794, 1–16).

In 1794, William Paley, the Anglican divine well known for his *Natural Theology* (1802), published *A view of the Evidences of Christianity*. On the first page of the first chapter, Paley stated his two main objectives. First, in line with the standard British evidentialists, he sought to establish that there was satisfactory evidence to support early Christian miracles. This, he said, could be known for certain by the willingness of those early witnesses to labor and suffer for their belief those miraculous events. Second, he sought to establish that in comparison to Christian miracle claims, there was insufficient evidence to reinforce all other religious miracle claims. Paley's second objective was a consequence of the Protestant reformation and its subsequent redefinition of the term "religio" (religion). It had now become mandatory to show why Biblical miracles could be trusted over and above the miraculous claims of other religions (Paley 1794, 17–18; Harrison 2015, 92–103). Books, such as *Evidences of Christianity* and later John Henry Newman's *An Essay on the Miracles Recorded in the Ecclesiastical History of the Early Ages* (1843), both stuck to the traditional English

evidentialist logic with not much concern for German criticism, although Newman was critical of Paley for not extending miracles beyond scripture to the Early Church (Newman 1843, cxxii, lxvi–lxvii). Yet, German critical works, such as David Strauss's *Life of Jesus* and Ludwig Feuerbach's *The Essence of Christianity* (translated into English by Mary Anne Evans in 1846 and 1854, respectively), continued to seep into British religious life. These works produced scathing criticisms of traditional Biblical miracles, instead offering their own naturalistic alternatives that rested on understanding the cultural context and mindset behind the Biblical authors' miraculous reports. Although, again, conclusions differed in the details, Strauss's *Life of Jesus*, which opted for a "mythical" interpretation of miracles (against Feuerbach's "feelings" interpretation), encapsulated the position that was widely held by German theologians, liberals, deists, and agnostics. Strauss summarized that whenever we find narratives of miracles, prophecies, divine apparitions, angels, and demons, "such an account is *in so far* to be considered not historical" because they are "irreconcilable with the known and universal laws which govern the course of events" (Strauss [1835] 1892, 88; Wheeler 2012).

Just two years after his book, Newman converted to Roman Catholicism, remaining a powerful intellectual force. Yet, the Anglican dissatisfaction that had slowly been growing among liberal theologians and other groups attempting to promote German criticism in Britain would climax with the publication of the massively controversial *Essays and Reviews* (1860). The seven authors were Frederick Temple (Rugby School), Rowland Williams (Cambridge University), Baden Powell, Henry Bristow Wilson, Mark Pattison, and Benjamin Jowett (all Oxford University). For Victorians, the true shock factor here was that six of the essayists were ordained Anglicans who had previously subscribed to the Thirty-Nine Articles—the last essayist being a Cambridge-educated layman. Following higher criticism, they argued for a revisionist understanding of the Bible in which the Bible was to be understood in the same light as any other historical document and that Biblical miracles were no longer credible. Moreover, orthodox beliefs and doctrines needed to be reinterpreted or completely nullified. Within two years, the book had sold 22,000 copies. Many High churchmen and evangelicals simply could not accept its conclusions; petitions amassing thousands of clerical signatures were circulated, and, following the efforts of powerful men like Bishop of Oxford, Samuel Wilberforce, the work was soon condemned as heretical (Ellis 1980, 124, 173–77).

