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Faust in Context: A Comparitive Examination of the Fates of Marlowe's and Goethe's Faust Characters

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Faust in Context: Introduction

Late in the sixteenth century, Christopher Marlowe wrote a play entitled *The Tragical History of Doctor Faustus.* In it, Doctor Faustus sells his soul to the devil in exchange for twenty-four years of power to satisfy every whim, including carnal pleasures, but also including the satisfaction of his burning curiosity to learn everything locked in "Nature's treasury" (Marlow 1.1.75). At the conclusion of the twenty-four years, Doctor Faustus is indeed doomed. He is gruesomely dismembered and sent to hell. Almost two hundred years later, Johann Wolfgang von Goethe wrote his own version of the Faust tale as a play entitled *Faust, A Tragedy, Parts One and Two.* Goethe's version of the tale is based upon the same legend as Marlowe's, with different details but basically the same premise: a pact with a devil in which the devil will eventually take possession of Faust's soul for eternity, in exchange for magical services performed by the devil during Faust's lifetime that enable Faust to learn the secrets of nature. But the outcome for Goethe's Faust is much different that of Marlowe's Doctor Faustus. Not only does Faust attain salvation, he is celebrated as a hero in heaven. The question that naturally arises is this: Why is Marlowe's Doctor Faustus inescapably damned, while Goethe's Faust attains salvation?

A simple answer is that times had changed; Marlowe's Doctor Faustus was simply a victim of the religious fervor of the Reformation: he had to die for the sins of consorting with devils, over-reaching his position in the social hierarchy, and the pursuit of knowledge. But curiosity and the pursuit of knowledge were no longer considered morally suspect during Goethe's historical period. Indeed, another eighteenth century author, Gotthold Ephraim Lessing, apparently intended to write his own play featuring the Faust tale. Notes were found after his death indicating that in his version of the story,

Faust would not be damned because of his desire for knowledge: "The Catholic theologians had permitted sorcerers to be saved by repentance, but the spirit of the Reformation demanded that Faust forfeit his soul, and from this inevitable doom there is no appeal. The age of Enlightenment, on the other hand, looked upon intellect as supreme, and it was obviously absurd that Faust's attempt to solve the intellectual problem should lead to the loss of his soul" (Rose 52). This is a reasonable explanation certainly, and it is certainly an important part of the answer, but a closer look at the lives of the authors and the state of science, religion, and magic during their respective time frames reveals that the motivations for the differing fates of the two Faust characters are actually more complex than they appear at first glance.

Marlowe could have chosen to find some way out of the snare for his Doctor Faustus; the elements he borrowed from medieval morality plays suggest that this might have been his intent (Engle 208). Indeed, later stage versions of the tale, written well after Marlowe's death, feature a Doctor Faustus who was saved so that he could reflect upon the error of his ways and go on to have further adventures (*The Wonderful and Surprising Life*). But Marlowe's primary goal in writing *The Tragical History of Doctor Faustus* was to entertain the audience with the familiar ending to a favorite tale to ensure the play's popularity and thus ensure his much-needed income (Riggs 199), so that makes frustrating those expectations unlikely. Moreover, the tale of Doctor Faustus offered the added benefit of allowing Marlowe a chance to show off his university education in the use of science, allusions to classical authors, and even magic in the text of the play (Riggs chapter 11). In addition to these motivations, however, the circumstances of Marlowe's own life demonstrate that he was using his Doctor Faustus story as a vehicle for making

veiled criticisms of education, religion, and science in Elizabethan England and to express his own feeling of entrapment in a system built to keep him in his place in the social order (Honan 202). Marlowe's Doctor Faustus was trapped in an inescapable web of Calvinism and social immobility, which were reinforced by the denigration of curiosity and the pursuit of knowledge, just as Marlowe himself felt he was trapped. Doctor Faustus's damnation was the inevitable result.

Goethe, on the other hand, was in no way obligated to employ the ending Lessing had pioneered. If it would have suited his story-telling purposes, Goethe could have condemned his Faust character to hell as well. But Goethe's motivations for writing the play over the sixty-year span that he took to write it were complex and grew even more complex as the decades progressed. The original motivation to write a play about the Faust character was likely nationalism; simply to reclaim this German legend for German people (Smeed 28). A further inspiration for the innovations that Goethe brought to the play early in its writing was to include the tale of Gretchen, the young woman executed for infanticide at the end of *Part One,* which was based upon an incident with which he was very familiar as a young lawyer in his native Frankfurt (Safranski 93). An additional motivation for writing this play was to use poetry to showcase Goethe's own scientific philosophy in such varied areas as evolution, geology, and meteorology, particularly in *Part Two* (Smith 196). Finally, his motivation for writing this play in the way that he wrote it was to demonstrate an alternative method to the data-driven, mathematics dependent, wholly objective experimental methods that dominated science by the last quarter of the eighteenth century (Smeed 20-1). Goethe believed that the dogma of Christian religion that had discouraged curiosity and scientific discovery in the past had

simply been replaced by the dogma of hyper-rational science (Jackson 678). Goethe's Faust attained salvation because he rejected rational, objective, empirical science and instead learned about science in an intimately engaged, holistic way, always striving towards the truth by remaining ever active and engaged with the world.

Both authors believed that each of their Faust characters had noble, heroic qualities, however imperfect each character proved to be, and were among the first authors to do so (Heller 70). This is the main trait that each Faust character has in common. But the historical context of each of the authors' lives coupled with their personal circumstances were the controlling factors that determined the fate of each of their Faust characters, regardless of the fate of the Faust character in the original Faust legend. Marlowe's Doctor Faustus had to be damned to hell not only to satisfy the expectations of a public already familiar with this popular tale, but in response to his own feelings of entrapment in an intertwined social, religious, and political order that discouraged curiosity, scientific innovation, and social mobility in order to maintain itself. Goethe's Faust was saved because he engaged with the world in order to learn through direct experiences in which Faust was intimately involved, and rejected mathematics-dependent empiricism as the ultimate source of scientific knowledge.

An examination of key elements of the original Faust legend as well as selected biographical information about the lives of the two authors will demonstrate the impact their historical contexts and personal circumstances had on each of their Faust characters. A comparison of the manner in which each play handled particular common story elements will further illuminate the differences in their contexts, despite the similarity of their tales. In order to understand impact of the monumental change in worldview that

occurred between the two authors' lifetimes, the shift in attitude towards curiosity and knowledge in Europe will be discussed, followed by a discussion of the impact that change in attitude had on religion, science, and magic in Europe. Lastly, the beliefs of each author in the areas of religion, science, and magic will be examined and the impact on their Faust characters will be considered. These factors worked together to determine the differing fates of Marlowe's Doctor Faustus and Goethe's Faust.

Faust in Context: Background of Faust Legend and Authors.

Background information about the original Faust legend and the context in which it arose, along with biographical information on each author's life will start to demonstrate how each author's context impacted their Faust characters.

The tale of Doctor Faustus has been popular in Western Europe for over four hundred years. It is thought to have been inspired in part by the invention of the printing press and was possibly modeled after a real scholarly magician. Coincidentally, Gutenberg's associate's name was Johann Fust, suggesting that the movable type printing press may have helped inspire the legend (Marcus 15). Tales of Faust and Faust-like charlatans made the rounds in early sixteenth century northern Europe, particularly in Germanic areas (Honan 198-9). The existence of an actual Faustus is given credibility by Phillip Melanchthon's account of the discovery of the body of a mountebank by that name, who was found "lying near the bed, with his face turned toward his back. The devil had killed him" (Riggs 234). Doctor Faustus famously sold himself, body and soul, to the devil in order to gain knowledge and power he would have otherwise been unable to obtain, but lost his soul to eternal damnation in the bargain. In the English translation of the tale, Doctor Faustus specified a period of twenty-four years in which to enjoy the

privileges so dearly bought through the sale of his soul (Rose 76). While he evidently enjoyed the magical powers the bargain brought him, satisfying his carnal desires and his curiosity about nature's secrets with the services of Mephistopheles, Doctor Faustus also suffered periods of despair when he considered the long-term consequences of his actions, but he seemed to cope with his inevitable damnation in the same fashion as Marlowe's character: through denial of "God, hell or Devil: he thought that body and soul died together, and had quite forgotten Divinity or the immortality of his soul," (Rose 81). At the end of the original tale after the twenty-four years had elapsed, Doctor Faustus was torn limb from limb, his body gruesomely destroyed and his soul dragged to hell (Rose 206-7).

The earliest publication of the tale in Germany is unknown, but the earliest existing copy of a printed version is dated 1587, printed by Johann Spies (Rose 23). It was translated into English at least by 1592 and published under the title *The History of the Damnable Life and Deserved Death of Doctor John Faustus*. The story captured the attention of Christopher Marlowe, who wrote the play *The Tragical History of Doctor Faustus* possibly based upon an English translation of *The History*, but not likely based upon the 1592 version in existence today. There is evidence that an English language version was available as early as 1589 (Riggs 233) and that Marlowe had written *Doctor Faustus* that early (Kuriyama 80) because the play appears to have been staged in that year, according to fragmentary records of the Bel Savage (Honan 199). It is difficult to precisely date Marlowe's writing of *Doctor Faustus* due to the lack of written records and the absence of a printed version of the play until 1604 (Kastan ix).

Most of what is known about Christopher Marlowe is pieced together from

college records, records of his family members' lives in Cambridge, official records, and the writings of other authors. Much more is inferred from the living conditions of scholars like Marlowe, who grew up as children of trades people and went to petty school, grammar school, and then on to college, all on scholarships, records of which were used by Marlowe biographers such as Park Honan, David Riggs, and Constance Brown Kuriyama to piece together a possible picture of Marlowe's life. The rest of Marlowe's story scholars such as Joseph Pearce attempt to construct from the scant known facts of his life coupled with clues gleaned from closely read texts of Marlowe's poetry and dramatic works, so we cannot be sure that we have a complete and accurate picture of Marlowe's life, but reasoned arguments may be made based upon these few facts and clues.

The main motivation for Christopher Marlowe to write plays was to make money; that much seems clear. He had evidently been an eager student who loved the literature of the classical world (Honan 110). He had translated Ovid's works, for example (Honan 24). Writing plays was a way for him to use his education and talent as a writer to earn a living. The successful author of a play could expect to earn six pounds for writing a play that will be staged, and would possibly benefit from a "revenue sharing" arrangement in which the playwright is paid the amount collected in admissions for the second day's performance (Riggs 199). Marlowe was certainly in need of this money, because other doors of opportunity were closed to him. Despite having been university educated and holding a Master of Arts degree, Marlowe had limited opportunity for securing the patronage that would bring him some financial security (Riggs 159). The acquisition of a Bachelor's degree conferred Gentlemanly status on Marlowe, but apparently in name only

(Riggs 71). Social mobility was possible in Elizabethan England, but it was still a very new idea and no one ever forgot Marlowe's "base birth," making real social mobility for him unlikely, despite his contact with people in Queen Elizabeth's court. Additionally, Marlowe was very likely recruited to undertake low-level espionage assignments for Queen Elizabeth's spymaster as an undergraduate (Kuriyama 71), providing him with much-needed funds that would have given him the financial support he needed to finish his studies and earn his Master of Arts degree (Honan 107). A courier like Marlowe could make between five and ten pounds for each assignment outside of England (Honan 127), so it was a lucrative endeavor. Unfortunately, the part-time job in espionage Marlowe took on in order to secure the funds that enabled him to continue as a scholar brought him unwanted notoriety which further damaged his chances of securing ongoing patronage (Riggs 199). Although Marlowe was long dead before the quarto of *The Tragical History of Doctor Faustus* was printed in 1604, an image was included on the title page depicting an earthbound man reaching for the heavens, entitled "Poverty obstructs the progress of the most gifted minds" (Riggs 242). This may have been coincidental, but it might have been an acknowledgement of Marlowe's financial challenges.

