



# God's Philosophers: How the Medieval World Laid the Foundations of Modern Science

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**God's Philosophers: How the Medieval World Laid the Foundations of Modern Science** James Hannam Presents a narrative history that reveals the roots of modern science in the medieval world. This book debunks many of the myths about the Middle Ages, showing that medieval people did not think the earth is flat, nor did Columbus 'prove' that it is a sphere; the Inquisition burnt nobody for their science nor was Copernicus afraid of persecution.

## God's Philosophers: How the Medieval World Laid the Foundations of Modern Science Details

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## From Reader Review God's Philosophers: How the Medieval World Laid the Foundations of Modern Science for online ebook

### Jelena Milašinovi? says

This is one of the most fascinating history books that I've read! Somehow we leave primary and secondary school history education with the preconception that the Middle Ages were dark and filthy place and that it's people were some sort of backwater bumpkins. Unless you take the time and effort to read history, or to study it and become a medievalist it's likely you'll never break those preconceptions. This book does that in delightful 20-something chapters. The book is a joy to read; Mr. Hannaman writing is clear and concise and most importantly accessible to everyone. You don't have to be a student of history or a historian to understand what you're reading. God's Philosophers is certainly an eye opener and a must read book for everyone.

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### Judyta Szaci??o says

Being a medievalist, I skipped large parts of the book that did not contribute in any way to my knowledge, but I have still learnt new things. There was certainly nothing about the mean speed theorem in my medieval philosophy class.

For someone who is not a historian, this is an excellent book, even though not perfectly free from misguided assumptions (like the complete uselessness of medieval medicine), or out-dated information (the use of stirrups had spread across Europe much earlier than the Author claimed) – but these are minor drawbacks. The book is very readable. To a non-professional reader, it offers a fresh look at the Middle Ages as a period of social development and progress in human knowledge. In this respect, it is also a very useful book, disproving much of the widespread prejudice about those times.

The Author may seem overly keen to defend the Catholic Church against the accusations for the curbing of the free thought, but he is also right in pointing out that, first, there were/are taboos in every period of history and every cultural milieu, and second, it was the Catholic Church that created the conditions for the philosophers to become scientists, and it was the people of the Church themselves who took the natural philosophy to the level of scientific research.

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### Rachel says

Hannam makes the argument that the development in philosophical thinking and study of the natural world in the middle ages is the cornerstone on which science was built during the later “scientific revolution” and that the role of the Catholic Church and medieval philosophy in the development of science is undervalued today. Hannam is a fantastic writer, in that he provides an engrossing history of the middle ages—especially providing interesting biosketches of the important philosophers of the time. Therefore, I recommend this book to popular readers of medieval history, history of science, or church history. However, Hannam’s book is not thorough enough to be considered a good academic history. He tends to provide the most interesting stories, ignoring the fact that some of his stories are controversial. Hannam also has a slightly defensive tone about the role of the Catholic Church during the middle ages. To most popular readers, I think the shortcomings of this book can be ignored, since it is a smooth and interesting read.

## David Shane says

This book is called "The Genesis of Science: How the Christian Middle Ages Launched the Scientific Revolution", and that title is quite descriptive. I think when I picked it up, I was thinking something more like "how Christianity launched the Scientific Revolution", but the book is really a history of science in the "dark ages" (which were in fact not so dark), and the role that the Church played with nascent science at that time is best described, as the author puts it, as a "creative tension". In addition to the well-known metaphysical assistance provided by faith (God made the universe orderly), certain Church decrees helped things along (for example a ruling that no one could say that there was something God could not do gave people freedom to speculate), and of course the Church also funded much of the work. On the other side, you have well-known events like the house arrest of Galileo that hardly helped things along.

I especially enjoyed learning about how astrology and alchemy actually helped scientific progress along - for example, how can you predict how the positions of the stars and planets will affect an event (astrology) if you cannot predict the positions of the stars and planets (astronomy)? Thus astrologers were astronomers best customers and a source of money. Also interesting to see that... the science we remember people like Galileo for was already "in the air", pieces having been proposed by names (most especially John Buridan) history has largely forgotten. (Newton said he stood on the shoulders of giants - how many can you name?)