In the "heretical" publication, each essayist took on a different topic, from the Mosaic cosmogony to the proper interpretation of scripture. The essayist who dealt directly with the question of miracles was Baden Powell (1796–1860), priest and professor of geometry at Oxford from 1827 until 1860. His chapter was titled "On the Study of the Evidences of

Christianity.” Troubled by the fact that German criticism had been ignored in Britain for so long, Powell set out to investigate the evidentialist approach. For many, however, this chapter was simply read as a direct assault on the British evidentialist school in favor of liberal theology mixed with Powell’s own romantic inclinations. There were two key points to Powell’s overall argument. First, he wanted to expose the evidentialist method of trying to prove the truth of scripture through miracles as fundamentally flawed. Second, he wanted to provide readers with what he thought was the correct way to embrace Christianity—by suggesting a distinction between internal and external methods of faith. Powell noted that the field of Christian evidences had occupied a “considerable space in the field of theological literature” especially in England, but that its use had declined in recent years. Indeed, Lecky made the same analysis in his own historical work on rationalism in 1865. Many theologians had produced evidentialist works, but for Powell, this approach was not central to Christian belief. Rather, it was an error in which—heightened by the work of Paley—theologians were attempting to claim knowledge about Christianity through the physical world (Powell 1860, 94). One of Powell’s key distinctions was between internal and external evidence “...when a reference is made to matters of *external fact*...it is obvious that reason and intellect alone can be the proper judges of the evidences of such facts. When, on the other hand, the question may be as to points of moral or religious doctrine, it is equally clear, other and higher grounds of judgement and conviction must be appealed to” (Powell 1860, 97). Powell, bringing to light his romantic commitments, declared that the use of external evidence (such as miracles) to try to prove Christianity was a category mistake. Christianity at its heart was a morally based religion and therefore ought to be judged on moral grounds (Powell 1860, 127). A number of problems haunted miraculous assertions. What were evidentialists to do, asked Powell, with the miraculous claims of other religions? Next, he argued that if evidentialists could stop treating the New Testament miracles as an “exceptional case” and instead apply historical critical methods, they would immediately realize how problematic the accounts were. In Powell’s eyes, both history and the inductive philosophy made clear that no events ever occurred outside the standard course of nature (Powell 1860, 104, 108). Furthermore, the more science uncovered, the less miraculous currently unexplainable phenomena would seem. In effect, science could explain everything seemingly supernatural given enough time and therefore, those who claimed the reality of supernatural miracles did so on the basis of a presuppositional bias toward miracles. “What is alleged is a case of the supernatural; but no testimony can reach to the supernatural; testimony can apply only to apparent sensible facts; testimony can only prove an extraordinary and perhaps inexplicable occurrence or phenomenon: that it is due to supernatural causes is entirely dependent on the previous beliefs

and assumptions of the parties” (Powell 1860, 107). But some thinkers could not accept this *nor* the classical evidentialist position, and among a number of Victorian intellectuals, the eighth Duke of Argyll would instead propose an alternative that sought middle ground between these two contending stances.

A PHILOSOPHICO-THEOLOGICAL COMPROMISE? ARGYLL’S NEO-NEWTONIAN APOLOGETIC

George Douglas Campbell was born into a Scottish aristocratic Whig family at Ardencaple Castle, Dunbartonshire. Educated at home, young Campbell had shown a keen interest first in science and then later in politics, and his mother strongly cultivated his Christian beliefs, rooted in Presbyterianism (Argyll 1906, 59–60). When his father died in 1847, Campbell succeeded him as the eighth Duke of Argyll. Simultaneously, Argyll was building his reputation as a promising Scottish figure primarily through two publications on the Disruption of the Church of Scotland in 1843, and in the early 1850s, Argyll began his almost lifelong service as a Liberal Cabinet minister under numerous prime ministers (Argyll 1842, 1849; Mulhern 2006, 243). Argyll also established a promising reputation as a geologist when in 1851 he published his discovery of fossilized leaves (later found to be of early Tertiary age) embedded in basalt lava from the Island of Mull in the *Quarterly Journal of the Geological Society* (Argyll 1851). He was subsequently elected a Fellow of the Royal Society, and in 1855 was elected president of the British Association for the Advancement of Science for its Glasgow meeting. Widely read in politics, science, theology, and philosophy, Argyll was deeply troubled by the widening theological divisions. From the 1850s onward, both liberal theologians and agnostics increasingly claimed that scientific and historical critical advances had made belief in divine intervention impossible. As Argyll saw it, these two groups were increasingly becoming a source of difficulty for Christians trying to square traditional belief in God’s immanent activity with modern philosophy. After the huge stir caused by *Essays and Reviews*, many undertook to respond. Argyll’s own response was published (anonymously although it soon became widely known) in October 1862 in the *Edinburgh Review*. His article, entitled “The Supernatural” argued that despite the claims of theologians, such as Powell, miracles were indeed possible (Argyll 1862). Like the Newtonians, Argyll’s position lay somewhere between the evidentialist and rationalist frameworks by claiming that, even if the uniformity of nature was accepted and the “supernatural” rejected, miracles, properly understood, were not a violation of the laws of nature.

