

Priest of Nature

the religious worlds of Isaac Newton
R. Iliffe (Princeton University Press, 2017)

1. A Rational Christian

He believed that the central Christian doctrine of the Trinity was a diabolical fraud, and that all of modern Christianity was tainted by its presence.

Newton did not arrive at these beliefs as a result of pursuing some dilettantish hobby; nor were they the result of studies he pursued at the end of his life. Instead, they lay at the heart of a massive research programme on prophecy and church history that he carried out early in his career. This was at least as strenuous, and, in his eyes, at least as rational as his work on physics and mathematics.

He hated idolatry, cruelty, and persecution in general, and since he believed that Roman Catholicism embodied all these aspects in their most virulent form, he reserved a particular revulsion for it.

At the core of Newtons religion was the idea that Christianity was a simple faith. To be a Christian one had to believe only that Christ was the Messiah prophesied in the Hebrew Bible or Old Testament, the Son of God who had died on the Cross and then been resurrected on the third day. A number of things flowed from this minimalist understanding of what was required for salvation. First, Newton believed that being a Christian was **not primarily concerned with holding allegedly correct doctrines, and that the main requirement of a godly life was to live according to the practical moral precepts of Christianity**. The Christian life was difficult, and it demanded continued vigilance and resistance against the temptations provided both by the outside world and the inner self. Second, although holding these basic opinions was sufficient to be a Christian, more mature, learned Christians like himself were obliged to study Scripture and to discuss more abstruse parts of doctrine with others.

They were intended for men like Newton of a full age, whose senses had been trained by experience to discern both good and evil. These generated complex but disputable questions, but they were not things about which Christians should fall out or try to excommunicate one another.

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Newtons extensive writings on the Trinitarian corruption of Christianity are among the **most daring works of any writer** in the early modern period, and they would merit careful study even if they had not been composed by the author of the Principia. As

Almost all of the writings discussed in this book have been published only in **the last fifteen**

years. To some extent this is due to the fact that they remain unfinished or unpolished, and to some extent it is due to their heterodox contents. It is also an indirect consequence of Newtons generally jaundiced attitude to publication.

12 Instead, they represent the concerted efforts of the greatest thinker of his age to engage with the biggest questions of his time, and they offer unique, and previously unknown insights into his character.

While it is not difficult for modern readers to accept that Newton was interested in religious issues, it is much harder to accept that the founder of Enlightenment rationality devoted so much time and effort to these topics. Theology, the most significant discipline in early modern intellectual culture, had long attracted the attention of its most talented thinkers and it retained this unrivalled position in Newtons time.

15 He devoted a large part of his private life to detecting the historical crimes of religious perverts and then prosecuting them for their misdemeanours.

16 Newtons belief that he had a special role to play both in identifying the true religion and restoring its pristine form lay at the heart of his faith. Like Newtons belief that he had a special role to play both in identifying the true religion and restoring its pristine form lay at the heart of his faith. Like He argued that the Ancients had been Newtonians, and he read his own doctrines into a number of classical sources, whose carefully veiled truths he believed he was uncovering. Newtons highly positive account of the role and capabilities of ancient priests demonstrates that he believed that natural philosophy was to a large extent a religious enterprise through which one could come to an understanding of the way God had created the world.

17 Although he held such priests in high regard, Newtons identity as a layman was essential to his role as a Christian academic.... Indeed, it was precisely this independent outlook that guided Newton away from orthodoxy.

18 Born on the auspicious day (25 December) that the whole Christian world celebrated for having brought a saviour to mankind, he was destined to introduce a freedom of thinking & to teach men not to give up their reason implicitly to any Hypothesis ; System ; howsoever dignified or established. Again, this pithy statement bundled together a number of Newtons most strongly held convictions, including his support for religious and intellectual freedom, and his dislike of hypotheses and systems.

22 This book is the first extended examination of Newtons early research on these subjects.

25 it is inconceivable that his mother did not visit him regularly, but either way, Newton was probably deprived of any domestic father figure until he left home to board with Clarke in Grantham in 1655.3

26 Newtons early life cannot be understood without a grasp of the major religious changes that took place in England between 1630 and 1660.

35 Even in 1727, when Stukeley obtained his information about these years of his life, Newtons practical accomplishments seven decades earlier were still fresh in the minds of those who had been his contemporaries. They recalled that he had been inordinately inventive,

procuring a whole shop of tools with the money his mother gave him. Among the products of his dexterous hands were a model windmill, many clocks, and an extraordinary sundial, many of which were based on drawings and descriptions found in John Bates Mysteries of Nature and Art (probably using the second edition of 1654). As Stukeley pointed out, the apothecarys shop provided sources for Newtons practical knowledge, though he was always drawn back to books.

