Philosopher who would be Scientist: René Descartes and the Discourse on Method

Essay Prepared for
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René Descartes: Philosopher who would be Scientist

In the seventeenth-century scientists began to question the Aristotelian view of the world, which posited that the basis of knowledge rested simply on its ancient wisdom. Descartes, Newton, Gilbert, Harvey, Kepler, and Galilei actively questioned the way in which man viewed the world and his position in it. The ideas that they advanced challenged those held by the church.

René Descartes is recognized as one of the fathers of this scientific revolution that swept Western Europe in the seventeenth century. In 1637, he published the *Discourse on the Method for Guiding One’s Reason and Searching for Truth in the Sciences*. This work is the first time in which he clearly and fully defined his scientific method. In the *Discourse*, Descartes presented his four cardinal rules for approaching scientific inquiry and the fragment that I received delineated these. This essay will present a context for the *Discourse* by examining the life of Descartes within the influences of the world in which he lived, a discussion of the work in the broader context of the time and finally a look at the legacy of the Cartesian method, which the *Discourse* introduced.

In 1596, René Descartes was born into a bourgeois family of privilege in the west of France. Although his mother died the year following his birth, Descartes’ father provided handsome financial provision for his upbringing. His father did not play an active role in his life, save generous financial support and the singularly important choice of the respected Collège de La Flèche for young René’s schooling. Free from relying on employment to sustain his lifestyle, Descartes was left unhindered in his pursuit of philosophical inquires.

The Collège de La Flèche chosen for René was the finest available. Jesuit educators in France were recognized as the most enlightened of their time. While their methodology and curriculum were largely traditional, dwelling on Aristotle and Aquinas for their scientific discussions, they were also most aware of the latest philosophies and theories. From 1607 until 1615, the instructors at Collège de La Flèche instructed Descartes in a programme of fables and histories, languages and literature, philosophy, logic, mathematics and physics. He developed an immediate passion for mathematics and physics. The absolute certainty of these disciplines had an appeal for him and he already questioned whether the same principles could be applied to

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philosophy itself. While he spent the next two years studying in Poitiers and graduated with a degree in law, Descartes felt a need to both “achieve glory” as well as experience all that life can offer and became a gentleman soldier. Descartes started to collect evidence about existence through experiencing life first hand. Already though, Descartes began “to accept as certain nothing of which the least doubt was possible”. Despite his questions, his faith in the church was not challenged. Soldiering however was not Descartes’ lifelong ambition and after two years, he continued his wandering.

Descartes was a young man on a quest, and the financial means to carry it out. In 1619, we learn from the Discourse on Method that he had a vivid dream, which provided the basis for his pursuit of the ‘scientific method’. He had been struggling with his skepticism in trying to find the certainty in philosophy that he saw in mathematics. “The young Descartes is wholly undecided as to the nature of his genius.” Through the medium of his dream, he suddenly realized that the reasoned way in which he approached mathematics could be applied to all knowledge. He felt that he could break down all things that are the subject of human knowledge and by avoiding assuming things to be true, which have not been proven so, this knowledge could be reconstructed on a solid reasoned basis.

During the next six years, he traveled throughout Europe making acquaintances that will form his main web of social contact for the rest of his life. Primary amongst these are a re-acquaintance with a friend from school, Friar Marin Mersenne, who will become his conduit to the scientific world and Isaac Beeckman, a Dutchman, with whom he will discuss, correspond and form many of his theories. In 1628, he made a decision to settle in Holland to isolate himself from the world. While it may appear that Descartes sought a society which would be more open to radical thought, and free from the restrictions of the Catholic Church, both Gassendi and Mersenne spoke and published freely in Paris and were not being censured for their thought. In fact, Descartes became a target for the Calvinists in the Netherlands, who criticized “…his metaphysical system and ‘papism’.” The seclusion that he sought in Holland was summed up in

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3 Vrooman, René Descartes, p.33.
4 Rodis-Lewis, “Descartes life and development of his philosophy” p.25.
6 René Descartes, Discourse on Method, I.
8 René Descartes, Discourse on Method, II.
9 Vrooman, René Descartes, p.81.
his motto from Ovid: “To live happily, we must live in seclusion.” He sought to ponder existence through correspondence, as opposed to interaction directly with his peers.