During the process of specialization in the nineteenth century, expertise in a particular field served as a sort of warrant enabling one to assert the authority to “properly” examine a specific area. For Argyll, one of the primary

issues was confusion of language, and thus a philosophical approach was warranted. He suggested that because theologians had not properly taken the time to define what miracles were, they had fooled themselves into thinking that there was an inherent conflict between the laws of nature and a miracle. Argyll acknowledged that Hume's definition of a miracle had become the most common in theological discourse. However, other neo-Newtonians, such as his friend the Scottish philosopher James McCosh and the English theologian Henry Mansel, had wisely bypassed this Humean barrier. Argyll cited McCosh's own work on this area in his book *The Supernatural in Relation to The Natural* (1862). McCosh—who had joined the Scottish Free Church movement by 1843—provided two conditions for miraculous occurrences. First, they were wrought by a divine power for a divine purpose. Second, they were of such a nature that even with increasing scientific knowledge, no human could ever bring about these events. For Argyll then, a miracle was “superhuman” but not “supernatural.” This second condition was one of a number of crucial distinguishing factors between the neo-Newtonians and liberals (Argyll 1862, 384). While Powell argued that everything that seemed miraculous in the past and/or future could one day be explained through science, the neo-Newtonians objected. For them, there would always be things which seemed miraculous but which no amount of scientific knowledge could ever hope to decipher, such as the immediate healing of an ill person, witnessing a talking animal, or the resurrection of a dead person (McCosh 1862, 115–6). Merged with divine purpose, these two conditions provided the true criteria for a miracle (Argyll 1862, 384). This did not yet settle the argument over how miracles could be considered credible, but by redefining the purpose of a miracle, it was now possible to defend their continuation in the present.

How should “laws” be understood? What is included in “nature”? These questions were central to a proper understanding of miracles. Powell had explicitly claimed in his essay that the boundaries of nature stopped where our present knowledge stopped. Since our knowledge was always increasing, however, this boundary too would slowly increase (Powell 1860, 109). Argyll, by contrast, noted that (1) humans had no issue with events happening within the physical laws of nature, yet (2) objections were readily leveled as soon as “supernatural” explanations were introduced. Therefore, as he saw it, “The reign of law in nature” was not limited to human knowledge but instead “universal” (Argyll 1862, 380, 397). He continued

The law in obedience to which a wonderful thing happened may not be known; but this would not give it a supernatural character, so long as we assuredly believe that it did happen according to some law...[To] a man thoroughly possessed of the idea of natural law as universal, nothing ever could be admitted as supernatural; because on seeing any fact, however new, marvellous, or incomprehensible, he might escape into the conclusion that

it was the result of some natural law of which he had before been ignorant.
(Argyll 1862, 380)