I did think the author sometimes tried too hard to defend some of the wrongs of the Catholic Church - but all in all quite balanced. A valuable history of the middle ages and early science.

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## Kate Sherrod says

Full review is < [Here](#).

In brief, there is some fascinating information in this book, and the bibliography points to years of more in-depth reading for the type so disposed (I am that type). Hannam has uncovered a myriad of nuggets of knowledge gleaned from thousands of pages of dreary and torturous scholasticism (the practice of laboriously reasoning one's way to artificially reconciling Aristotle et al with Christian doctrine and scripture) that prefigure the scientific discoveries of the Renaissance and beyond. Copernicus and Kepler and Galileo weren't the first to establish earth's actual position in the heavens, just to prove it so exhaustively, etc.

This would all be fine, but there is kind of an ugly undertone to this book, at least as I took it. I felt hectored by the author to be grateful to the Catholic Church for forcing all that scholasticism to take the place of honest inquiry, even before I got to the passage where Hannam declares that the humanists who sought to recover and amplify the nearly-lost writings of antiquity were "incurable reactionaries" who wanted to return to an imaginary past. Because they didn't spend their lives paging through all those arguments about God and Aristotle to sift out the odd germ of actual knowledge they were bad guys?

Again, it's not a bad book and a lot of the information in it is illuminating and stimulated my curiosity about some nearly-forgotten figures in medieval learning, but I still found its tone a rather rough row to hoe.

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## David says

Mr. Hannam is a Christian apologist, but, having said that, this is a fascinating history of the evolution of science from the Medieval world of Europe and through Early Modern Europe.

It meant for those that have not read widely in Medieval European history and those that have not thought critically about the traditional reading of science history and the Medieval Catholic Church. In many ways it will be an eye-opening experience for the average reader.

The style is accessible but intelligent.

If there is one criticism, it is the book is less analytical than I had hoped. Still, an excellent and import reading of science history in the West.

4 out of 5 stars

Recommended for those interested in Science and its history.

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## Noah Goats says

The middle ages have always seemed like a wasteland as far as scientific discovery is concerned, and after reading this book it still kind of does. Nevertheless, God's Philosophers sheds some much needed light on the efforts of discovery in this time period and corrects many of the prejudices against it. Enlightening and interesting.

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## Heather says

I really, really enjoyed this book. The fact that it took me so long is not the relevant factor; the fact that I finished it is.

We think of the time between 476 and 1492, give or take a decade, as "not much happened besides the Crusades." Nothing could be further from the truth. This documents how the discipline of natural philosophy--the study of the natural world--became our three main branches of science. Biology, the study of medicine and the body, chemistry and its embarrassing grandfather of alchemy, astronomy's comparable relationship with astrology, even physics.

The myth that the world was thought to be flat is refuted, the history of our modern university and the Church's role in research--that very basic premise that God created an orderly, knowable world and to study it is to cultivate a relationship with its Creator--is defended.

Hannam's dry sense of humor is evident as well. Read for yourself and enjoy.

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## Andrew says

I've recently finished this book and would like to post my thoughts. I was able to breeze through the book in a relatively short time because I am fascinated with the Middle Ages and the history of science. Hannam is

certainly providing a valuable service by offering a counterweight to the irrational denigration of the Middle Ages in popular culture. Certainly, the propagandists throughout history who have distorted the Middle Ages as a time of darkness are being exposed by objective modern historians. The author does a nice job of showing how Renaissance, Reformation, and Enlightenment thinkers contributed to the many misconceptions about the Middle Ages. The progress during this period will be more and more appreciated in the coming decades.

I took extensive notes while reading the book learned quite a bit of entertaining and useful information. However, the book was not quite as good as it could have been. One of the main faults I have with the book is that I don't think the author proved his thesis very well. According to the subtitle, the Middle Ages launched the Scientific Revolution. While there were endless contributions made by natural philosophers during the Middle Ages, it was a slow and imperfect path to modern science. I also thought the author could have included more information about medieval universities and their role in the development in modern science.