For most of Descartes’ life, France is in a state of religious civil war. The counter-reformation has pitted Catholic against Protestant for religious as well as political power. René Descartes is not a heretical rebel. His ties to the Roman Catholic Church were insoluble and his desire to provide this new scientific method for instruction in Jesuit schools was a lifelong goal. While he challenged the teaching received from the Jesuits, he was determined to seek their acceptance.

Marin Mersenne is Descartes’ link to the outside world. Mersenne helped create a group of scientists, which developed into the Académie Royale des Sciences by 1666. As the nexus of a wide group of philosophers and scientists, Mersenne exchanged thoughts, ideas, and concepts amongst his contacts. Mersenne provided for Descartes selective isolation from the outside world and functioned as his literary agent and confidant.

Descartes had not formally published any of his thoughts before the Discourse. While he had spoken to groups of people in largely informal surroundings, The Discourse represented his first attempt to influence others through his writing.

The method itself was stated concisely in the Discourse. Simply expressed, the Cartesian method is:

1. If there is any doubt about something, do not accept it as true. Instead, approach the truth of it by employing the following rules;
2. Bear in mind your own biases when making the judgment of the first part, and do not be hasty in reaching a conclusion about something;
3. Express the subject of your interest as a problem and break it down into the smallest possible components that you possibly can;
4. Start with the simple components and ensure that you have a grasp of knowledge of them. Gradually assemble them into the more complex objects working towards assembling the whole;
5. Do not miss anything. Make sure you consider everything from all possible angles and as fully as you possibly can.

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12 Pennington, Seventeenth Century Europe, p.140.
14 Pennington, Seventeenth Century Europe, p.144.
15 My paraphrase of the method as stated René Descartes, Discourse on Method, II.
The method itself was revolutionary, not because it promised flawless execution and the answer to everything, as much as it introduced the aspect of doubt, as a key practice, into the scientific community. The method and treatise provided by Descartes stated that you should doubt all that you are not entirely sure of. This threatened the church’s contention that simple faith and ancient authority constituted truth. Descartes did not feel that his method challenged the teachings of the church and section four of the Discourse used the methodology to prove the existence of God and the soul.

The first edition of Discourse on Method was published in 1637 in Holland. It was composed by Descartes in French and he specifically charged that it be published in French as well. At this time, works of philosophy or science were published in Latin. They were intended for use by learned peers of the author. Descartes was anxious for his work to be read and applied to everyday life by as wide a possible audience as possible and that by publishing it in French it would be accessible to women and to men who had not had the benefit of an education. In fact, the publishing of the Discourse in French is recognized as a milestone that validated the future publishing of scientific treatise in native languages, rather than Latin. This contributed to the broadening of availability of knowledge to a much wider population. As a result, Descartes was widely recognized in his own lifetime as a philosopher and scientist.

Descartes intended to publish the Discourse anonymously. He instructed Marin Mersenne in Paris to seek privilege – today’s copyright laws, which would protect the work as his. Descartes claimed that his decision to publish anonymously was to maintain his seclusion, not to mask himself for fear of being held liable. However, in letters between himself and Mersenne, he expresses great concern about the churches anger and censure of Galileo’s Sistemi del Mondo. Ultimately, Descartes sought to avoid having his name connected with the work to know what people thought of it, not of him. His seeking of privilege, for the Discourse on Method, however, immediately connected the work with his name in France.

The choice was made to publish the Discourse in Holland where the publishing industry was not as closely monitored as in France or as subject to state and church approval. Although Descartes claims that he was concerned only that his writing was too illegible to trust to a

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17 Vrooman, René Descartes, p.93.
18 Ree, Descartes, p.17.
20 Vrooman, René Descartes, p.94.
publisher as far away as Paris, his knowledge of and fear of the rebuke that Galilei suffered, was evinced in his correspondence.

The Discourse was published to stimulate scientific discussion through the essays on his findings in Optics, Meteorology, and Geometry. Before the publishing of the book itself, Descartes referred to the method as ‘discours qui sert de Preface’. The method was the vehicle that he used to reach his findings, but the findings were the real content that he was making available. Ironically, it is the method that is his lasting legacy.