A miracle then, just as Augustine and later the Newtonians had defined it, was simply an occurrence “contrary to human experience of the course of nature.” But in the end, “God, the Author and Creator of all natures, does nothing contrary to nature” (Augustine). The Dean of St Paul’s, Henry Mansel—whose theology was somewhat controversial—expressed the same view in his section “On Miracles” in *Aids to Faith* (1862), a book published in direct response to *Essays and Reviews*. In it, Mansel summarized that “A miracle is *not* ‘a violation of the laws of nature’...It is simply the introduction of a new agent, possessing new powers, and therefore not included under the rules generalized from a previous experience” (Mansel 1861, 16). Similarly, the presbyterian Church of Scotland minister John Tulloch had come to a similar conclusion in his own book *Beginning Life* (1862) when he stated that “...the idea of law is so far from being contravened by the Christian miracles, that it is taken up by them and made their very basis. [Miracles] are the expression of a higher Law working out its wise ends among the lower and ordinary sequences of life and history” (Tulloch 1863, 38). How was this conclusion arrived at? Utilizing the German critical method of understanding the context behind the authorial accounts, Argyll and Tulloch drew linguistic support from the Biblical notion of God’s involvement within the ancient world. They noted that in scripture, there was no clear distinction between the natural and the supernatural. Argyll appealed to readers to remember “...that the language of scripture nowhere draws, or seems even conscious of, the distinctions which modern philosophy draws so sharply between the ‘natural’ and ‘supernatural.’” Instead, “All the operations of nature are spoken of as operations of the divine mind” (Argyll 1862, 389). Within the Bible, the words that in modern times were likely to be translated as miracles were “signs” (*semeia*) “wonders” (*terata*), and “mighty works” (*dunameis*). The regularity of these three words throughout the Old and New Testament provided strong evidence that the Biblical authors envisaged God’s interaction within their world very differently from modern conceptions. This, then, was the basis of the neo-Newtonian position. Yet, in one sense, it was inherently paradoxical; on the one hand, there was the complete acceptance of the modern notion of uniformity in nature, but on the other hand, there was a complete rejection of the modern notion of uniformity in nature in favor of an ancient Judeo-Christian understanding of nature. This paradox is only apparent, however; the neo-Newtonians certainly agreed with uniformity, they simply disagreed with how intellectuals, such as Powell, had characterized it.

The neo-Newtonians could also employ scientific explanations beneficially. For example, when trying to understand how God created Adam

and Eve in Genesis, Argyll claimed that the “dust of the ground” in Genesis 2:7 that God used to make them could in fact have constituted some sort of Darwinian evolutionary process that was simply unknown to man. This could then be classified as a miracle, not because it went against the laws of nature but rather because of its origins in the divine mind (Argyll 1862, 388). A final and important redefinition that the neo-Newtonians stressed was the idea that natural laws were not static, but instead *elastic*. They argued that it was this elasticity of laws which enabled humans to interfere in what would otherwise be natural occurrences without destroying the chain of uniformity. For example, whenever anyone threw a rock in the air and stopped it from falling to the ground, they had interrupted the natural law of gravity yet not broken uniformity (Mansel 1861, 19–20). Working with this novel reconstruction of the definition of miracle, Argyll summed up the neo-Newtonian position by concluding that, “The truth is, that there is no such distinction between what we find in nature, and what we are called to believe in religion, as that which men pretend to draw between the natural and the supernatural. It is a distinction purely artificial, arbitrary, unreal” (Argyll 1862).

Argyll’s *Edinburgh Review* article had a mixed reception. Despite some negative reviews,¹ Argyll was undeterred and this article became the first chapter (with little modification) to his most widely circulated book, *The Reign of Law* (1867), which went into its fifth edition the following year. Certainly, the more positive depiction of Argyll’s position recognized by Lecky in his successful 1865 publication *History of the Rise and Influence of the Spirit of Rationalism in Europe* spurred Argyll to press on with his primary argument unaltered. In his chapter on the decline of miracles, Lecky noted that a new breed of evidentialists had risen who had a “tendency to meet the rationalists, as it were, halfway” (Lecky 1865, 194). Lecky referenced Argyll’s article stating that “For an exposition of this view I cannot do better than to refer to an article on ‘The Supernatural’ in the *Edinburgh Review* for October 1862, and to the works there noted” (Lecky 1865, 195). Argyll was exultant about this positive reference (Argyll 1868, 16). Aware of the range of other authors who had also elucidated this position, Lecky’s positive words were a considerable source of encouragement. However, the issue of miracles was not settled yet. By the early 1870s, the debate would shift from general miracles to the specific subject of prayer and Argyll’s newly developed neo-Newtonian argument would see him once again at the forefront of these theological contentions.