Nearly two hundred years after Marlowe wrote his Faust play, in approximately 1772, Johann Wolfgang von Goethe undertook to write another theatrical version of the Faustus tale, entitling the play *Faust: The Tragedy* (Safranski 523). A version of the play *Faust, A Fragment*, was published in 1790 (Willams 189). Its title indicated that to even writing a partial version of the Faust tale took Goethe almost twenty years, and foreshadowed the fact that the play would expand and continue to engage him for decades to come. He completed *Faust: The Tragedy Part One* and it was published in

1808 (Bell xxvii). Goethe finally finished *Faust* Part Two in 1831, shortly before his death in 1832 (Williams 52). Goethe's motivation for writing *Faust* was clearly not financial gain, nor even the pleasure of seeing his words brought to life on the stage. His Faust play was more personal than that to him as well. Goethe's life is incredibly well documented, both by his own writing and the writing of contemporaries, but very little is written about the production history of *Faust Part One* during Goethe's lifetime. Getting it onto the stage was apparently not the point in writing it for Goethe. During the sixty years in which Goethe wrote *Faust,* he wrote and published an incredible amount of written works of various types, including plays, poems, novels, an autobiography, essays, and scientific papers.

In contrast, Marlowe's entire literary career spanned from his last year at Cambridge in 1687 until his death at the age of twenty-nine years in 1693. The length of time it took for Marlowe to write *Doctor Faustus* is unknown, but it is believed to have been written in roughly a year's time in order to get it on the stage and to follow up on the success of his hit plays *Tamburlaine the Great,* parts one and two. Marlowe wrote *Doctor Faustus* possibly as early as 1588, although a later date, such as 1592 is possible as well. Marlowe wrote three other plays during this time frame as well (Kuriyama 80), so he was producing work quickly with the goal of getting his work on the stage in order to earn the much-needed income that he could expect as a writer of popular plays (Riggs 199). Examination of the circumstances of Marlowe's life and early death, however, indicate that Marlowe likely had additional, more personal reasons for engaging with the tale of Doctor Faustus. Marlowe may have been expressing his own feeling of entrapment in the social, religious, and political order through his inescapably damned Doctor Faustus

(Honan 212).

The vastly differing length of each author's life and career is only the start of the differences between the two authors. Little is actually known about Marlowe's life: He was baptized on February 26, 1564 (Downie 33) and was the child of a Canterbury cobbler in Elizabethan England. As such, he was of the lower class, and would not have had the opportunity to be educated without the petty schools that King Henry VIII created which had the dual purpose of teaching the sons of laborers letters and numbers, while simultaneously reinforcing the separation of England from the Roman Catholic Church (Honan 31). Marlowe would have learned in school that the desire to better his lot was sinful, violating the commandment "Thou shalt not covet" (Riggs 42). Marlowe later went to the King's school on a scholarship to continue his education but for unknown reasons he did not start until he was very near the upper age limit of students at that school, which was fifteen years of age. This delayed his progression through grammar school (Riggs 37).

Upon completion of grammar school, Marlowe went to Corpus Christi College on a scholarship as well (Kuriyama 38). While starting off at Corpus Christi College in the spring of 1581, Marlowe had some trouble obtaining the funds from his scholarship, probably because there was another student who was being funded from the same scholarship at the same time (Honan 82). Marlowe studied versions of the traditional Trivium and Quadrivium, which make up the seven subjects of a liberal arts education (Honan 88). These traditional courses of study had been modified in Elizabethan England to include a wider variety of works from the classical age. The inclusion of the works of classical Latin authors was intended to differentiate the course of study from scholastic

Aristotelianism, and thus from Roman Catholic university programs (Riggs 71). Marlowe studied astronomy and natural philosophy, which was a sub-category of learning under astronomy. He had been writing verses since he was in grammar school, but as a university student, his exposure to such works as Ovid's *Metamorphoses* taught him "that vivid description was the equivalent of a scientific definition. He was quick to grasp the dramatic potential of this figure" (Riggs 88). Also while in college, Marlowe would have studied Ptolemy's treatise *On Astronomical Prediction* as a science and legitimate field of study (Riggs 173). It was a short step, however, from astrology to magic and several scholars at Cambridge made that step in Marlowe's era (Riggs 176). We don't know if Marlowe studied magic at university, but he certainly had the opportunity.

A great deal of circumstantial evidence suggests that Marlowe was an agent for Sir Francis Walsingham's espionage service (Pearce 85). While there is no hard evidence that Marlowe started his espionage career as an undergraduate, it is likely because other students were known to have been recruited from Corpus Christi College (Riggs 140). Additionally, in light of the problems with obtaining his scholarship funds coupled with the records of Marlowe's spending in the college commissary demonstrating that his original scholarship could not have covered his basic needs in college, it is reasonable to conclude that he must have had additional income (Honan 106). He obtained a Bachelor of Arts degree in the spring of 1584 (Riggs 96), but was in danger of not being allowed to finish his Master of Arts degree at Cambridge due to his many absences, which probably occurred because he was carrying out espionage assignments. Ultimately, the Queen's privy council intervened, commending Marlowe's service to the government and recommending that he be allowed to complete his Master's degree in 1587 (Pearce 85).

After completing his Master of Arts degree, Marlowe was forced to rely upon his earnings as a playwright to live on. But, as stated by author Constance Brown Kuriyama,

> "While the Renaissance encouraged ambition and achievement, it was less effective in rewarding them once a young man moved beyond the grammar school or university. The favor and patronage of the great or established, which were virtually the only means for a talented individual to advance himself, were capricious and unreliable, a fact reflected in frequent complaints about the scorn and empty promises of patrons" (30).

The remuneration as a playwright provided Marlowe with funds to live on, but not enough to be financially secure. After leaving his lodgings in Cambridge, Marlowe lived in an area of London near the theatres called Shoreditch. It was near theatres but was also home to "bull- and bearbaiting rings, taverns, and houses of prostitution" (Kuriyama 75). Due to depressed economic circumstances, Marlowe was obliged to share lodgings with fellow playwright Thomas Kyd (Honan 159). His need for earnings may have led Marlowe into a counterfeiting scheme (Downie 34) that may have led to his death (Kuriyama 133-4). Marlowe would continue writing plays and attempting to secure the patronage of wealthy courtiers until his untimely death in 1593 at the age of twenty-nine years, when he was stabbed in the eye in a tavern under suspicious circumstances (Kuriyama 120-1).

Marlowe's Doctor Faustus bore a striking resemblance to Marlowe himself. At the beginning of the play, Doctor Faustus was trying to find a direction in which to apply himself that would be worthy of his talents and education, just as Marlowe was doing shortly after attaining his MA. Doctor Faustus, like Marlowe, had reason to question if

the rigor of study was worth the rewards: "What are the rewards of learning but more learning, a docile subservience, a bleak submission to the scheme of things" (Honan 207)? Doctor Faustus resembled Marlowe in his apparent socioeconomic status as a scholarship student as well. One of the first things he intended to do with his magical power was "I'll have them fill the public schools with silk, Wherewith the students shall be bravely clad" (Marlowe 1.1.90-1). Marlowe was subject to sumptuary laws while at university in which he, like all of the other scholarship students, were required to wear "but woolen cloth of black, puke, London brown, or some other sad colour" (Riggs 69). Doctor Faustus saw no other way to better his circumstances than to sell his soul to the devil for short-term gain, thus compromising his future. Marlowe may have been expressing his own feelings of entrapment in his circumstances with Doctor Faustus's despair (Honan 202).

Goethe, on the other hand, has a much longer story. Not only did he live to the age of eighty-three and literally died peacefully in his bed, he also wrote copiously throughout his life, including a lengthy autobiography. Goethe's literary career lasted sixty years while Marlowe's career covered just six years. Goethe simply had a much longer life and left much more evidence of that life than Marlowe, so there will be no attempt to summarize Goethe's life in this paper. Only the outstanding events in his life that demonstrate the similarities and striking differences between Goethe's life as compared to Marlowe's life, as well as significant events that may be reflected in Goethe's *Faust* will be included.

Johann Wolfgang von Goethe, while not born to the aristocracy, was nevertheless the child of a prosperous family who were among the first class of citizens in Frankfurt

am Main (Bayle 46), where his father purchased the title of Imperial Councilor (Williams 4-5). Goethe was educated at home as a child, at first by his father and later by a variety of tutors (Goethe *Poetry* 93). He was sometimes on his own in his primary studies, but other times he was joined by other children of the bourgeois (Goethe *Poetry* 96). Music and drawing was included in his studies (Williams 6), and he was encouraged in his interest in theater and history as well (Williams 7). His education was not completely unstructured but he was often able to pursue his own intellectual interests (Safranski 13-4).

In 1765 when Goethe was sixteen years old, he went to college in Leipzig to study law. This was his father's preference, not his own (Williams 7). Goethe himself wished to study the texts of the classical world in order to improve his poetry at the University of Göttingen, but he acquiesced to his father's wishes (Safranski 19). While at university he did what many young people do when on their own for the first time; he drank copious amounts of alcohol and "caroused" with like-minded young men (Williams 8). Goethe wrote to his beloved sister Cornelia after his first year at Leipzig about visiting "Hotel Auerbach, which belongs to the count [and in the basement of the tap-room of which, incidentally, there were seventeenth-century paintings of Dr. Faustus flying out on a wine barrel]" (Boyle 66), giving us our first documented glimpse of the Faust character in Goethe's life. After three years at Leipzig, Goethe returned home with his degree unfinished and in poor health, possibly suffering from tuberculosis (Boyle 71).

During his recovery in Frankfurt, Goethe became close friends with and was greatly influenced by Susanna von Klettenberg, to whom he was related through his mother. She was roughly a quarter century his senior and had spiritual leanings that

associated her with the Pietists, although there really is no name for her extremely introspective approach to religion and the way it influenced her life (Boyle 71-2). Pietism was a religious sub-movement within Protestantism in which the practitioner was far less concerned with dogmatic faith and believed that "Faith should come from within" (Safranski 50). Goethe himself apparently had no internalized concept of sin, and "He once said to Susanna von Klettenberg that he didn't know what he needed to ask God's forgiveness for. He was not conscious of having intentionally incurred any guilt and did not feel responsible for anything that was not volitional" (Safranski 51). A statement like this makes it clear that Goethe did not accept the Christian ideas of original sin or intrinsic human depravity brought about by the Fall of Adam and Eve. We also see it reflected in the freedom from religious-inspired self-torture and anxiety for the fate of his eternal soul of his Faust character, which is in stark contrast to the despair we witness in Marlowe's Doctor Faustus.

Also during Goethe's convalescence, the first indication of a developing interest in occult and esoteric studies became evident (Williams 9). Klettenberg introduced Goethe to Doctor Johann Friedrich Metz, a far stricter Pietist than Klettenberg, who Safranski describes in this way: "He was a pious man who experimented in the borderland of natural science and magic" (51). This is two hundred years after Marlowe's lifetime and towards the end of the Enlightenment, otherwise known as "the Age of Reason," demonstrating that while occult practice was no longer as widespread, there were still believers and practitioners in the educated class. Metz was an alchemist and used his knowledge of chemistry to treat Goethe's discomfort during his illness (Boyle 72). Metz introduced Goethe to several esoteric works, many by writers who would have

been familiar to learned people in Marlowe's era, such as those by Paracelsus. Goethe took part in alchemical experiments with Metz and while they were not successful, these activities at this time involved Goethe in combined explorations of "religion and chemistry and alchemy" (Safranski 51-2). In other words; religion and science and magic.