I would, however, recommend this book to anyone interested in the subject matter. It is a popular treatment of the material covered by authors such as Edward Grant and David C. Lindberg.

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## Johnnie says

Nothing is simple, particularly history where facts are sometimes ignored or re-adjusted to fit an ideological narrative. According to popular opinion the Middle Ages were the Dark Ages, a time of stagnation and persecution, witch-hunts and the belief that the world was flat as a pizza. Progress only came in the Renaissance period when free-thought somehow came into being after Columbus sailed the ocean blue to prove the world was round and Galileo discovered the earth revolved around the sun only to get trampled by the Catholic Church who has been keeping mankind back. The thesis of this book is that this narrative is categorically false and sets out to prove it.

This book is part of a long line of media, including the book *'Lies my Teacher Told Me'* and *Terry Jones' Medieval Lives*, that shows that much of what we think about this particular era is just plain wrong. Certainly it was not the utopia of Arthurian Romances but it was hardly a dystopia either. Terry Jones (the Monty Python member and historian) has been very vocally critical of the way the Renaissance is depicted as time of great scientific discovery. *'Genesis of Science'* (or *God's Philosophers*, as its known in UK-territory countries) attempts to prove that during the Middle Ages science was not constricted by Biblical dogma but surpassed not that of the ancient Greeks. And when constriction came the dogma was mostly because of scientific dogma\*, not religious (though the book acknowledge that religious persecution of scientists happen on occasion but was not as widespread as usually believed and it very seldom ended in the accused being burnt at the stake). From Boethius to Nicolas of Cusa, Dunn Scotus to Jean Buridan to William of Ockham there are chains of thought that link with Copernicus, Kepler and Galileo. Some of these scientists acknowledged these sources while some plagiarized them completely.

\* To explain, a lot of people in Medieval and Renaissance times believed that the pre-Christian pagan philosophers were mostly infallible, particularly Aristotle, and to questions these philosophers were like attacking the foundations of western civilization itself. Also, they believed the Romans and ancient Greeks were more advanced scientifically and so all Medieval achievement were wrong or suspect. Part of the reason our view of the Middle Ages as being "dark" is because of this view.

Hannam's style is very straightforward and very seldom launches into hyperbole and never feels exaggerated. It also focused and generally chronological, making it easy to follow particularly when he returns to subjects briefly discussed earlier in the book. That said, this is an extremely broad subject and I would have liked to know more about certain subjects than the book has room for.

At the beginning of this review I said that 'facts are sometimes ignored or re-adjusted to fit an ideological narrative' and there are times when you can be mistaken info thinking that Hannam has lapsed into this trap himself. Though he tries to focus on the positive side of the medievalist thought and tries to put a lot of their views in perspective his optimistic approach means that he can sound like he's downplaying or excusing the bad things. He is not and a careful reading will see that he condemns the actions of the Catholic Church and the Inquisitions several times through the book.

Overall, as a summary for a complex time and even more complicated thoughts this book is a good launch pad for learning about an era that is generally misrepresented.

For a far more in-depth review try Tim O'Neill's review of the book . O'Neill is an atheist whose pet peeve is the conflict thesis between science and religion. Check out his excellent blog at <http://armariummagnus.blogspot.co.za/>

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## **Courtney Johnston says**

Hannam's argument is that medieval science - 'natural philosophy' - and its practitioners have been sadly, even criminally overlooked, and his book seeks to bring to the readers attention the developments in scientific understanding over the Middle Ages, and the men who made them (yep, all men, all the time).

As Hannam points out, 'medieval' as a word has connotations of backwards, benighted, superstitious. To generalise, we tend to think (if we think at all about such things) that no science of any real merit was done in Europe/Britain between the Roman Empire and the Reformation and that the church suffocated and punished any innovations in science that threatened its power.