While Descartes was passionately convinced that his thoughts were right, he also believed in the process of dialogue. He felt that through dialogue he could bring greater clarity to his work. He instructed readers of the Discourse to correspond with him through Marin Mersenne. He planned to reply to the objections received and then include the eventual arguments in subsequent editions of the Discourse. This enterprise was not successful. Mersenne received a number of objections to the work. None of the objections and replies proved fruitful. The sole objection he pursued vigorously was with the Jesuit Father Bourdin as Descartes hoped the Jesuits would adopt his method for instruction. Bourdin was not easily convinced and only agreed to accept the general nature of the method because of Descartes’ appeal to his immediate superior Father Dinet. As a result, none of the dialogues was ever published along with any edition of the Discourse.

Blaise Pascal challenged Descartes’ works almost immediately. While Descartes and Pascal had met twice before Descartes death, their parting was in discord. Pascal was quite adamant that Descartes’ methodology, removing as it did faith from the scientific equation, reduced the world to one of generalization through methodological mathematics. Pascal felt that intuition, not meditation guided human actions and he thus dismissed Descartes approach.

The church also opposed the writings of Descartes. While they avoided actually condemning the man, they did place the works on the Index of banned works.

22 Vrooman, René Descartes, p.86.
23 Roth, Descartes’ Discourse on Method, p.22.
24 Rodis-Lewis, Descartes: His Life and Thought, vii.
25 Roth, Descartes’ Discourse on Method, p.28.
26 Rodis-Lewis, Descartes: His Life and Thought, pp.114-118.
27 Roth, Descartes’ Discourse on Method, p.133.
Eventually, as Leon Roth states, “the Discourse…came into its own with the discredit of the Essays: the stone rejected of science became the corner-stone of philosophy.”

The Discourse on Method is the purest expression of Cartesian methodology presented. At his death, there was a growing outcry against his rationalist approach. “In 1663, Descartes’ work were put on the Index, because they were thought to be contrary to the principles of the Catholic religion, and in 1671, in spite of the fashion for Cartesianism amongst the ladies of the French court, Louis XIV issued an edict forbidding the teaching of Cartesian physics.” Despite this fact, “in the seventeenth century, Descartes was widely thought of as the creator of the new scientific outlook, or the ‘new philosophy’. By the end of the century ‘Cartesianism’ was nearly synonymous with ‘science’.” By the advent of the eighteenth century, “the philosophes of the eighteenth century saw Descartes as the great pioneer of the enlightenment.”

The Essays, in Descartes eyes, along with the Meditations and Principles were the fruit of his labours. He saw himself as a great scientist with concrete applications to the scientific world. For the fifty years following publishing of the Discourse, “Newtonian physics were normally treated as little more than a commentary on Cartesianism.” In time, Newton’s work replaced Descartes’ as the products of the scientific revolution. Descartes contribution to the development of science was the rupture he provided with past scientific theories and his creation of a new scientific method.

Motivated by a desire to find reasoned answers to the world around him, Descartes was a man determined to revise thinking on the nature of truth. To do this he pioneered a new interrogative process that he presented in the Discourse on Method. He made his thoughts widely available to many people through harnessing the emerging power of the printing press and composing them in the common vernacular. He sought to change the world by influencing the evolution of the teaching that he received into one which he felt was a true pursuit of knowledge. He never sought to challenge authority. He did seek to challenge ways of thought and in this, he was a rebel. The church perceived the far-reaching implications of his work and was perhaps his truest judge. Time has born out Descartes contribution as the father of modern philosophy despite the fact that he saw himself first as a scientist. However, lest we finish on such a strongly

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28 Roth, Descartes’ Discourse on Method, p.139.
29 Ree, Descartes, p.152.
30 Ibid., p.151.
31 Ibid., p.153.
32 Ibid., p.154.
reasoned basis where all the pieces seem to fit in place, we should bear in mind the words of Descartes himself, who admonishes those who will attempt to understand his life and thoughts:

“I beg posterity never to believe anything attributed to me unless I have said it myself. I am not the least bit surprised by the outlandish ideas attributed to all the ancient philosophers whose writings have come down to us; but since they were amongst the best minds of their time, I do not believe that their ideas can really have been all that absurd, but only that they have been misrepresented.”

René Descartes’ *Discourse on Method* forever altered the way in which mankind has attempted to find its identity within the natural world. The contribution of the Cartesian method, first delineated in *Discourse on Method*, has stood the test of time. This method remains the foundation for today’s continued pursuit of knowledge.