Goethe experienced religion, science, and magic with the boundaries between each domain greatly blurred and overlapping as a young man, and the experience shaped his thinking and expression of all of these domains. This influence is reflected in many of his writings, including his literary, poetic, and scientific writings. It was almost like turning back the clock to an era when the boundaries between each domain were more porous, as in Marlowe's Elizabethan England, except that experimenters and practitioners were not risking execution for heresy or witchcraft as they would have been in Marlowe's time.

Upon recovery, Goethe elected to finish his college career and take his degree at the university in Strasbourg (Safranski 54). While in Strasbourg, Goethe met Johann Gottfried Herder, who proved to be a great influence on Goethe as well (Safranski 59). Herder introduced Goethe to the idea of an intuitive genius and would one day inspire the "cult of genius in the Sturm und Drang movement" (Safranski 61). Goethe was part of a generation of people for whom "Petit bourgeois obsequiousness, breadwinning, the entire machinery of society in which one feels like a tiny cog or screw, and added to that, a dry rationalism with no respect for secrets-the younger generation was disgusted by it all" (ibid). Goethe was not under pressure to seek his law degree quickly, so he had time to undertake the collection of Alsatian folksongs, with Herder's encouragement (Boyle 98-9), and to develop his admiration of Shakespeare (Safranski 71). Herder's influence

would stoke

> "Goethe's interest, . . . in the history, language and art-forms of the German sixteenth century, in the Germany of Luther, Faust, and Paracelsus, of Hans Sachs and Dürer, of the street ballad and the woodcut, is explained not only by his own search for the Moder [a river near Strasbourg] material of literature, or by the influence of Herder's theories, but also by a desire to identify and return to a German bourgeois cultural tradition independent of courtly absolutism and its intellectual buttresses, Pietism and the Leibnizian Enlightenment" (Boyle 115).

These influences are clear not only in his version of *Faust,* but in his scientific writings as well.

In Book Ten of Goethe's autobiography *Poetry and Truth,* he revealed that by 1771 he had started work on *Faust.* He says that he was attracted to the Faust story because, like Faust, "I too had dabbled in all knowledge and had quite soon discovered the futility of this. I too had tried all sorts of things in life only to abandon them in even greater discontent and torment" (Goethe Hamlin 514). But Goethe did actually finish an undertaking: he finally graduated from university in 1771, albeit with a less prestigious degree due to the rejection of his dissertation (Safranski 77). His dissertation argued that citizens should be free to believe and practice in private whatever religious belief struck them as true, provided that their public display of religiosity was in line with the state religion. This struck university officials as too controversial (Boyle 103).

After receiving his degree, Goethe returned to Frankfurt and "he petitioned for leave to plead as an advocate at the Frankfurt bar" and thereafter practiced law unenthusiastically (Boyle 105-6). In 1772, his legal profession and the involvement of

family and friends made Goethe very familiar with the case of a young, unmarried woman named Susana Margareta Brandt who committed infanticide after an unwanted pregnancy (Safranski 93). She was executed in public by beheading, which made a great impression on him; this event would inspire the Gretchen story in *Faust* (Boyle 106).

Goethe wrote poetry, plays and novels during this time while practicing law. Goethe had great success with his play *Götz von Berlichingen*, which was published in 1773 (Safranski 571), and fame ensued (Safranski 114). Goethe continued writing other plays, encouraged by the success of *Götz*, and started work on *The Sorrows of Young Werther* as well (Safranski 123). His fame caught the attention of the young not-yet-duke of Weimar, Karl August, late in 1774 (Safranski 147). Goethe secured the patronage of Karl August, by then the Duke of Weimar, in the summer of 1776, as much due to a deep friendship between the two as to the duke's desire to have an author and intellectual of his own in his court, emulating his granduncle Frederick the Great's employment of Voltaire (Safranski 177). Goethe was an entertaining and erudite man but as a commoner, albeit a very well educated commoner from an uncommonly prosperous family, he was not allowed to dine at the same table as his prince and patron. Karl August remedied this situation by making Goethe a noble in 1782, which added the "von" to his name (Williams 22).

Goethe filled many governmental posts while in the Duke's employ, starting with Privy Counselor (Safranski 179). Another of Goethe's official posts was as the Director of Court Theatre, which he held from 1791 through 1817, mainly as an administrator (Williams 32). Goethe served as administrator for mines as well, a position that stoked his interest in science, particularly geology (Safranski 243). Herder, a friend and one-time

mentor of Goethe's, wrote of Goethe's many duties at court in 1782:

> "So now he is really a privy counselor, finance director, chairman of the military commission, supervisor of construction down to the level of road building, and in addition director of recreations, court poet, the author of petty festivities, court operas, ballets, masquerades, inscriptions, works of art, etc., director of the academy of graphic art where during the winter he delivered lectures on osteology; is himself everywhere the first actor, dancer-in short, the factotum of Weimar . . ." (Safranski 257).

This is precisely the long-term patronage and elevation that Marlowe had longed for, but had never succeeded in securing. Ironically, while Goethe devoted himself energetically to his duties at court, the very security and purpose they brought to his life interrupted his literary output, causing him to put aside his beloved *Faust* as well as other literary projects, causing Goethe to comment at one point "My writing has become subordinated to life," (Safranski 181).

During this incredibly busy time in Goethe's life, he became involved in Freemasonry in 1780. He passed through several of the degrees and became a master mason in 1782 (Jackson 680). Along with his friend and patron Duke Karl August, he was inducted into the Weimar order of the Illuminati in 1783. It is unknown if he was there simply to monitor the lodge for subversive activities or if he was there to partake in occult secrets and fellowship with other intellectuals, but he quit attending meetings in 1785 (Williams 27). Goethe came to fear that the Illuminati were a threat to the existing political order, so he ordered the closing of the lodges in Weimar (Jackson 681). He supported the Duke's decision to prevent a new lodge in Jena from opening in 1789

(Williams 27). It is significant that Goethe was a member of secret societies at the time that he was, however, because secret societies are where occult practices, shunned by the scientific mainstream, continued to thrive and be transmitted (Fleming 117). He may have approached them as a way to continue exploring alternatives to the mechanistic worldview in a setting free from ridicule, but he seems to have turned against them for political reasons (Jackson 681).

Goethe grew frustrated with his many duties in the Weimar duchy and left without permission from Karl August for a prolonged absence from court in 1786. He traveled incognito around Italy and settled for an extended period of time in Rome, taking up with artists and painters while there (Williams 24). He traveled to other locations in Italy, such as Sicily to further his studies in botany and to locate the "*urpflanze*," the primordial plant, and Vesuvius, to further his studies of geology (Williams 25-6). Goethe returned to the Weimar court in 1788 and eventually resumed his duties (Safranski 297). Goethe's literary pursuits and scientific interests would occupy him for the rest of his life. His scientific interests would be reflected in *Faust,* particularly in *Part Two*.

Goethe, despite his long association with the theatre and his life-long project of writing *Faust Part One* and *Part Two*, had "no great interest in adapting his own plays for stage performance-he left that to others . . ." (Williams 32), which makes it clear that Goethe, unlike Marlowe, was not dependent on his income as an author of plays. Neither was he spurred on by a timeline to finish *Faust,* giving him plenty of time to muse, consider, rewrite, add to, edit, and reconfigure *Faust.* Goethe, despite running the theater for the Weimar court for many years, did not seem to feel any pressure to bring his Faust to the stage, nor any desire to do so either. *Faust* was a deeply personal project in which

he explored many of the topics in his life that were of interest to him.

Despite these differences these authors had some surprising similarities. Both authors had an abiding interest in the classical world, including the arts and philosophy. Both authors were poets as well as dramatists. Both authors had to deal with the problems of securing patronage so that they could continue their artistic, and in Goethe's case, scientific, endeavors. There is evidence that occult philosophy was unofficially studied in Marlowe's university (Riggs 176), and Goethe had an interest in esoteric studies as well, as demonstrated by his association with Dr. Metz and his involvement with secret societies. Marlowe studied natural philosophy, which was the forerunner of science, while at university (Riggs 78). Goethe's interest in science was inspired in college in Strasbourg and grew throughout his career in government service (Safranski 254). Both authors believed that scientific ideas could be effectively communicated through poetry (Williams 98) (Crane 252). The story of Doctor Faustus resonated with both authors, and both authors saw in the character greater nobility and complexity than the popular Faust stories had portrayed (Heller 70). Both authors were striving to reach beyond the bounds of the lives that were easily available to them, and perhaps that is why they both had such an abiding interest in Doctor Faustus. Marlowe was hampered by the socio-economic circumstances that he was born into, but even the much more privileged Goethe felt the constraints of society and the scientific community upon him. These similarities and differences between the authors impacted both the stories and the differing fates of their respective Fausts.

The original English chapbook makes it clear that Doctor Faustus was a scientist, or rather, a natural philosopher, to use the parlance of the time, as well as a magician.

These facts explain why he was so insatiably curious about "nature's secrets" that he willingly sold his soul to Lucifer in exchange for knowledge he could not otherwise gain (Rose 70). The original Doctor Faustus spoke about the cosmos in Ptolemaic terms, not heliocentric terms, although if the German Faust book was published in 1587 in Frankfurt-on-the-Main (Rose 23), the author would almost certainly have been familiar with Copernicus's heliocentric model. This obsolete answer was given to Doctor Faustus at a time when the structure of the cosmos, along with most scientific truths, was still in question. In the Introduction to the twentieth century reprint of the 1592 English chapbook, William Rose contends that " . . . Faust was intended as a warning to all who could not find peace and content in the bosom of the Church, but would seek to explore beyond, with the treacherous aid of science, which at that time, of course, included magic" (26).

Despite the fact that the Scientific Revolution is said to have begun in approximately 1500, the lives of ordinary people in the sixteenth century would not have been greatly impacted by it, and would not have recognized that there was a revolution underway (Falk loc. 286). The thought-domains of science and magic overlapped to a great degree (Thomas loc.12002), religion was firmly in charge of determining the boundaries of permissible knowledge (Ginsberg 28), and curiosity was considered sinful as well as dangerous (Harrison 275). New scientific ideas were in the air, but they were the concern of educated and powerful people, not most regular folks. Marlowe wrote *Doctor Faustus* near the middle of the Scientific Revolution, and would not live long enough to see the astonishing scientific developments that took place during the seventeenth century.

Goethe, on the other hand, lived after the conclusion of the Scientific Revolution, near the end of the Enlightenment era. The lines between magic and science were firmly drawn in mainstream science by that time, and a mechanistic worldview based upon empirical data and mathematical analysis had triumphed in the intellectual sphere (Monod 17). It was finally accepted that in order to learn scientific truths, one needed empirical knowledge. Preferably this knowledge would be gained through observation, frequently through experimental data, and analyzed through the lens of complex mathematics (Dolnick 124). Goethe chafed under this mechanical, soulless, and impersonal approach to understanding scientific phenomena, and in his scientific writings as well as his literary work pushed back against this hard line in many areas of his life, which is particularly evident in *Faust*. He uses conversations within the *Faust* text for " . . . the assertion of impassioned feeling over arid rationalism, of mercurial genius over plodding Endeavour" (Williams 188). Goethe believed that scientific discovery happened in a sudden "flash of insight" (Safranski 66), which resulted from consideration of phenomena as a whole and in context.

This short synopsis of the two authors' lives and contexts shows the similarities between the authors that led them to engage with the Faust legend, as well as the differences that would influence the fates of each Faust character.

Faust in Context: Common Elements Between the Two Plays.

A comparison of the differing ways that the two authors handled similar elements of the Faust story will set the stage for a discussion of how attitudes changed towards religion, science, magic, and curiosity in Europe between the two authors' lifetimes. The two Faust plays have a great many differences, as well as a great many similarities. The

most striking similarity between the two Faust characters is that they both possessed (or were possessed by) curiosity, a burning desire to learn nature's secrets. Each Faust character was frustrated by the limited scope of knowledge available to him, as well as the limited means of learning new knowledge, which prompted each of them to bargain with the devil, with strikingly different outcomes.