The stories Hannam tells temper this. He describes the lives and works of men across the continent - most of whom were either members of universities (established in the Middle Ages) or the Church - who took God and Aristotle as their two authorities, who must be reconciled with each other, and the natural world they observed.

The thing I most enjoyed about the book was the way Hannam teased out the way people - intellectuals - thought. C.S. Lewis makes similar points, writing about medieval allegory - thinking was almost on two levels. There was what could be observed or shown, and then there were the abstractions that these observations had to be fitted into.

For example: Paracelsus (Theophrastus Bombatus von Hohenheim, 1493-1541) attacked conventional medicine, still based (as it went on to be) on Galen's concept of the four humours.

In Paracelsus' mixture of Christianity, mysticism and alchemy, all material was made up of three base elements: salt, sulphur and mercury. Paracelsus added salt to the traditional alchemical pairing of sulphur and mercury to bring his theory into harmony with the Holy Trinity.

I think my overall lesson from the book - driven home by the endless attempts of philosophers and astrologers to construct an understanding of the solar system that matched their observations with their

readings of the Bible and, more importantly, their firm belief that God could only make things that were beautiful, simple and balanced - is that when you're trying to understand how something works, you need to very carefully put aside your assumptions of how it *should* work.

I'm partway into Marcus Chown's 'We need to talk about Kelvin' at the moment, and one of his observations on Rutherford drove this home. Subatomic particles - even just atoms - fly in the face of every belief medieval philosophers held about how a god-created world should behave. Writing about the famous gold foil experiment, Chown notes

"Seeing an alpha particle ricochet backwards would be like firing a bullet into a cloud of gnats and seeing it bounce back the way it had come. But the mark of geniuses - and Rutherford was the greatest experimental physicist of the twentieth century - is that they are always open to the unexpected, never allowing their theoretical prejudice to limit what nature might reveal to them."

Medieval science was really philosophy. It was reasoning from first principles, taken from the approved source material (even chunks of Aristotle were banned at times because they couldn't be made to jibe with theology). Experimentation would have to wait. As C.P. Snow writes of Rutherford:

"His ideas were simple, rugged, material; he kept them so. He thought of atoms as though they were tennis balls. He discovered particles smaller than atoms, and discovered how they moved or bounced. Sometimes the particles bounced the wrong way. Then he inspected the facts and made a new but always simple picture. In that way, he moved, as certainly as a sleepwalker, from unstable radioactive atoms to the discovery of the nucleus and the structure of the atom."

Hannam's books is a generally enjoyable read - it'll certainly tip any preconceptions you have about the Church in this period upside down, and introduce you to a totally different mindset. However, I did wish he wouldn't remind me quite so frequently of the wrongs he was setting right - a bit too much tell, slightly spoiling an otherwise very good show.

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## Abigail says

very readable. i only wish i had it in hard copy so i could throw it at people's heads when they say "dark ages" (hissssss).

probably my favorite bit was "One noted theologian and astrologer, Richard Holcote (d. 1349), had used his art to confidently predict a peaceful death for himself. Maybe, lying in his pallet as the Black Death ravaged his body, he wondered where his calculations had gone wrong." cold as ICE.

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## Rick says

I liked this book. I'm no expert on the Middle Ages, and I'm afraid I held several stereotypical misconceptions of the period that Hannam artfully demolishes in this very interesting (if you're interested in this sort of thing) read. For example, most educated people in the Middle Ages did not believe the world was flat, and Columbus' sailors did not fear sailing off the edge of the world; the church was not opposed to the advancement of scientific knowledge, as is evidenced by the fact that most natural philosophers (their

version of modern scientists) were also trained theologians, and many of them were cardinals in the church; and no one really argued about how many angels could dance on the head of a pin. I have an enriched understanding of this era of history and appreciation for the foundations that were laid during this time that was anything but intellectually "Dark."

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## Daniel says

God's Philosophers is a well written introduction to medieval natural philosophy. Throughout, Hannam argues that 'science' did not emerge from nowhere with Copernicus or Galileo. Rather, there is a long history of medieval natural philosophy that predates the so-called scientific-revolution and made it possible.