JOHN TYNDALL AND THE LAW OF CONSERVATION

In 1862, John Tyndall published a small book called *Mountaineering in 1861 A Vacation Tour*. Tyndall was born in Ireland to educated but poor parents who instilled in him a deep Protestant faith. Through much

dedication and work, eventually leading to a doctorate from Marburg in 1850, Tyndall, with the support of Michael Faraday, advanced to become Professor of Natural Philosophy at the Royal Institution. Following a crisis of faith early in life which led him to adopt a more romantic religious belief, Tyndall would become one of the most vocal scientific naturalists of the century. Aside from science, Tyndall was an avid mountaineer and his book described his trip to the Alps the year before. The fifth chapter of the book, however, had a slightly different theme discussing science, prayer, and miracles. In this chapter, Tyndall expressed his thoughts on the problem of prayer in light of science and in particular the conservation of energy. He began by reflecting on nature, noting that before the laws of nature were well understood, every natural event was ascribed to a personal agency: “the savage saw in the fall of a cataract the leap of a spirit, and the echoed thunder-peal was to him the hammer-clang of an exasperated god” (Tyndall 1862, 33). However, no longer did people tend to propitiate the powers of nature, and prayer to God to intercede in the natural world had declined. Rather than present a well-refined argument against prayer, Tyndall’s goal was simply to mark out a particular viewpoint, which was that in Protestant countries, the age of miracles was considered to have passed (Tyndall 1862, 34). If there was one thing that Tyndall wanted readers to take away, it was that the discovery of the conservation of energy had major implications for the possibility of all miracles. Because of this law, no new power in nature could come about without expending some other power. For Tyndall, this effectively meant that no deity could intervene in nature; even the smallest interference would break the law of conservation since an equivalent power would not have been effected. Turning to prayer, Tyndall claimed that no act of individual (or national devotion to) prayer could cause one “shower from heaven” or deflect toward man “a single beam of the sun” (Tyndall 1862, 39).

That the age of miracles had passed in the Western world was a common trope for many orthodox Protestants. Retaining the Calvinistic approach, however, the power of prayer remained unaltered. Prayer could still affect the course of the natural world, but not in the same way that miracles did. Instead, a prayer to change things in the physical world could be seen as an act of providence. The difference between a miracle and an act of providence was subtle but important (although often blurred). Both were supernatural but whereas a miracle might be immediate and easily equated with divinity, an act of providence was done *through* the course of nature in such a way that, to someone who did not believe, it might not appear unusual at all. To a believer, however, the hand of God could be discerned in the event. As an ardent critic of the power of prayer, Tyndall would capitalize on an opportunity to advance his unbelief years later on the 10th anniversary of Prince Albert’s death.

DOES PRAYER WORK? TYNDALL'S CHALLENGE AND ARGYLL'S RESPONSE

In her autobiography, Argyll's daughter, Lady Francis Balfour, recalled the morning habits of her father. He would come into the library five minutes before nine in the morning to find the section of scripture he intended to read at family prayers. Lateness was not an option as she recollected, "not to be late was one of the rules which we kept carefully, for a reproof for our absence was no light matter" (Balfour 1930, 14). Indeed, Argyll was a man who believed in the power of prayer as a petition which could enact not just spiritual change, but also physical. As we have seen above, the role of prayer and miracles had since the 1860s become a topic of discussion for many and in the 1870s, Tyndall would again raise these questions. Ten years after the publication of *Mountaineering*, another discussion, far more extensive and critical in nature, was proposed. In July 1872, Tyndall published a paper, "The Prayer for the Sick: Hints towards a Serious Attempt to estimate its value" in *London Contemporary Review*. Over the next few months, this publication would be the cause of yet another great religious controversy extending across the Atlantic. What would come to be called the "prayer-gauge debate," headed by Tyndall, would raise profound questions about the nature of prayer, acts of providence, and miracles in light of modern science and biblical criticism.