One of the burning questions on the topic of Doctor Faustus and Faust is whether or not Goethe was inspired by Marlowe's version of the tale, and further, if he consciously expanded upon themes about which Marlowe had written. There is no definitive answer to that question at this point; there is simply no existing record of whether or not Goethe read *The Tragical History of Doctor Faustus* prior to writing *Faust Part One* (Heller 20). While at university in Strasbourg, it is believed that he viewed a traveling production that " . . . a German-speaking company performed the popular melodrama of *Dr. Faust,* to which Marlowe's tragedy had degenerated after 150 years on the German travelling stage" (Boyle 92). It is known that Goethe was familiar with Marlowe's version of the play, having commented upon it in 1829 "How greatly it is all planned!" according to a diary entry of H. Crab Robinson (Heller 16), but it is not known at what point in his life he had read it. Despite the confirmation that Goethe was familiar with Marlowe's play, it is uncertain how much of Goethe's play was influenced by Marlowe's version of the tale. Since there is no existing record of Goethe having owned or read Marlowe's version earlier in his life, it is possible that Goethe did not read Marlowe's play until 1818, when he jotted "Dr. Faust von Marlowe" in his diary, which was well after he had written *Faust Part I* (Heller 14), so direct influence on Goethe's play is unlikely.

Marlowe's indirect influence on Goethe's *Faust* is nearly certain, however, due to the popularity of traveling troupes of English actors who went to the European continent starting near the end of the sixteenth century and continuing into Cromwell's reign, performing plays from the English canon, including the works of Shakespeare and Marlowe (Potter 263). These traveling English troupes toured and performed in Europe well before Goethe's lifetime, but their legacy lingered in German lands through the performance of popular puppet plays, which adapted and performed the Elizabethan English plays, albeit in thoroughly bastardized forms (Rose 48). These puppet plays remained popular through Goethe's childhood and the Doctor Faustus story was a popular topic. Goethe confirmed that he was aware of the Faustus puppet plays in his later writing as well (Heller 123). Goethe was likely influenced by the puppet plays he saw performed during his childhood (Goethe *Poetry* 68), and his theatrical leanings were evident while he was a child. Goethe had a puppet theater in his own home, a gift from his grandmother, for which he wrote plays and performed as a child (Goethe *Poetry* 119). Despite the lack of direct influence, both versions of the tale incorporate several of the same elements, many of which are found in the original Faust legend.

Marlowe's relatively short play hewed closely to his source material, which was probably the original English chapbook (Riggs 236), supplemented by the Simon Magus stories (Brown 83), but he emphasized aspects of the story and traits of the Doctor Faustus character in a manner that revealed insights into his motivations for selling his soul to the devil (Brown 82). As the play progressed in Marlowe's version, Doctor Faustus touched upon topics and episodes from the chapbook that were dealt with quickly, sometimes in just a line or two. The English chapbook is episodic and the Faust

legend was already well known in Protestant Europe and England by the time of Marlowe's writing (Rose 19). It may be that in bringing up and dispensing with some of the familiar topics from the chapbook, Marlowe was establishing for the audience that they were indeed seeing a staged version of the exact beloved Faustus tale, and not a story that simply borrowed a famous character, in order to ensure the popularity of his play.

Goethe dealt with many of the same topics as Marlowe did, but in much greater detail and in greater depth. He definitely felt freer to add elements that were of particular interest to him, such as the Gretchen storyline, and to embellish episodes, such as the Witch's Sabbath in response to his interest in German folk tales. Performance of Goethe's full version, both *Part One* and *Part Two*, is approximately twenty-one hours (Midgette). It is little wonder that it is rarely performed in full. It is far longer than Marlowe's tidier version; even the most extravagant production of *The Tragical History of Doctor Faustus* is typically performed in less than two hours. As a result, Goethe had much more time and words with which to expand upon the topics that intrigued him. Among the topics explored by both authors are education, hidden wealth underground, serving in a ruler's court, pageants, Helen, magic, and science. The differences in the manner in which these topics are dealt with by each author reflects not only the differences between the two authors as artists, but the differences between the times and the circumstances under which each lived.

Strikingly, both plays include a critique of education near the beginning of the story. Both authors were well-educated men, Marlowe as a scholarship student at Cambridge in Elizabethan England (Kuriyama 38), and Goethe as the son of a striving

member of the bourgeois, whose father expected Goethe to complete his university education in jurisprudence at Leipzig (Safranski 19).

Aristotelianism was the dominant worldview in European and English universities during Marlowe's lifetime (Henry 79). In the sixteenth century, the emphasis in university education was on memorization, instead of the production of new knowledge or technical innovation. Further, the practical application of knowledge was not the domain of the university student, as explained by author David Riggs:

> "Marlowe absorbed the content of his textbooks through copying them out by hand. 'There was no shorter way to learn much,' explained the Spanish educator Juan Luis Vives, 'than to write fair and swift.' Educators mapped the pedagogical distinction between gentlemen and artisans. School was for thinkers, the shop was for the handicraftsmen" (Riggs 38).

With this kind of attitude towards learning and practical application, it is easy to see why scholars in the sixteenth century would be frustrated with the constraints placed upon their learning as well as what they could do with it. Curiosity and innovation was neither fostered nor welcomed in this educational system.

Interestingly, in an attempt to distance university scholars from Roman Catholic-developed and sanctioned Scholasticism, Elizabethan universities adopted a more humanist educational program. This exposed Marlowe and other students to the works of "The ancient historians Polybus, Plutarch, and Livy" who "revealed that Roman statesmen had introduced the fear of gods in order to fashion law-abiding citizens: 'the only resource is to keep them in check by mysterious terrors and scenic effects of this sort'" (Riggs 89). This surely resonated with Marlowe and other scholars. The very

machine intended to mold them in orthodoxy and make them tools of the state instead provided intellectual tools that caused students to question the state. This is reflected in Marlowe's use of Doctor Faustus to utter the politically subversive line: "The Emperor shall not live but by my leave, nor any potentate in Germany" (Marlowe 1.3.110-1). Thus upending the social order and denying the divine right of sovereigns to rule, a subject near and dear to the English crown's heart. He also has Doctor Faustus speak outright blasphemy: "Come, I think hell's a fable" (Marlowe 2.1.123). If hell is a fable, then so is heaven and the rest of it; Doctor Faustus is declaring his atheism. It is true that Doctor Faustus is proven horribly wrong in the end of the play, but he still had a chance to say those words in public.

Even though the university curriculum was more flexible than in Marlowe's era, Goethe was not a proponent of organized educational institutions, appearing to prefer the less structured curriculum of his childhood. While convalescing at home in Frankfurt after his early university years in Leipzig, Goethe continued to pursue his own interests. Under the influence of Dr. Metz, the alchemist friend of Susanna von Klettenburg, Goethe wrote the following in a revealing 1769 letter to his friend in Leipzig, Friederike Oeser: "My life is currently devoted to philosophy. Shut in, alone, a compass, paper, pen and ink and two books are my only equipment. And in this simple way I often come so close to realizing the truth, closer than others with their bookish learning. A great scholar is seldom a great philosopher. Those who have pored laboriously through many volumes are prone to scorn the light and simple book of nature, but there is nothing true that is not simple" (Boerner chapter 3). The seeds of Goethe's opposition to formal university education are revealed in that statement. His antipathy toward university study and book

learning is evident, as well as his inclination towards active, self-directed learning.

Marlowe's play starts off with Doctor Faustus's discussion of the relative merits of the four disciplines in which a scholar may pursue further study at university, and he dismisses all of them as being ultimately pointless and unworthy of his intellect. Logic, law, medicine, and theology all leave him cold. Marlowe's Faustus is driven by curiosity and a hunger not only for learning, but to apply his learning to the world. It is this hunger for learning, and for learning specifically about "nature's treasury," or science, that drives him to study magic (Marlowe 1.1.75). In the 1575 book by Lamber Daneau, *Dialogue of Witches*, Daneau warns of people who "borne away with the fonde vanitie of a proude mynde, whyle they are not able to containe themselues within the compas of mans vnderstanding & capacitie, do yeelde themselves vassals to Satan, being desierous to know things to come & to foretell them to other" (Harrison 275). Doctor Faustus exactly fits this description of a man with a gluttonous and reckless appetite for knowledge.

Marlowe was a man of his time and saw the effects of the suppression of knowledge, learning, and thought all around him. For example, one of Marlowe's undergraduate classmates was burned at the stake for heresy eight years after graduating from university (Honan 79). He knew that the consequences for expressing unauthorized opinions were very real, so he was careful to put the controversial lines in the mouths of the demon Mephistopheles, the Evil Angel, and the irredeemable sinner Doctor Faustus. As expressed by Parker Honan, Faust was the perfect vehicle for Marlowe to safely express his opinions: "Since he is damned, he can be used with impunity to criticize God's order" (212). For example, in a conversation with Mephistopheles, Doctor Faustus claims "Think'st thou that Faustus is so fond to imagine/ That, after this life, there is any

pain?/ Tush, these are trifles and mere old wives tales" (Marlowe 2.1.129-131). After Faustus mournfully asks what the good of repentance and prayer is, the Evil Angel utters an even more outrageous line: "Rather illusions, fruits of lunacy,/ That make men foolish that do trust them the most" (Marlowe 2.1.16-9). The possibility that Marlowe was using these characters to express his opinions is even more likely given corroborating evidence in the form of numerous accusations of atheism against Marlowe, including the famous Robert Greene's *Groatsworth of Wit Bought With a Million of Repentance* (Riggs 293).

In a few short lines, Faustus expresses his dissatisfaction with the range of knowledge available at his university, not only to give the audience a justification for Faustus's seemingly rash decision to sell his soul to the devil, but also to provide the playwright a platform upon which to state his own opinion about the relative worth of each of the disciplines in which a scholar might pursue a doctorate degree. It is made clear from the beginning of the play that Doctor Faustus is driven to seek out magic because he is tired of the disputation and rote memorization that comprised education at that time. "The knowledge that Faustus wants to attain is knowledge that can be put to use-what Bertrand Russell long ago called power knowledge-the knowledge that allows one to effect changes in the world around him" (Brooks 282). Doctor Faustus, like many other university scholars and possibly like Marlowe himself, yearned for knowledge of "natural magic" that could be applied to practical uses (Riggs 178), as is revealed by the many and seemingly wild uses to which Doctor Faustus claims he will apply magic in Act one.

In contrast to the critique of education that Marlowe so tidily dispenses with in just forty-eight lines of text, Goethe expands upon the critique of education in three

different places in the text of his *Faust*. In the first instance, Goethe starts off his critique of university education with Doctor Faust's very first lines. Like Marlowe's Doctor Faustus, Faust dismisses, with a great deal of self-disgust, the same four traditional areas that Marlowe cited in which one may earn a doctorate in a European university during the mid-sixteenth century (Goethe *Faust* 354-9). It is worthy of note that Goethe's Faust discusses and dismisses the four disciplines in the same order as Marlowe's Faust does, which provides a rare bit of evidence that Goethe was familiar with Marlowe's version when he wrote *Faust Part One* (Heller 51), but it is possible that the puppet play versions that Goethe viewed as a child preserved the order of the disciplines (Rose 49). The dismissal of the disciplines section of the play provides an indication that Goethe's Faust is quite a bit older than Marlowe's Doctor Faustus; in fact that he is actually a professor. He states "I have led my students by the nose-" (Goethe *Faust* 363). He further denigrates himself and his colleagues by stating, "I do not pretend to worthwhile knowledge,/ Don't flatter myself I can teach in college/ How men might be converted or bettered" (Goethe *Faust* 371-3). This attitude reflects Goethe's own indifferent attitude towards the value his university education.