36 Judging by these entries, and the anecdote about wanting to burn his mother and step-father, books and mechanical pursuits offered Newton release from an existence marked by frustration and resentment.

41 In any case, the sober, silent thinking lad was an independent and private youth, capable of losing himself in textual worlds and of walling himself off from the society in which he lived.

45 Once he became a serious scholar, the religious energy that underpinned this early display of piety would manifest itself in a strictly disciplined religious life and a devotion to study.

Scripture. Once he became obsessed with his studies, he continued to find it hard to maintain regular church attendance, and his notes and essays on theology and natural philosophy would constitute his particular style of worship.

2. A Spiritual Ant

46 Newton had lived the first two decades of his life in an environment that was beset by deep tensions between different religious and political groups.

56 The young Isaac Newton entered Trinity when the institution was in the throes of a profound religious crisis.

Religious duties formed the core of the daily regimen that had changed little since it had been laid down at the colleges foundation. The statutes of 1552 and 1560 demanded that Trinity students rise at 4: 30 a.m. and attend chapel at 5 having said their private prayers. After this, they had breakfast, during which Scripture was expounded, and from 6 a.m. they were to spend three hours reviewing what they had learned the previous day about logic, mathematics, Latin, and philosophy and preparing for the lectures that were to follow. At 9 a.m. students....

62 Compelling evidence indicates that Newtons life at Trinity was saturated with religious study.

64 More significantly, about 60 percent of the additional terms in his thirteenth chapter have religious connotations.... Pagan, Pope, Preist [sic], Papist, Protestant, Pharisee, Philistine, Puritan, Presbyter, Prebune, Patriarch, Pelagian, and Priscillianist. These words betray the overwhelmingly religious environment in which Newton grew up, although many of the terms have a more technical bearing that could only have come from his time at Trinity. They open an extraordinary window to the world of a youth immersed in Scripture, sermons, prayer, and books of practical divinity. 35

66 Indeed, students were not supposed to go into town at all, unless to Great St. Marys, the schools, or a bookseller.

Newton was not interested, as far as we can tell, in football, fishing, or riding. He did pay

the regular fee for use of the tennis courts, and one of the first things he purchased while at Cambridge was a chess board (for 2s. 6d.); the entry Chesse men. Diall possibly indicates that he was later proficient enough to be in possession of his own pieces.

68 Although the core curriculum concerned human learning, the rigorous, critical examination of Scripture was central to Newtons life at college.

69 This severe training, his excellent memory, and his evident religiosity combined to give Newton an exceptional knowledge of the Bible.

71 Newtons recollections of the great work of his student years effectively started with the pioneering mathematical and scientific researches that led to his annus mirabilis, and the earlier years of study stood condemned by his silence. Historians

72 In seeking to magnify Newtons independence and genius, his immediate intellectual environment at Trinity has been caricatured as being at best sterile, and at worst hostile to the new philosophy. It is true that the general curriculum relied on texts that were expositions of scholastic philosophy, but the college possessed the likes of Ray and Barrow (though the two hardly overlapped), and in the mid- to late 1650s, it had enjoyed the presence of Alexander Akehurst, John Nidd, Francis Willughby, and Walter Needham, who had expertise in medicine and chemistry.

as I show in the next chapter, a number of contemporaries testified to the broad use of Cartesian texts and principles at Cambridge.

Moreover, the institution provided a setting in which a substantial degree of independent research was possible, and once the standard curriculum had been successfully negotiated, students were able to devote the final year of study to subjects of their own choosing. In one area, however, the standard curriculum was ideal for enhancing the skills that Newton needed for his research.

81 As an undergraduate, and even earlier at Grantham, Newton must have spent a vast amount of time improving his skills in practical disputations. To

82 Historians who have portrayed the work of Vossius and others as utterly irrelevant to Newtons intellectual education miss the point concerning its significance for his intellectual life as a whole. Like most contemporary natural philosophers, Newton would frequently condemn disputation as irrelevant to demonstration in natural philosophy, but when he wrote on church history, and in particular, when he dealt with the chief corrupters of the faith, the forensic procedures of the law-court were vital. Sermons

In any case, there is no doubt that when he came to write church history, he used sophisticated approaches to evidence and argument that he had learned at school and university. His entire account of Christian past was a giant conspiracy theory, and he put on trial all of the most authoritative architects of modern Protestant and Catholic orthodoxy. In due course, as we shall see later in this book, all those tried in his private court would be found guilty.

3. Infinity and the Imagination

84 Right from the beginning, Newton was committed to various positions and doctrines that would be cornerstones of his later philosophy. These included the existence of atoms and of vacuous spaces, and the real infinitude of an absolute space, which was in turn bound up with his understanding of the nature of God. Virtually all the topics that would interest him later on, such as astronomy, optics, gravity, infinity, and the existence of the aether were

present in the Philosophical Questions programme.