In 1871, the Prince of Wales, Albert Edward, contracted typhoid fever, the same disease that was believed at the time to have taken the life of his father. Wanting to avoid this potential tragedy, the Queen requested that the British clergy pray for his recovery. Mullen notes that "amazingly, the prince began to feel better—exactly on the tenth anniversary of the death of Prince Albert" and at the passing of this dreadful illness, a celebration of thanks was held at Westminster Abbey (Mullen 2003, 208–11). This was clearly an example of divine providence in action for many Victorians and this made it abundantly clear to Tyndall that action was needed to show once and for all that belief in divine intervention was fundamentally misplaced. In July 1872, Tyndall published an article in the *London Contemporary Review* calling for a scientific test to establish the reality or falsity of divine providence. In it, Tyndall took advantage of an anonymous letter (which in fact turned out to be from the surgeon Sir Henry Thompson) that suggested a possible scientific method of testing the effect of prayer

I ask that one single ward, or hospital...counting certain numbers of patients afflicted with those diseases which have been best studied, and of which the mortality-rates are best known...should be, during a period of no less, say, than three or five years, made the object of special prayer by the whole body of the faithful, and that, at the end of that time, the mortality-rates should be compared with the past rates, and also with that of other leading hospitals similarly well managed during the same period. (Tyndall 1872a, 18)

In October 1872, Tyndall published a second article in the *Contemporary Review* as an expansion on some of the arguments in his primary article. In an attempt to show how science had displaced the Bible throughout the ages, he briefly recapped the story of Galileo's "affair" with the Church before swiftly moving onto the new geological science which had displaced the traditional Mosaic account of a 6000-year-old creation. Tyndall finally ended on the most recent scientific upheaval in the form of Darwinian evolution. Darwin, Tyndall argued, had shown that once again, the Biblical account was in conflict with modern science (Tyndall 1872b, 109–10). Tyndall declared that

from the earliest times to the present, religion has been undergoing a process of purification, freeing itself slowly and painfully from the physical errors which the busy and uninformed intellect mingled with the aspiration of the soul, and which ignorance sought to perpetuate. Some of us think a final act of purification remains to be performed while others oppose this notion with the confidence and the warmth of ancient times. The bones of contention, at present, is *the physical value of prayer* [Tyndall's emphasis]. (Tyndall 1872b, 110–11)

In fact, this act of purification was part of a tradition stretching back to the Protestant Reformation. For scientific naturalists, such as Tyndall, Thomas H. Huxley (also from a poor background), and liberal theologians, such as Powell, their intentions were never to get rid of religion but rather to "purify" it from doctrinal assertions, dogmatic theology, and what was conceived as evidently false teaching about the physical world.² In this respect, far from wanting to rid the world of Protestantism, scientific naturalists alongside the liberal Protestants saw themselves as continuing in line with the Reformation tradition bringing about a "New Reformation" (Barton 2018, 440; Ungureanu 2019, 133–44). Tyndall's key point was that, just as previous parts of scripture had been subjected to scientific assessment and found wanting, prayer would be next. Although prayer seemed to be culturally useful as well as a tool for strengthening the heart during life's hardships, there was no justification for claiming that prayer had any physical effect until science could affirm or discredit it.