Later in *Faust*, Goethe returns to the critique of university education by dressing Mephistopheles in professor's robes and having him give council to a young and eager student who has not yet declared a major while Faust prepares to abandon his life-long dedication to the university and scholarship (Goethe *Faust* 1868-2048). Mephistopheles gives the student advice, and as to be expected from the devil, he gives very bad advice, in which he councils the student to take up a course of study that would lead to the perpetuation of the university itself, not to the satisfaction the student's yearning for

authentic learning, as expressed by the student himself: "I'd truly like to learn a thing worth knowing" (Goethe *Faust* 1879). The academic advising ultimately leads to the student's ruination in life, which is revealed upon Mephistopheles' return to Faust's academic quarters near the beginning of *Faust* Part Two. The student, now holding a bachelor's degree, has determined that his professors do not have anything useful to teach him, saying, "From these musty tomes they drew it,/ Pickled wisdom as they knew it,/ Knew it, aye, and knew it worthless,/ Made their lives and others' mirthless," (Goethe *Faust* 6707-10). Mephistopheles, rather than acknowledging his poor council, suggests that with this great insight the student himself is ready to start teaching, and thus to start the self-perpetuating cycle of pointless scholarship all over again (Goethe *Faust* 6754-6755). The student further claims that the university offers no practical experience in anything that it teaches (Goethe *Faust* 6757-61). But Mephistopheles remains quite confident that for lack of anything else to do with his education, that the student will ultimately capitulate and continue the fraud that is university education, saying, with ages-old cynicism, "Dear kids, I do not take offense;/ Recall: the Devil, he is old,/ Grow old yourselves, and he'll make sense!" (Goethe *Faust* 6816-18).

Ultimately, Goethe's critique of education started off in the same territory as Marlowe's critique, but Goethe took advantage of his greater length to explore the theme in more depth and to make more pointed and detailed criticisms. Both Faust characters traded their previous, scholarly methods of learning for lived experiences, albeit experiences mediated and curated by Mephistopheles. But in the context in which Marlowe's Doctor Faustus operated, this led to distraction from his goals and caused his ultimate ruination, while for Goethe's Faust, these experiences led him to ultimate

wisdom and salvation.

A much smaller topic dealt with in Marlowe's version of the play actually informed a great deal of *Part Two* of Goethe's version. Doctor Faustus's magical mentor, Cornelius, mentions the possibility of using conjured spirits to fetch " . . . all the wealth that our forefathers hid/ Within the massy entrails of the earth" (Marlowe 1.1.146-7), but Doctor Faustus never actually pursues this course of action. Goethe used this same idea of finding buried treasure, but he put the suggestion of its pursuit in the mouth of Mephistopheles, who had usurped the court jester's position in the court of an unnamed emperor in first act of *Faust Part Two*. Mephistopheles reminds the emperor that the emperor actually owns all of the treasure that had been buried and subsequently lost in his lands throughout the centuries, and that there are untold riches buried in the earth because of people in the past attempting to hide their wealth from war time invaders (Goethe lines 4928-5046). It actually was the law in Elizabethan England that treasure buried beneath the surface of the earth in the sovereign’s territory was the property of the sovereign, no matter who laid claim to the surface. It was also a perennial claim of sorcerers, such as John Dee, that they could employ spirits to direct them to the locations of buried treasure. It was in the interest of the rulers to join with religious leaders to suppress treasure-hunting activities aided by demonic magic (Clulee 195).

The empire in Goethe's play happened to be short of cash to pay the army and operate the empire, so this reminder of buried riches tempted the ruler into debasing the currency of the realm by creating paper money, the value of which was guaranteed by this undiscovered but presumably existing buried wealth. After a long and elaborate pageant in which the emperor's court celebrates this new source of wealth, the other shoe

drops; the fact that the wealth had not actually been found! Instead, the emperor had been duped into signing off on a plan to issue paper money backed by imaginary buried wealth:

"To all it may concern upon our Earth:
This paper is a thousand guilders worth.
There lies, sure warrant of and full measure,
Beneath Our earth a wealth of buried treasure.
As for this wealth, the means are now in train
To raise it and redeem the scrip again" (Goethe *Faust* 6057-62).

After some incredulity that people would actually accept these pieces of paper as a stand-in for the unseen wealth supposedly buried in the earth, the emperor enthusiastically embraces this monetary system (6062-6150). That paper currency had literally been invented by the devil is certainly Goethe's judgment upon this system of currency. If Marlowe had such criticisms of the monetary system, or any other system, in Elizabethan England, he would not have felt free to so obviously satirize government practices. This is a reflection of the far greater freedom people had to write and publish their opinions during Goethe's historical period, but it should be noted that this episode takes place in *Faust Part Two*, which was published, at his insistence, after his death (Safranski 524).

Another common element is that both Goethe's Faust and Marlowe's Doctor Faustus gave medical help during an outbreak of the plague. Marlowe's Doctor Faustus was apparently successful, saying:

"Are not thy bills hung up as monuments,
Whereby whole cities have escaped the plague

And thousand desperate maladies been eased?" (Marlowe I.i.20-2)

But this is not enough for Doctor Faustus; he wants the secret of power over life and death:

"Yet thou are still but Faustus, and a man.

Wouldst thou make men to live eternally

Or, being dead, raise them to live again.

Then this profession were to be esteemed." (Marlowe I.i.23-6)

With which, Doctor Faustus dismisses medicine as a worthy use of his intelligence. Goethe's Faust also dismisses medicine, and he too was perceived as having had some success as a physician in a time of plague, as revealed while he was enduring what he believed to be unearned praise from a townsperson:

"For many a man here drawing breath,

Caught in the fever's parching grasp,

Was by your father snatched from death,

The time he stemmed the plague at last.

You also did, a young man then,

Attend each sick-bed without fail," (Goethe *Faust* lines 997-1002).

Goethe's Faust hurriedly excused himself from receiving the praise of the grateful townsman, and a few lines later describes to his famulus Wagner, who had watched Faust receive this praise with some envy, what really happened during the plague:

"And thus with our infernal tonic

on these hills, these dales we visited

A plague far worse than the bubonic.

Why, with this poison I myself defrauded

Men by the thousands, leaving them for dead;

Now I must hear the brazen killers lauded" (Goethe *Faust* lines 1050-1055).

From the reassurances of Wagner following this confession and the description of how the medicine was made, it certainly wasn't that Faust and his father were actually murderous charlatans, but instead experimental scientists who had concocted an ineffective medicine and now received praise for which Faust felt guilt accepting. This shame-faced admission certainly explains Faust's dismissal of medicine as a worthy route for further study.

There are differences between the two plays on the topic of medicine, but the similarities are striking. Both bemoaned the ineffectiveness of medicine, albeit for very different reasons. Doctor Faustus wanted ultimate power over life and death, while Faust simply wanted to actually help relieve suffering, but believed that he could not. Regardless of the differences between the two accounts of their medical careers, what is striking is how the attitude towards medicine changed during the intervening years between *Doctor Faustus* and *Faust.* The practice of medicine during the fifteenth and sixteenth century resembled the practice of Paracelsus, who was an experimental scientist in his own right but a practicing natural magician as well (Clark 220). Medicine aroused suspicion because it worked through unseen, or by nature "occult" mechanisms (Clark 226), and illness was often seen as Providence, or God's will, to be suffered through as a moral lesson (Kocher 96). It follows that attempts to relieve an illness sent by God would be better treated with prayer instead of medicines, which are intended to relieve suffering and thwart God's will (Thomas loc. 2596). In Goethe's historical period, medicine was a

respected and appreciated profession, although one in which the practitioners were aware of its shortcomings, as demonstrated by Wagner and Faust's conversation noted in the preceding pages. But due to the rise of the mechanical philosophy as a viable explanation for many formerly occult phenomena, belief in the intervention of demons in general faded (Monod 16). Medicine still retained a whiff of esoteric practice, however, as demonstrated by Dr. Metz, who was a physician as well as an alchemist. He treated a sick Goethe with compounds created using alchemical equipment and methods (Safranski 51). Even in Goethe's childhood, German doctors were hesitant use make use of inoculation against smallpox, because it "seemed to forestall Nature." Goethe suffered a terrible bout of smallpox as a child as a result of failure to inoculate (Goethe *Poetry* 100).

Like Goethe's Faust, Marlowe's Doctor Faustus mixed with his social superiors as well, entertaining an emperor and later serving in a duke's court. For the emperor, Doctor Faustus commanded Mephistopheles to produce the shades of Alexander and his paramour, and he even affixed horns to the head of a rude courtier (Marlowe 4.1.51-95). For the amusement of the duke's pregnant wife, Doctor Faustus commanded Mephistopheles to produces grapes out of season (Marlowe 4.2.7-16). These episodes demonstrate Doctor Faustus's desire for recognition by his social superiors as well as his lack of will to execute the lofty projects he had claimed he would pursue with his awesome powers during the relatively short time that he had them. On a personal level, Doctor Faustus's service in these rarified social circles may have been an exercise in wish fulfillment for Marlowe. His own "base birth" haunted him, and despite his remarkable accomplishment of rising from the status of the son of an ill-reputed cobbler to that of a gentleman who had earned a Master of Arts degree, he could not secure the patronage

that would give him the financial security he needed in order to flourish as an artist and live as a gentleman (Riggs 160). Perhaps Marlowe recognized this aspect of the story as well, because despite Doctor Faustus's great powers and ability to mix with his social superiors, he functions as an entertainer and servant, and so is never really their social equal.

Goethe's Faust becomes an integral part of the emperor's court as well, producing huge and fascinating entertainments for the emperor, much as Goethe himself had in Karl August's court, among his many other duties. In this way Goethe also resembled his own Faust character. Faust and Mephistopheles take on oddly subservient roles in the imperial court rather than seizing power for themselves, but it provided a platform for some of Mephistopheles's more outrageous stunts, as well as setting up Faust for the action in the next acts of *Part Two*.

Both authors include the summoning of the Greek ideal of beauty in their plays, with vastly differing results. As a part of the entertainment for the emperor, Goethe's Faust summons the shades of Paris and Helena. Faust promptly swoons for love of this mythical perfect woman (Goethe *Faust* 6487-6500). Faust's obsession with Helena sparks a lengthy story within a story taking up the entirety of Act III that involves a journey to the realm of the classical Greek idealized forms, where Faust fathers a child with Helena. Faust only returns to the physical world when his son with Helena dies in an echo of the Icarus tale, falling to his death in an attempt to fly off of a cliff. Helena, inconsolable, dissolves into a mist, and Faust is returned by that mist to the real world. Marlowe's Doctor Faustus, it should be noted, has Mephistopheles summon Helen as well, but he only manages to get two kisses from her, which briefly relieves his horror at the coming

end of his twenty-four years (Marlowe 5.1.81-109). For both Marlowe and Goethe, Helen/Helena represents perfection in beauty, but for Goethe, Helena is the vehicle through which Faust develops "his capacity for the highest form of love," which is a part of what enables his salvation (Heller 83). It was close to the end for Doctor Faustus, so other than a brief respite from his dread of hell, Helen mostly served to demonstrate how he had misspent his years of magical powers.

Both plays consider hell, although hell plays a much larger role in the action and motivations of Doctor Faustus than Faust. Beyond the origin of the demon that incites much of the action in the stories, the two plays actually handle the topic of hell very differently. For Doctor Faustus, hell and his justification for claiming that he does not fear it, coupled with his frequent bouts of dread for his soul's destination at the end of twenty-four years, underpins much of the action in Marlowe's play.

Doctor Faustus denies hell's existence to Mephistopheles, and this despite the demon's assurance that not only does hell exists, but that Mephistopheles is currently inhabiting it:

FAUSTUS:

"How comes it then that thou art out of hell?"