Being something of a fan of medieval philosophy myself, I can't help but endorse Hannam's thesis, not only because I agree with it, but also because it's right (haha).

Something interesting Hannam points out: far from advancing natural philosophy, the humanists of the fifteenth and sixteenth century probably held it back a bit. By valuing the ancients over and above the scholastics, the humanists took Aristotle and Plato to be more authoritative than Oresme and Buridan. As a result, natural philosophers, in a certain sense, had to redo what thinkers of the previous two centuries had already done. They had to show once again that Aristotle and Plato were not final authorities on all 'scientific' matters. This is, of course, an oversimplification, but I've never heard this argument before.

In all, I'd recommend this book to anyone who takes science or the history of science seriously. It certainly puts the lie to the (obviously false) thesis that science only became possible with the demise of religion.

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## English says

It seems that I sometimes have and controversial and nonconformist taste in history books. I don't generally like tabloid style, sensationalistic controversy for its own sake, especially if this is based on dubious assumptions or modern judgement- but sometimes controversy might spark my interest. One thing that attracted me to this book was the extreme polarization of opinion- the way that historians and interested laypeople seemed to love it, but many with secular humanists hated it. As a student of medieval history I have long known that the notion of all Medieval Europeans being backwards and stupid was a fallacy, so I was inclined to side with the author, and bought the book shortly after it first came out.

After nearly two years I finally got around to reading and finishing it. On the one hand God's Philosophers is an accessible and necessary work. Necessary because it challenges popular views and misconceptions which still exist to this day, especially where the history of science and philosophy are concerned. Hannam demonstrates that it was in the Universities of Medieval Europe that natural philosophers, theologians and intellectuals made important discoveries and theorized, analyzed, and strove about the world around them in many subjects from astronomy to mathematics, physics to rationality. More importantly, especially to Hannam's line of argument is that most of these important thinkers were churchmen.

The most common misconception that the author seeks to correct is that the church sought to suppress learning and rational inquiry. It may be based perhaps on a modern, humanistic understanding of reason which holds itself to be the antithesis of faith, and therefore incompatible. However, those who read anything of the scholastic thinkers of the 11th century onwards will realize that their definition of reason was different. It was not the enemy of faith, for they were men of faith, but rather a gift from God to help men. A

creation based belief system told them the universe was ordered and adhered to certain laws, and so men could understand and interpret the creation and the world around them.

Of course there was conflict, especially when some scholars sought to use philosophy to challenge Orthodoxy or formulate beliefs deemed heretical. The paranoid heresy hunting church hounding innocent scientist is however not truthful or accurate picture of the time- a time in which a English blacksmith's son by the name of Richard of Wallingford would in his closing years create one of the world's first mechanical clocks, in Italy the first spectacles appeared, as well as many other inventions and innovations in agriculture, architecture and many other areas. So much for the supposed 'intellectual stagnation' of Medieval Europe which did not end until 'the Renaissance'- in fact there was more than one Renaissance.

On the other side of the coin, there are some drawbacks to this work. Hannam is to my knowledge, a scientist first and foremost, not a historian. Hence he does seem to apply the preconceptions and attitudes of modern science and 'progress' to his work sometimes, and they do not always sit well. His view of medieval medicine is rather scathing, for instance, but does not seem entirely justified. At least, a medical historian at my University would not agree with his generalisation that all medicine of the time was useless and more likely to do harm than heal. To the contrary, there is some evidence that herbal remedies of past may have been effective.

Conversely, whilst having little good to say about medical practitioners and quacks, credit is given to some astrologers, alchemists and even occultists in spite of the dubious basis of their beliefs- even by the standards of the time. Also, I felt there was some bias against Creationism and Protestantism on the part of the author, which came through in the work, so the accusations of a Pro-Catholic slant may not be entirely unfounded.

Altogether, a useful and necessary work, though with some deficiencies, and perhaps suffering from one or two misconceptions itself.

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