While more orthodox theologians were critical of Tyndall, liberal theologians were in agreement. Influenced by Tyndall and Huxley in his work, one such contributor to the prayer-gauge debate was the Scottish theologian and professor of Moral Philosophy at St Andrews University, William Knight. In an 1873 article entitled "The Function of Prayer in the Economy of the Universe," Knight offered his own views. His main argument centered on the claim that there were indeed two spheres in the universe, the physical and the spiritual. It was simply mistaken to think that acts within the spiritual sphere could affect the course of the physical sphere:

“...a spiritual antecedent will not produce a physical consequent. The exercise of the religious function of prayer cannot directly affect any material change.” Unlike the Baconian method of discovering God through the two books of nature and scripture, Knight, like Powell, felt that Christianity was not something to be proven, but rather experienced through an inner intuition. Furthermore, God did not act in the physical world because He was not a God that broke his own laws once established (Knight 1873, 225; Knight 1893, 53–55).

Although Tyndall’s challenge was the principle reason Argyll entered the debate, Argyll’s response was initially directed at Knight. Unimpressed with Knight’s exposition, he branded it “self-contradictory” and “confusing.” For Argyll, this distinction between the two spheres was a grave error, and Argyll’s title “The Two Spheres: Are They Two?” reflected his thoughts. This article, relatively short, was framed as a direct response to Knight’s article (Argyll 1873), reserving a fuller treatment of prayer for his 1896 book *The Philosophy of belief; or Law in Christian theology*. In his 1873 article, Knight had suggested that prayer was removed from the physical world altogether. To this, Argyll replied that, since human beings did not know what exactly was included in the “sphere of physical causation,” there was no way to know where this boundary lay. Furthermore, if there were well-defined “boundaries” between the physical and spiritual, they were inseparable such that it was impossible to tell where one ended and one began (Argyll 1873, 254–55). Argyll used the human being as an example; where Knight had suggested that a spiritual antecedent will not cause a physical consequence due to the known physical laws, Argyll countered by suggesting that humans contradicted this idea. If human beings have a moral and intellectual nature separate from mere physical nature, it was quite certain that these antecedents did produce physical consequents in the body. For example, by willing one’s own arm to move, one was able to physically move their arm, but left to nature’s own devices, one’s arm would remain stationary (Argyll 1873, 257). This then was the same with prayer; although God was a spiritual being, it was still possible for him to act providentially within the world to bring about physical change in response to a prayer request as long as the request was in line with His will. In *The Philosophy of Belief*, the same line of reasoning was taken up and defended. Argyll first articulated what had become a common view for theologians attempting to reconcile science and theology, such as Powell and Knight, which sought “an attempt to draw a fixed line of distinction between spiritual and physical effects” (Argyll 1896, 467). As he had done in “The Supernatural,” Argyll returned to the Biblical authors to support his position. He argued that none of the apostles drew any sharp distinction between the physical and spiritual. When John said, “Whatsoever we ask, we receive of Him, because we keep his commandments, and do those things that are pleasing in his sight,”

(1 John 3:22) this naturally encompassed spiritual and physical requests with no sharp divide (Argyll 1896, 473). Equally, when Jesus taught his disciples the Lord's prayer, some elements could almost certainly be seen as physical requests. Asking for God's will to be done "on earth as it is in heaven" would necessarily mean that both physical and spiritual change would need to occur at the hand of God (Argyll 1896, 469). Considering the writings of St. Paul, Argyll explained to his readers that

St. Paul urged men to be 'instant in prayer' and he did not pretend to draw any dividing line of definition between legitimate, and illegitimate petitions. Leaving that to the conscience of men, in so far as moral elements can determine it, he encouraged them 'in all things to make their request known to God.' He associated himself with the humblest of those whom he addressed in saying that 'we do not know what we should pray for as we ought to.' But he added, with absolute conviction, that the God with whom we have to do, is not only accessible to supplication, but desires it on the part of those who love, and seek, Him. (Argyll 1896, 489)