MEPHISTOPHELES:

"Why, this is hell, nor am I out of it." (Marlowe 1.3.76-7)

Mephistopheles follows up this declaration with a lament about his deprivation of the "joy of heaven" (Marlowe 1.3.78), making hell sound more like a psychological condition than a physical location (Brooks 283). Doctor Faustus actually welcomes the news that Mephistopheles is currently in hell and extrapolates from that fact the he is

currently in hell too, saying "How? Now in hell? Nay, an this be hell, I'll willingly be damned here. What? Walking, disputing & c." (Marlowe 2.1.134-5). As noted earlier, Doctor Faustus actually denies the existence of hell to a resident of hell. Mephistopheles's assertion that where ever he goes, he is in hell is fully in line with Calvinist theology: "In his *Commentary on I John*, Calvin had said that if we neglect reconciliation, 'we shall always carry hell about within us,' since 'hell reigns where there is no peace with God'" (Honan 211).

Doctor Faustus's bravado is revealed to be nothing but self-deception at several points later in the play, when he actively despairs of any possibility of salvation from the fires of hell. The urgings to repent that he receives from the Good Angel and the Old Man makes it seem as though Doctor Faustus has a chance at redemption; indeed, earlier folk-tales that included a pact with the devil often ended with the redemption of the soul of the person who made the pact (Ball 400). Some later adaptations of the Doctor Faustus tale actually did redeem Doctor Faustus, as in a play printed in Philadelphia in 1797; Doctor Faustus is revealed as having survived his ordeal while seated comfortably by the fireplace at a time apparently years after the original tale. He expressed regret for having entered into his nefarious pact and related how he was miraculously saved. Having learned from his grievous error, Doctor Faustus went on to have other adventures (*The Wonderful and Surprising Life and Horrid Death of Doctor John Faustus*). But Elizabethan England's Calvinist leanings very nearly confirm Marlowe's Doctor Faustus's reprobate status, that is, a person who is predestined by God to spend eternity in hell, no matter what choices he makes in life (Kocher 227).

Goethe's Faust, on the other hand, neither denies nor dreads hell. He makes the

bet with Mephistopheles and then seems to put hell entirely out of his mind until the end of the play, when his body is incapacitated upon the apparent loss of the bet, and demons attempt to drag him away (Goethe *Faust* 11586-11643). This distinct difference in the way the two playwrights regard hell is certainly a product of the shift from the very religious Renaissance world-view to the more secular Enlightenment worldview (Heller 82). In Marlowe's time, the only person more hated than a non-Christian was an atheist, because it was believed that humans, being naturally depraved, needed the outside motivation of an eternity of torture in hell to keep them in line and maintain the social and political order (Riggs 326). In Goethe's time, atheism was still deeply troubling and aroused suspicion, but people were less likely to be executed for it. If discussed in properly "veiled" terms, philosophers such as David Hume (1711-1776) could publish discussions of morality that did not depend entirely on the guidance of the Bible and the promise of eternal damnation to keep human beings from behaving immorally, and thus unable to co-exist in an organized society (Gottlieb 226). There was also a greater variety of religious beliefs and spiritual practices in the late eighteenth century than the sixteenth, as demonstrated by the presence of Goethe's Pietist friends in polite circles in Frankfurt. Goethe's treatment of hell in *Faust,* or lack of it, also reflects Goethe's own spiritual beliefs, which are closely bound to his scientific beliefs in polarities. In essence, Goethe's conception of the material realm as an emanation of the spiritual realm, which are two ends of the ultimate polarity, makes no provision for purely spiritual realms of heaven or hell.

A major plot device in both plays is the appearance of Mephistopheles. Doctor Faustus by deliberately summoning him, and Faust by being approached by the demon in

the form of a black dog. Marlowe's Mephistopheles was conceived of as a fully realized character with its own existence beyond Doctor Faustus's use of him as a means to short-cut the path to knowledge and power, but other than his outbursts of misery at being required to spend eternity in hell and deprived of heaven, Marlowe's Mephistopheles is a pretty basic medieval demon servant to a conjurer. Goethe's Mephistopheles, on the other hand, is quite another creature altogether. We actually meet Mephistopheles along with God at the beginning of the play during the Prologue in Heaven and it quickly becomes apparent that this demon is actually integral to God's plan for Faust:

> "For not only does the Lord appear to anticipate Faust's salvation, and to allow that effort and error are inseparable in human activity; he also calmly informs the devil that he is an active agent in that salvation-by constantly goading humankind into activity, by preventing man from falling into sloth, inertia, indolence and passivity, the devil works creatively in the divine scheme" (Williams 191).

Goethe regarded reality as being the constant tension between two polarities, literally polar opposites, and as such, Mephistopheles is the externalization of the active, physical principal in Faust's life, and God, who we meet in the prologue of Goethe's Faust, as the perfect, inactive, spiritual principal (Bergstraesser 131). Goethe's devil departs frequently from his main purpose in the story for dramatic purposes as well as to enable Goethe to use Mephistopheles to provide commentary on current events in Europe, such as the advent of paper currency, or bring in elements of German folk-tales, such as the seven league boots. But Mephistopheles always returns to continue his mission of being an unwilling agent of Faust's salvation through constant activity. When Faust demands of Mephistopheles his identity, Mephistopheles answers ruefully "Part of that force which

would/ Do ever evil, and does ever good" (Goethe Faust 1335-6). With these lines, Mephistopheles admits that he is merely a tool of God's will. Bergstraesser labels Mephistopheles "the Spirit of Negation," against whose opposition Faust must constantly strive (160). This striving between the polarities of activity and repose produces "intensification," which is how all elements in Goethe's system differentiate and develop into a higher form (Goethe *Essential* 952). Mephistopheles is the agent of spiritual growth to whom the Erdgeist referred when he brushed off Faust with the lines "Close to the wraith you comprehend,/ Not me!" (Goethe *Faust* 512-3).

An additional shared element is that both characters suffer profoundly in the courses of the action in their plays. On the surface this suffering stems from frustration about their stymied attempts to gain knowledge, but the underlying causes of this thirst for knowledge are actually very different. Doctor Faustus wants a short cut to knowledge so he can have more power and material pleasures in this world that he is denied because of his circumstances. Marlowe's Doctor Faustus's circumstances bear a striking resemblance to Marlowe's own circumstances: an apparently impoverished scholar who had difficulty accepting his "place" in the social hierarchy, who briefly resolves to be "divine in show" (Marlowe 1.1.3) long enough to gain the knowledge he can glean through university education. Marlowe himself may have been encoding his feelings of entrapment, frustration with his circumstances, and envy of better-off students, especially since his university education put him in contact with the sons of aristocratic families, who were clearly less motivated to take their educations seriously, as evidenced by the fact that markedly fewer affluent students completing their degrees as compared to the scholarship students (Riggs 54). These observations, coupled with the humanist

educational materials that encouraged ambition to better one's circumstances (Kuriyama 30) and the Calvinist exhortation to obediently maintain one's social position (Riggs 38), would certainly create nearly unbearable frustration.

While at university, Marlowe could see other people enjoying the better life, social connections, and financial security that he craved (Riggs 2), but he could not get there on his own; he would need a patron. Patronage was difficult to secure and he was tainted by his origins as the son of a shoemaker as well as notoriety due to his occupation as a spy (Riggs 159). Perhaps Marlowe's Mephistopheles was an embodiment of the deal he had made to be a spy at the expense of his future reputation. If one thinks of Mephistopheles, Lucifer, and the Evil Angel as representatives of the hierarchy of the Elizabethan spy agency, then the threats that kept Doctor Faust in line make more sense. Perhaps the uncaring God who forsakes Doctor Faustus to his fate is representative of the patronage that never materialized for Marlowe but would have saved him from continuing in risky espionage service. Regardless of what the various devils really represented in Marlowe's life, his Doctor Faustus backed down from considerations of repentance, even though that might have saved his immortal soul. In sharp contrast to Goethe's Faust, Marlowe's Doctor Faustus does not grow or develop into a more mature character with greater understanding of himself and the natural world as a result of his suffering. Instead he remains blind to deeper meanings and afraid of further suffering, as demonstrated by his submission to threats of physical pain in the material world when he considers reaching out for divine forgiveness.

Goethe's Faust wants knowledge of a different kind-unified understanding of the whole experience of existence, knowledge beyond words and data that can only be gained

through experience, and not just experience, but intense, personal experience that involves the entire being of the scientist and leads to intuitive knowledge (Bergstraesser 145). For Goethe, the suffering Faust endured was necessary, imperative in fact, to the growth and understanding of our romantic hero. Faust's growth starts with his first crisis in his laboratory when he summons the Erdgeist only to be unprepared to understand who or what he has summoned. The Erdgeist chants his dominion over the polarities: "In tides of living, in doing's storm, /Up, down, I wave, /Waft to and fro /Birth and grave, /An endless flow, /A changeful plaiting, /Fiery begetting, /Thus at Time's scurrying loom I weave and warp /And broider at the Godhead's living garb" (Goethe *Faust* 501-9). When Faust protests that he "feels close" to the Erdgeist, but the Erdgeist denies that kinship, saying "Close to the wraith you comprehend./ Not me!" (Goethe *Faust* 512-3).

Note that while Marlowe's Doctor Faustus summoned a devil specifically, Goethe's Faust summoned the Erdgeist, otherwise known as the Earth Spirit, which is not a devil, but is instead a manifestation of the processes of nature. Mephistopheles only approached Goethe's Faust with God's permission, as established in the Prologue in Heaven. Contrast this with Marlowe's Mephistopheles's need for Lucifer's permission to make a pact with Doctor Faustus. Moreover, the audience had witnessed the presence of the ultimate benevolent principle, God, at the beginning of Goethe's play. In Marlowe's case, the audience sees only two small representatives of the benevolent principle: the Good Angel and the Old Man. We see many more devils threatening Doctor Faustus, and instead of God or the Erdgeist, Doctor Faustus gets a visit from Lucifer himself (Cox 260). If these two Faust characters mirror their authors' lives, it is easy to surmise that Marlowe saw the world as far more threatening and himself as far more alone in it than

Goethe did.

Goethe's Faust suffers loss again in the Gretchen episode, in which the innocent woman for whom he at first feels merely great and selfish lust but grows to love profoundly is put to death. After a melee of Mephistopheles's devising, the devil convinced Faust to flee the town to save his own skin, but Faust did not know that he had left Gretchen alone, pregnant, destitute, and outcast. He suffers the loss of his child in the same moment that he learns about its existence and then suffers the loss of Gretchen, who, realizing that she had sinned egregiously in the death of her child, preferred redemption through execution to survival on the run with Faust. This episode ends *Faust Part One,* leaving a devastated Faust to flee with Mephistopheles.

Faust wakes up at the beginning of *Faust Part Two* while being ministered by forest fairies. When he is able, he stands up and faces the light of the rising sun, from which he must avert his eyes, as he had done when faced with the Erdgeist, but this time he understands that he is not yet ready to receive full illumination (Bergstraesser 31). Faust endures another cycle of joy followed by suffering, in which he builds a life with Helena in the classical world, and they produce a son together. Again, his child dies, and he loses his lover as well, but Faust almost immediately lets go of this dream, and steps back onto a mountain top in the real world, looking at "Aurora" (Goethe *Faust* 10061), the goddess of the dawn (Hamlin footnote 5 287), but this time not having to turn his eyes away.

In Act V of Part Two, the final trial for Goethe's Faust is the failure of his body in old age coupled with his misjudgment in sending Mephistopheles to evict a harmless elderly couple from a patch of land encompassed by his land reclamation project.