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33 René Descartes, *Discourse on Method*, VI, as translated from the French in Ree, *Descartes*, p.154.
Research Journal

When starting my research, I was disappointed to have received a fragment from Discourse on Method by René Descartes. Descartes was a name that I immediately linked with his work on geometrical principles. Although there was a resonance in his statement that “I think, therefore I am”, I was concerned that I was pursuing a dry, boring mathematician.

Admittedly this opinion was not changed on first reading the two pages from the Discourse on Method. I was however intrigued by the tone of the article. The use of the first-person narrative certainly suggested that this was more approachable than I would expect to find in writing from the seventeenth century. The fragment did not tell me much about the man. It did indicate that he was thinking on a higher plane about deeply philosophical thoughts.

Before beginning my research I compiled a list of simple questions that I felt I would like to explore to contextualize this work. I have attached these as Appendix A.

Concurrently, I found an approachable translation of Discourse on Method. I chose Desmond M. Clarke’s 1999 translation from the original French edition of 1637, which also relied upon the 1644 Latin and the first English edition of 1649 as well. This translation also contained a number of additional writings that I felt might be useful.

To begin with, the Discourse was printed without reference to sections or chapters of any kind. Descartes himself however in preface to his work invites the reader to divide it up however is most appropriate to his use. Practice over time seems to have emerged to divide the Discourse into sections of which this translation makes note. Following this methodology, the fragment provided fell in Part II.

As I read the translation of the Discourse, I quickly came to appreciate that Descartes attributes much to commonsense. Descartes tone in the Discourse is very familiar. His translators have indicated that this is the original tone. What I most sensed from the writing was that there was some confusion in the world that Descartes was trying to resolve. I did not take much away from my first reading.

To begin to provide a context for René Descartes’ writings, I first sought to get a feeling for the man and his times. To accomplish this, I found a number of overview works. These works, I hoped, would give me a clearer picture of Descartes the individual.
The first source I consulted was the Catholic Encyclopedia\(^{34}\). I chose this for two reasons. I expected to find bibliographical details about Descartes here and I have found it often quite thorough in its presentation. Secondly and more importantly, knowing the bias of the Encyclopedia I felt I might also get some indication of the attitude of the modern church towards a man I knew was proposing radical thoughts for his time. This proved fruitful and gave me a good chronological narrative of the life of Descartes. I was able to gain an understanding of his principal works as well as the key events in his life. I did not get as good appreciation of any attitudinal context. I did however collect a chronological record of Descartes’ life and works.

The information that I had collected provided no information as to the motivations, the formative experiences or even of the times in which Descartes lived and into which his works were received. My next step was to understand the environment that surrounded Descartes. I first consulted a chronological record of events in France in the 100 years before and after Descartes lived.

I then sought a better picture of the European scene and consulted the overview work: Seventeenth Century Europe\(^{35}\). Serendipity pleasantly intervened when consulting this work. It was most forthcoming in providing a good overview of the times. More importantly, the author builds a bulk of his presentation around René Descartes as representative of the seventeenth century man. I was able to collect some useful summary information regarding Descartes’ contribution to the achievements of the times.

I then proceeded to skim read the bibliographies that I had collected about Descartes. I found the ones by Geneviève Rodis-Lewis\(^{36}\) and Jack Vrooman\(^{37}\) most useful. The additional sections of books with bibliographic details from The Cambridge Companion to Descartes\(^{38}\) and Descartes by Jonathan Ree\(^{39}\) were also useful. Throughout my examination of these works, I collected appropriate pieces of information that I footnoted immediately. I work directly into the electronic medium. I find it more flexible.

As I traced the events, the chronologies and most specifically how these applied to Descartes, I consulted my list of questions to determine how well I was answering the questions

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\(^{39}\) Jonathan Ree, Descartes. (London: Allen Lane, 1974).
originally proposed. While I was making good headway in putting together the framework, new questions began to emerge about the man and why he seemed to make particular life decisions.

Descartes’ military service seemed problematic. Having cast him as a staunch Roman Catholic and Frenchman, it seemed peculiar that he chose to serve in the armies of the Calvinist Prince of Orange. I consulted the biographical sources I had for Descartes. While one, Geneviève Rodis-Lewis admits to finding his military career somewhat curious, none offered any immediate solution. I turned then to a few histories of the Thirty Years War for clues. During the short time that Descartes was actively involved in arms, 1618-19, the Protestant armies were allied to France’s interests, which opposed the powerful Hapsburg Catholic hegemony. Therefore, the great mystery is not so mysterious after all. More important was simply to reflect that the connections made by Descartes at this time would shape the rest of his career.