As with the discussion on miracles, Argyll was by no means alone. McCosh again took to the defense of prayer against Tyndall and the liberal theological contemporaries. McCosh raised an important philosophical point, arguing that Tyndall had mischaracterized prayer altogether. McCosh insisted that there were two ways of producing evidence, the scientific method and the Christian method, but the two were not the same. Tyndall's fundamental mistake was in claiming that prayer had to be tested scientifically. For McCosh, God was not a being who would conform to scientific rules, and crucially, prayer worked on the basis of faith rather than any arbitrary test. In scripture, for example, Jesus would not work a miracle where there was unbelief (Mark 6: 1–6 NIV) (McCosh 1872, 136–38). McCosh's final statement efficaciously summed up his stance "I believe that the time has come when the intelligent public must intimate pretty decisively that those who have excelled in physical experiments are not, *therefore*, fitted to discuss philosophical or religious questions. Persons who do not follow the appropriate method in physical science will not be rewarded by discoveries" (McCosh 1872, 144).

CONCLUSION

The second half of the nineteenth century saw a permanent change in Victorian ideas and beliefs about miracles on an intellectual level. From the 1860s onward, liberal theologians and agnostics increasingly claimed to possess theological authority, and with this came the reinterpretation or nullification of traditional Christian doctrines. As I have shown, these debates were highly complex, and the boundaries were often blurred. Theists could be found at various points on the continuum agreeing with and disagreeing with the agnostics and each other, while agnostics could

sympathize with many of the theists who subscribed to their criteria. The main aim of this article has been to explore how a small yet prominent network of intellectuals, such as Argyll, Tulloch, Mansel, and McCosh,³ responded to the problem of miracles through a philosophico-theological explication of divine action. The result was an updated, Augustinian-informed notion of a miracle as an act of God which was not contrary to nature, but simply contrary to our human experience of nature. By the mid-eighteenth century, Hume's publication alongside the onset of German higher criticism constituted a pivotal point in philosophical and rational discourse. And in the nineteenth century, major scientific discoveries in geology, physics, and evolution would provide yet more ammunition for liberals and agnostics in their fight against orthodoxy. Within this context, the neo-Newtonians had to construct an intellectually robust position that could account for all of these modern augmentations while somehow not themselves being counted as heterodox.

As I explored at the start of the article, scholarly discussions on divine action today in the West exist as part of a historical continuum pushing back to at least the patristic period. In each instance, the varying positions that have emerged have usually done so within a specific context. In the fourth century, Augustine was involved in a theological dispute against Faustus on the nature of life and death. In the late seventeenth century, the contention was the new experimental philosophy and the laws of nature. In the eighteenth and nineteenth centuries, German higher criticism and the differing understandings of laws of conservation shaped the intellectual background. And last, in contemporary culture, interpretations of quantum mechanics have informed much modern discourse. In each case—underpinned by a similar framework—the intellectual middle-position has served to demonstrate that a range of alternative views can and do exist, which move us beyond binary notions of God as breaking or indeed being limited by the laws of nature.

NOTES

1. For example, one immediate and less favorable review was published on the November 15, 1862 in the *Saturday Review* by Henry Parker—Darwin's cousin. After criticizing Argyll's paper, Parker stated that the argument was merely a rehashing of Mansel's chapter in *Aids to Faith*.

2. At the January 1876 meeting of the Metaphysical Society for example, Huxley presented a paper arguing against the possibility of Christ's resurrection, yet in the introduction, he reminded listeners that he still saw Jesus as the greatest moral teacher. For Huxley, the moral message of Christ was authentic, but the physical and doctrinal assertions were erroneous (Huxley 1876).

3. There are a few other notable names who fit the neo-Newtonian criteria. H.P. Liddon, Canon of St Paul's Cathedral whose lent lecture of 1870 was featured in the "Prayer-Gauge Debate" (Liddon 1872). The philosopher Shadworth Hodgson who presented a paper on miracles to the Metaphysical Society on March 14, 1867 (Hodgson 1876, 383). And Charles Babbage who was well known for his calculating machine (Babbage 1837, 95–96). Whereas Liddon and Babbage were professing Christian, however, Hodgson remained a scientific naturalist.

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