Mephistopheles murders the couple, and pins the blame on Faust, which leaves Faust suffering feelings of guilt. Shortly after this point, Faust starts to anticipate his satisfaction when the land-reclamation project is finished and inhabited: "Such teeming would I see upon this land,/ On acres free among free people stand" (Goethe *Faust* 11579-11580). It is at this point that Faust loses the bet by wishing, however fleetingly, that the moment would last (Goethe *Faust* 11581-6). Mephistopheles attempts to claim his prize, but Faust's final battle is won for him through divine intervention, apparently at Gretchen's behest. Mephistopheles's minions may have spirited his body away, but Faust's soul is taken to heaven due to Mephistopheles's lustful distraction by a young angel.

It was necessary for Faust to be "bedeviled" into continuous action by Mephistopheles in order to experience life, love, and suffering intensely, thus making him ready for the final illumination in heaven (Bergstraesser 31), where this incredibly flawed man is welcomed as a hero and wise teacher of young souls. Goethe's Faust's journey is a constant pull between two polarities, joy and suffering, causing a "spiraling" intensification of spiritual growth in him (Bergstraesser 150-1), which leads to his illumination and salvation.

The overlapping themes and elements of the two Faust plays demonstrates the uses to which each author put their Faust character in their respective plays, and that use was dependent on the author's context. There were huge changes in worldview between the times of the writing of each of these plays. The religion dominated, anti-curiosity, anti-science worldview in force during Marlowe's lifetime sealed his Doctor Faustus's doom, while the secularized, pro-curiosity worldview during Goethe's era enabled his

Faust's salvation. The audience is told from the beginning of Marlowe's *Doctor Faustus* that he is damned and there is no way out for him. The audience is just along for the ride of witnessing this train wreck of a life. In Goethe's Faust's case however, God tells the audience from the beginning that he wants to challenge Faust, and is sending Mephistopheles to do it. God makes his esteem for human effort known: "As long as on earth he lives,/ So long it shall not be forbidden./ Man ever errs the while he strives" (Goethe *Faust* 315-7). This statement establishes that humans are supposed to learn through activity, and that curiosity is not forbidden. This is a result of the prevalent Enlightenment worldview and Goethe's own philosophy. Although the outcome is not always certain during the course of the play, the audience has been assured from the beginning that Faust's actions are condoned.

Faust in Context: Transformation of Curiosity and Scientific Knowledge

Given the common assumptions about the historical period stretching from the mid-sixteenth century through the seventeenth century, commonly referred to as the Scientific Revolution (Weinberg 147), it is not unreasonable to surmise that the differences between the fates of the Faust characters in the two plays are simply due to the vast advancement of scientific knowledge during the two centuries that separate the two plays. While this is certainly a contributing factor, an even more fundamental underlying worldview had to change before it could become acceptable for Goethe's Faust to indulge his insatiable curiosity and not meet the same fate as Marlowe's Doctor Faustus. Indeed, this attitude had to change before the Scientific Revolution could advance as it did during the seventeenth century (Ginsberg 35). There was a major shift in the attitude towards knowledge and, more importantly, towards curiosity. This shift

towards viewing curiosity as more of a virtue than a vice allowed the Scientific Revolution to proceed unimpeded (Harrison 266), and for Goethe's Faust to be redeemed instead of meeting the same grisly fate as Marlowe's Doctor Faustus.

In the late sixteenth century, people needed enough knowledge to obey their social betters, avoid sin, perform vocational activities, and function in their role in society, but not any more than that (Riggs 71-2). Even for university scholars, the focus was on learning the content of the approved textbooks and how to effectively argue known points, but not to add to the body of knowledge or to apply that knowledge to practical problems outside of the university (Henry 90-1). Indeed, the purpose of universities in England became so closely identified with the Church of England that in 1604 King James proposed "a revision of the curriculum . . . which would have narrowed it to subjects immediately bearing on the study of Scriptures and have eliminated most of what little science was being taught there" (Kocher 15). The point of university study was to learn the recovered knowledge of the ancient Greeks, particularly Aristotle, on the assumption that Greek civilization was the pinnacle of human accomplishment, and so no attempt to add to or surpass ancient knowledge was expected or encouraged (Wilson 47). The desire to acquire new knowledge, through questioning, experimentation, and discovery, and to desire to possess knowledge of "high things" without having a purpose for knowing it was deemed sinful, because knowledge "puffeth up," leading to the sin of pride (Harrison 272).

The suspicion of curiosity and "knowledge for knowledge's sake" predates the sixteenth century and was in fact an ongoing theme in European thought. Greek and Roman writers and philosophers of antiquity did not outright condemn curiosity, but they

expressed at least distaste for it. Cicero, for example, identified *curiositas* as a moral issue "where it has dual aspect: on the one hand, curiosity is a necessary motivation for the pursuit of knowledge; on the other it is an intemperate and excessive desire for unsuitable or inappropriate knowledge" (Harrison 266-7). Myths such as Prometheus, a god who suffers eternal torture as punishment for stealing fire from heaven and giving it to humans, reveal antiquity's suspicion of innovation and the acquisition of new knowledge. Technological innovation was generally suspect as well. For example, Icarus and his father built wings for themselves so they could fly out of captivity. Icarus grew over-confident and flew too close to the sun, which destroyed his wings and sent him plummeting to his death (Ginsberg 34). Prometheus and Icarus were so often invoked as warnings against curiosity and innovation that their images were featured in emblem-books, which were popular in the sixteenth and seventeenth centuries. The images were typically accompanied by the Latin phrase "Quae supra nos, ea nihil ad nos," which translates to: "We have not to care about things which are above us" (Ginsberg 33-4).

Goethe idolized Prometheus for his restless rebellion against the gods. He wrote poems and planned a play featuring Prometheus as a heroic character (Safranski 115-6). Marlowe, on the other hand, invoked Icarus's fall as a symbol in the prologue of *Doctor Faustus*: "His waxen wings did mount high above his reach, And melting heavens did conspire his overthrow" (Marlowe 1.1.21-2). Note the differing regard each author has for the two mythological characters commonly used as exemplars in the injunction against curiosity. Goethe enthusiastically embraces the rebellious Prometheus, despite the suffering the character must endure as a result of his actions, much in the way his Faust had to suffer in order to continue gaining knowledge. Marlowe, on the other hand, does

not blame Icarus for his fall, as is traditionally the view, but instead, he blames the heavens for destroying Icarus when he dares to reach beyond his earthly bounds: "His waxen wings did mount above his reach,/ And melting heavens conspired his overthrow" (Marlowe Prologue 21-2). His Doctor Faustus also strived "To practice more than heavenly power permits" (Marlowe Epilogue 8), and was punished by heaven for so doing. This reflects that the blame for Doctor Faustus's demise lies not with Doctor Faustus, but with "heaven" or any authority, that sets up and enforces arbitrary bounds on knowledge or ambition.

The Old Testament of the Bible contains several verses that warn against innovation, learning, and curiosity for seemingly useless knowledge. Starting in the book of Genesis, Adam and Eve ate the forbidden fruit from the Tree of Knowledge of Good and Evil in order to gain that knowledge for themselves. They, along with all of their descendants, were harshly punished for their curiosity, disobedience, and pride (Shattuck 51). Eve is also our first example of a person being led astray by a devil who appealed to her curiosity (Harrison 275). This idea that curiosity provides an opening for demonic influences is manifest in Marlowe's version of *Doctor Faustus*. Doctor Faustus initially seeks out the demon in order to gain knowledge that he can in turn put to use: "These metaphysics of magicians/ And necromantic books are heavenly;/ Lines, circles, scenes, letters, and characters-/ Ay, these are those that Faustus most desires" (Marlowe 1.1.49-52). Later in the play, Mephistopheles uses Doctor Faustus's curiosity to maintain him in his snare. He provides a book on alchemy and weather control to distract Doctor Faustus from his desire for a wife in Act Two, and then proceeds to provide books on magic, astronomy, and "all plants, herbs, and trees that grow upon the earth" (Marlowe 2.1.154-

172). In Act Three, Mephistopheles conducts a grand tour of the heavens and Europe to feed Doctor Faustus's curiosity and keep him distracted from repentance. Goethe's Faust, as established in the early scenes in his scholarly chamber, has renounced books and experimental science in favor of direct experience. Goethe himself was able to avail himself freely of such resources during his historical period, so Mephistopheles's ability to obtain obscure books would not have held the same enticement that it did for Marlowe's Doctor Faustus.

Additional verses in the Old Testament present the demonstration of intellectual humility by placing limits on the scope of learning as a virtue (Harrison 267). In Psalms 139 verse 6, for example, the humble declaration of ignorance and futility of learning the motivations of God is expressed thus: "Such knowledge is too wonderful; it is high, I cannot attain unto it" (KJV). Also in Psalms, 131 verse 1 "Lord, my heart is not haughty, nor mine eyes lofty: neither do I exercise myself in great matters, or in things too high for me" (KJV), which indicates that attainment of knowledge may cause haughtiness and disregard for their social position (Ginsberg 32). Marlowe's play actually demonstrates this desire to upend the social and political order through the use of the knowledge and power acquired through Mephistopheles in Doctor Faustus's declaration "By him I'll be great emperor of the world" (Marlowe 1.3.104).

The New Testament of the Bible continued the anti-intellectual refrain, as reflected in a verse of St. Paul to the Colossians chapter 2, verse 8: "Beware lest any man spoil you through philosophy and vain deceit" (Kocher 5). In fact, Tertullian believed that "Christians are better off without worldly studies of any kind" (Kocher 5). Indeed, other early Christian theologians heartily endorsed limits on knowledge and intellectual

curiosity. St. Jerome, in a remark typical of early Church fathers, said of the attempt to understand natural phenomena: "Is it not evident that a man who day and night wrestles with the dialectic art, the student of natural science whose gaze pierces the heavens, walks in vanity of understanding and darkness of mind" (Harrison 267)?

Contemporaneous with the anti-intellectual and anti-curiosity writings of the early church fathers, a crucial shift in the interpretation of verse 20 in chapter xi of the Epistle of Paul to the Romans developed. The Latin phrase "noli altum sapere, sed time" translates roughly into English as "be not high-minded, but fear." The meaning of the word "sapere" shifted from meaning "to be wise" to "to know" after the fourth century CE (Ginsberg 28-9). "Altum" means "highness," and so this phrase that could have been read as a warning against over-estimating one's own wisdom came to be the basis of the Church's authority to condemn intellectual curiosity and a warning to not reach for knowledge that was too high (Ginsberg 30). The shift in meaning of this simple, short phrase would have immeasurable impact on the boundaries of permissible knowledge in the Western world for the next thousand years, and impact the manner in which knowledge would be permitted to be acquired as well.

Also in the late fourth century CE, Augustine of Hippo was hugely influential in turning this traditional suspicion of the pursuit of knowledge into official Church doctrine. In his work *On Christian Doctrine*, Saint Augustine "warns that empirical knowledge pursued for its own sake and not from or relevant to the understanding of Scripture constitutes, at best, idle curiosity and vainglory, and, at worst, hazardous traffic with demons" (Rampton 67). In chapter thirty-nine of the same book, Augustine goes on to specify that "studious and able young men" should not pursue the "branches of

learning that are in vogue" and not approved by the Christian church, because it would interfere with "the happiness they seek" in Christ. Augustine outlines the narrow scope of learning suitable for Christians: "I think, however, there is nothing useful in the other branches of learning that are found among the heathen except information about objects, either past or present, that relate to the bodily senses, in which are included also the experiments and conclusions of the useful mechanical arts, except also the sciences of reasoning and of number." But even within this limited body of knowledge, Augustine warns "Nothing in excess" (Augustine, Rampton 72). Augustine is even more explicit in his condemnation of curiosity in his earlier work, *The Confessions*. In chapter ten of this work, Augustine declared that "Our yearning for knowledge was long ago dubbed 'libido sciendi', a term that insists on the analogy between curiosity and sexual desire." Augustine "considered lust for knowledge more dangerous than sexual desire" (Shattuck 46).