Descartess Principia Philosophi (1644), which was an essential source for his early metaphysical and scientific thinking. The

85 Many of these enquiries resulted from his belief that humans were made in the image of God, a view that lay at the heart of his metaphysics. As a result of this, he was committed to the view that one could and should understand various aspects of the being and attributes of the divine through the study of human faculties. Specifically, he argued that the freely acting and effective human will was an undeniable fact of human existence and an adumbration of the voluntary, creative power of God.

86 Benjamin Pulleyn sent Newton to be examined by Barrow, who found that he knew depressingly little of Euclids Elements though he was by now a master of the contents of Ren Descartess Gometrie.

In particular, the sophisticated mechanical philosophy of Descartess Principia Philosophi seduced him, just as it did many other students at the time.

95 According to Newton, God existed as far as the vacuum extended, and being a spirit he was subtle enough to penetrate all matter and thus could not retard the motion of any material object. Newtons commitment to motion in vacuo and the claim that a plenum would
105 impede such motion would be the bedrock of his later physics.

With his metaphysics, a body could think and a mind could be extended. De Gravitatione demonstrates that Newton believed that the nature of the mind was one of the key objects of his researches. Mind itself was in nature, and any plausible metaphysics had to take account of it. It remained to propose and carry out the experiments that would clarify the nature of self-motion and thus provide an inlet into the workings of God. 34

120 The analogy between the human and the divine would remain at the heart of Newtons theological metaphysics. In the essay on God, space, and time that he penned in the early 1690s, the analogy between man and God played a key role. Was it not most agreeable to reason, he asked, that Gods creatures shared his attributes as far as possible as fruit the nature of the tree, and an image the likeness of a man, and by sharing tend towards perfection? Similarly, was it not reasonable to believe that God could be discerned in the more perfect creatures as in a mirror? Such a view also enabled humans to understand the
219 being and attributes of the divine.

Newton studied both Old and New Testament prophecies with an intensity that matched
240 the vigour with which he had initially engaged with mathematics and natural philosophy.

254 spirits. In May 1692 Newton told Locke that this language of casting out demons

As we have seen, during the ensuing correspondence over the true path of a falling object Newton informed Hooke that for many years past he had been attempting to bend himself from natural philosophy towards other studies, so much so that he had for a long time begrudged the amount of time spent on natural philosophy except when he did so as a diversion at idle hours. In addition to his chymical researches, his reference to his studies concerned his apocalyptic researches, which must have begun some time before his departure

388 for Woolsthorpe.

399 By these terms, Newtons and Lockes interactions constituted an ideal intellectual friendship.

Newton's use of his intellect, and the moral and religious values he attributed to it, were central to his life and work. Like the imagination and the will, the understanding had been forged in the image of God, and one had a duty to use it. Not only could one discern important truths about Scripture and Nature, but by using the intellect properly one could see exactly how attributes of the divine being were adumbrated in mere mortals. In the language of the Cartesian texts that he studied so early in his career, all of his work can be seen as the outcome of his own finite mind seeking to know the infinite and the divine. Contemporaries understood this, revering Newton and his achievement precisely because he had shown that mortals were capable of grasping the ordered structure of the divinely created cosmos. *The claims that the Principia had revealed the language and blueprint of the divine creation, and that (in Halley's famous words) no mortal could approach the gods more closely, should not be read as mere hyperbole.* If Newton's achievements said a great deal about the human intellect, so they said much about the mind of God. God had the capacity to calculate and effect all the infinite motions and their causes that constituted the universe from one moment to the next, but armed with the Principia, *humans created in the Image of God* had the equipment to do something similar. 1

400 Newton had high confidence in the extent of his understanding, and contemporaries were fascinated by it. The

401 Newton believed that the perfection of the understanding involved the relentless study of sacred texts and the rational examination of the cosmos. His preface

Convinced that he had been created in the Image of God, his scholarly life was in part an exercise in examining how he measured up to his maker. As such, it focussed both on perfecting himself and on understanding the works of God. Accordingly, he strove to make his life that of a godly man, avoiding the temptations of the imagination and its chief effects, idolatry, idleness, and lust. He condemned the imaginary products of human artifice and instead nurtured his understanding so that he could dedicate himself to studying the divine truths of Scripture and Nature. The relentless cultivation of his own intellect was the precondition for gaining a mature wisdom, along with a purified will that could make the correct choice between good and evil, and between true and false religion. It was also this heroic intellectual labour that produced the monumental works in theology, natural philosophy, and mathematics that survive today.