Education was another ripe area that I felt was worth exploring. I felt that given Descartes emerging zeal to reform education, I must ask, what was his experience with schooling. I had originally accepted rather too easily that he simply attended the Jesuit College at La Flèche. The question I had to ask was: what did he learn there, if anything, that caused him to so question the nature of scholasticism? I was able to find some good background on the education offered by the Jesuits at this time. This information was in the overview work that I was consulting as well as the biographies of Descartes by Rodis-Lewis and Vrooman.

The identity and significance of Marin Mersenne was the next avenue to be explored. He was clearly and important correspondent of Descartes, but who was he? In the broader overview work on the seventeenth century, I was fortunate enough to discover Mersenne’s pivotal role in a time before scientific societies. More careful study of the biographies I had previously skimmed revealed additional information about Mersenne. I was able to identify him as attending La Flèche while Descartes was there.

Finally, from a biographical perspective, I was curious as to why Descartes made this decision to accept Queen Christina’s invitation and travel to Stockholm after years of refusal. In this quest, I ultimately found some character revealing answers. To find answers I explored works that described the nature of the Queen’s court at this time. I was able to discover that Queen Christina did invite and attract a wide range of philosophers and scientists to her court and this led me to accept that perhaps after years of isolation and correspondence with peers, Descartes finally thought that life in a fertile intellectual environment might be intriguing. Then I consulted Vrooman. He goes to great length in explaining the nature of the relationship between Christina and Descartes. He draws his information from the collected letters of Pierre Chanut. Looking at
the letters between Chanut and Descartes, who writes both letters he intends for passing on to Christina as well as ones that are meant to instruct Chanut personally in how to present certain pieces of information, a more rich relationship is described.

Having established a solid basis for painting a picture of the times in which Descartes lived, I now turned to the work itself. I found the Discourse more approachable than I expected for the times as I have mentioned previously. I was also interested in quickly perusing some of Descartes other works.

Language is a key factor in this entire study. I can only read French very slowly. While I read the *Discourse on Method* in translation, there were also a number of seminal works that were available only in French. This was especially true when I sought to find some critical essays specific to the *Discourse*. It would have been useful with more time to spend more time with these works.

Leon Roth’s *Descartes’ Discourse on Method* was particularly useful. Through discussion of the *Discourse* itself, I gained a greater appreciation for critical reception that was afforded the work at the time. I found that in this phase, the collection of references was particularly useful and I categorized these along a broad range of themes.

At this point, I was ready to write a first draft of my findings.

I thank Paulette for raising a number of additional questions that she felt were unanswered in my work and encouraged me to dig further to get a better picture of the man and his times. To accomplish this I returned to my now familiar set of reference sources. These changes were incorporated into subsequent drafts of the work.

The greatest struggle I experienced was in presenting my information in a concise and compact manner. I was forced to read and re-read the essay striking entire paragraphs and simply establishing the priority value of one thought over another.

Through the investigation of the four cardinal rules of Descartes’ *Discourse on Method*, I have grown in my appreciation of the far-reaching consequences of this work. A man, who I had casually dismissed as a dry mathematician with some contribution to geometry, has grown in dimension. I have come to see him as a perplexing complex figure that sought to revolutionize a variety of disciplines and ultimately provided the break with ancient beliefs that fostered the scientific revolution.

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Appendix A
Questions that I sought to Answer after Reading the Fragment Provided

What did he write?
What was happening in France at this time?
What is happening in the world?
Who was Descartes’ audience for this work?
Why did he write this?
What compelled Descartes to write this?
When did he write this?
Whom was he writing against?
Out of what translation, comes my fragment?
What language was it translated from?
Was this the original work done by Descartes or another translation itself?
Who did this translation?
What sources did they draw upon and how much change do they invoke to better capture the essence of Descartes writing?
What was he reading?
What was the accepted version of what Descartes was writing about?
Who immediately was critical of the work?
Has it stood the test of time?
What faults were found with it?
Did Descartes accept his own work on the discourses later on in his life?
What did his critics say about this work?
Bibliography