Aristotle, the fourth century BCE Greek philosopher, influenced natural philosophy in the Western world to a greater extent than any other philosopher, particularly after the thirteenth century CE, when he became known as simply "The Philosopher" (Weiner 27). Aristotle made a clear distinction between natural phenomena, such as thunder, and artificial phenomena, such as a thunderous noise produced by a person striking two objects together. In Aristotle's philosophical system, artificial phenomena did not merit consideration: "What is the good of creating an artificial situation when what are really interesting are natural phenomena" (Weinberg 24)? Thus, in Aristotle's philosophy, the only legitimate way to gain knowledge was through close observation of natural phenomena, followed by careful reasoning. This attitude from the

foremost ancient authority on natural philosophy further contributed to the suspicion of experimentation as a means of gaining knowledge (Weinberg 24-5).

Aristotle had been influential in the West throughout the medieval period, but his alignment with Christianity became complete and his authority became unquestionable in the early fourteenth century, when Thomas Aquinas was canonized (Weiner 130) and his work *Summa Theologica,* which is "a comprehensive fusion of Aristotelian philosophy and Christian theology," was accepted as the absolute authority on natural philosophy (Weinberg 128). Thus, questioning Aristotelian laws of nature became the equivalent of questioning the authority of the Church (Henry 49).

Among the types of knowledge most strenuously condemned was prognostication, such as through astrology or divination. Such practices were seen as intruding directly on humanity's "reliance on the Providence of God." (Kocher 66) as well as in conflict with the concept of free will (Thomas loc. 6814). Some predictive capacity is necessary for humans to live in most climates and the ability to predict when seasons would start and end, for example, was knowledge gained from observing the movements of planets and stars. From that stand point, and given the general reliability that each turn of the season correlates with predictable movements of heavenly bodies, it is not a great leap to surmise that the stars may be used to predict other aspects of life (Riggs 173).

Despite growing interest in classical literature during the late fifteenth and early sixteenth centuries, universities in Europe officially rejected both experimental science and magic because both systems of thought contradicted the received wisdom of the Catholic Church-approved Aristotelian worldview, making it difficult to justify any efforts to expand existing knowledge (Baily 201). Additionally, people generally

regarded life in the body as "but a hideous interlude before heaven" (Kocher 5). In light of this attitude, prior to the late sixteenth century, there was no concept or expectation of "progress" as twenty-first century people understand the idea, so curiosity and discovery of new knowledge was considered futile, obliging people to wait in "pious passivity" for the next life (Wilson 46). This tendency didn't entirely snuff out the flame of the Renaissance stoked by the resurgence of works by classical authors, however. As J. Barzun wrote:

> "Humanitas . . . opened a vista on the goals that could be reached on earth: individual self-development, action rather than pious passivity, a life in which reason and will can be used both to improve worldly conditions and to observe the lessons that nature hold for the faithful" (Wilson 44).

Despite attempts to suppress them, however, medieval "Books of Secrets" were becoming easier to share and circulate during the sixteenth century in large part due to the printing press. These books "professed to disclose the hidden properties of natural substances, as well as providing instructions on how to unlock and employ these powers" (Baily 204). So knowledge was starting to escape the bounds placed upon it by centuries of traditional repression.

As the centuries progressed, the Roman Catholic Church continued to try to limit and control knowledge. So much so, that prior to the Protestant Reformation, lay people were forbidden to read and study the Bible for themselves (Wilson 45). With the introduction of the movable type printing press, the sharing and expansion of scientific knowledge in the sixteenth century was inevitable (Shattuck 27), but it was still strongly opposed by those who feared too much knowledge loose in the world as well as the

impacts this freedom to question might have. Without new knowledge of nature's secrets and without the freedom to question authority, the religious, political and social order was more justifiably maintained. If people were free to question Aristotle, what else might they feel free to question? "These were, according to the most perceptive of contemporary minds, two possible effects of "the new science": blasphemous intellectual pride on the one hand, or rejection of such a powerful, cohesive social force as religion, on the other" (Ginsberg 35).

It is true that the Protestant Reformation resulted from bold questioning of the religious order and introduced the idea that people needed knowledge of the Bible to secure their own salvation, but even Protestant leaders frequently did not enthusiastically embrace scientific discovery (Weinberg 156). For example, concerning Nicolaus Copernicus's heliocentric model of the cosmos, "Martin Luther is said to have offered a snide dismissal of the theory, chastising astronomers who wished to sound "clever" by proposing "to turn the whole of astronomy upside down"" (Falk loc 879). Philipp Melanchthon dismissed Copernicus's heliocentric model by citing a Biblical verse from Ecclesiastes 1:5: "The Sun also rises, and the Sun goes down, and hastens to his place where he rises." (Weinberg 156). Note that there is no mention of the Earth moving in this verse.

John Calvin, while encouraging the study of nature as "God's works" (Kocher 10), nonetheless condemned Copernicus's heliocentric theory because it questioned the primacy of knowledge contained in the Holy Bible (Kocher 191). Further, Calvin is quoted as stating: "Nearly all the wisdom we possess . . . consists of two parts; the knowledge of God and of ourselves." Calvin's comment was specifically about Biblical

interpretation, and he commented further "All we can know of him is to be found in what he has revealed in his written word. Beyond that we may not speculate. Wisdom entails a realization of the limits of reason; an acknowledgement of our profound ignorance" (Wilson 72). While Calvin may have encouraged the study of God's creation, he did not encourage deep questioning, due to the inextricable link between God and creation. These particular quotes are about interpreting the Bible, but for the average person, it certainly sounds like an admonition to avoid the deep study of nature as well. Protestant reformers sought to establish a new religious order and to use it to support the social and political order, while suppressing the questioning of any kind of authority. The King's School that Christopher Marlowe attended, which educated children within the narrow bounds of Calvinist dogma and identified disobedience to any religious or political authority to be the greatest of sins, is a prime example of this use of the control of knowledge to control the social order (Honan 33).

In light of this suspicion of new knowledge and the active resistance of religious leaders to accept empirical knowledge, it is not surprising that many scientists were circumspect about their discoveries. Copernicus, for example, waited until he was on his deathbed before agreeing to have his book, entitled *De Revolutionibus Orbium Coelestium,* published in 1543. Copernicus's book explained and demonstrated the mathematics and geometry of a heliocentric cosmos (Falk loc. 879). Copernicus's publisher, concerned by the fact that the mathematical calculations worked out much more elegantly in the heliocentric model than the Ptolemaic model, included a preface with the book that claimed that the heliocentric model was intended only to make calculating the movements of heavenly bodies easier, but emphasized that the book was

in no way asserting that the sun was stationary while the earth moved around it (Falk loc. 893).

Self-censoring and repudiation of knowledge by natural philosophers was a recurring pattern during the sixteenth century. There are numerous examples of men who, while walking the line of discovery between science and magic, came to feel that they had overreached the boundaries of what humans are allowed to know or perhaps had simply perceived some threat to their well-being from religious or political authorities. In response, they would demonstrate their contrition by burning their books, both the ones they themselves had written and those written by others (Kocher 24). In burning the books, the contrite scholar was not only cutting off his own access to them, but also sparing other people from the possible sin of gaining the illicit knowledge contained within the books. This method of demonstrating contrition and renunciation is reflected in Doctor Faustus's desperate last line in Marlowe's play in which he wails "I'll burn my books! Ah Mephistopheles!" (5.2.115), thus renouncing the knowledge for which he sold his soul, and removing that forbidden knowledge from the world. The burning of books is not only an act of renouncing magic, but of renouncing knowledge itself (Davies 38). It should be noted, however, that many of the books burned by magicians were printed, meaning that one magician burning just one copy of the book was more of a performative act of contrition, and not a decisive excision of the knowledge from the world.

In a variation of this trend, Cornelius Agrippa, after having written the first book of his famous three-book series, *De occulta philosophia* in 1510, apparently had come to the attention of the Inquisition, which inspired him to write a diatribe against the seeking of knowledge of all kinds. Written in 1526 and entitled *De incertitude et vanitate*

scientiarum atque artium, atque excellentia verbi Die declamatio (Lehrich 32), the author appears to have made an attempt to atone for publishing the first book in the *De occulta* series, perhaps believing that the average scholar was not ready for such knowledge, or perhaps simply in the interest of saving his own skin. As Derek Wilson commented: "Agrippa's backtracking is testimony to the growing anxiety within the Church at the uncontrolled quest for knowledge (and therefore, power) and where it might lead (as in the *Malleus Maleficarum* indicated)" (38). Over time, however, Agrippa apparently overcame his worry and went on to publish two more volumes of the *De occulta* series in 1531 and 1533 (Lehrich 36). Agrippa is actually mentioned in the text of Marlowe's Doctor Faustus play as a person whose works were worthy of study. Due to his infamous reputation as a necromancer, Agrippa likely served as a model for Marlowe's Faustus character (Yates 116). Goethe read *De vanitate* as a young man, and was reportedly greatly troubled by it, apparently not believing himself sufficiently spiritually prepared for the esoteric knowledge he desired (Lehrich 33). Goethe's concern may be reflected in his Faust character's failed encounter with the Erdgeist, which resulted in Faust's suicidal despair of ever being worthy of acquiring genuine knowledge (*Faust Part 1*, lines 481-518). The entire ensuing drama may be considered as simply Faust's elaborate spiritual preparation for ultimate knowledge.

John Dee, a mathematician and astrologer in Queen Elizabeth's court, is reported to have said to "the Emperor Rudolf II that for forty years he had sought knowledge, only to find that no book or living man could tell him what he wanted" (Thomas loc. 5112). This sentiment is echoed by Marlowe's Doctor Faustus in his frustration with the knowledge available in books. This despair is much more pronounced in Goethe's Faust's

opening scenes, in which he renounces learning knowledge by any method other than direct experience. Dee's experience is also echoed in both plays in his claim that he could locate buried treasure using divining tools (Clulee 195). Knowledge like this would be dangerous in the wrong hands, indeed, and would further erode the authority of the church and the crown.

While the shift away from the denigration of knowledge and curiosity did not occur in a single event or a single location in Europe and thus cannot be wholly attributed to one person, Francis Bacon wielded a great deal of influence in his own time and during the subsequent seventeenth century by investing the systematic search for new knowledge with a humanitarian purpose. "Knowledge for knowledge's sake" was not an acceptable reason for seeking knowledge in Elizabethan England; there had to be an intention of applying that knowledge for practical purposes (Kocher 21). Bacon knew that the approach to learning prevalent in the universities, which was the pursuit of "philosophy through disputation and commentary, rather than through direct experience and observation of nature" (Ash 188) would not yield new natural philosophical knowledge. So instead he championed a new, systematic approach to obtaining empirical data. Bacon envisioned a "cooperative research institute, 'Solomon's House' whose members would devote themselves to collecting useful facts about nature" (Weinberg 202). Francis Bacon argued successfully in favor of several purposes for delving into nature's secrets, mostly for the political and economic benefit of England, but ultimately for the world. This set the stage for the explosive advancement of knowledge during the seventeenth century, particularly in England, but in other parts of Europe as well. Bacon argued in his unpublished 1603 work *Valerius Terminus* that knowledge could be sought

not for the purpose of satisfying curiosity, but for "the benefit and relief of the state and the society of man; for other wise knowledge becometh malign and serpentine, and therefore as carrying the quality of the serpent's sting and malice it maketh the mind of man to swell; as the Scripture saith excellently, *knowledge bloweth up, but charity buildeth up"* (Harrison 279). Despite his reliance on traditional scripture to justify his program of scientific research, Bacon was actually promoting a heretofore startling idea: that is was possible and desirable to use scientific discovery and technology to better the lot of humankind. A small step in the development of the idea of "progress" had taken place.

Bacon expanded his advocacy of the systematic search for new knowledge about the natural world by publishing in 1620 the first of an intended series of books that were to introduce and convince readers of the theological permissibility of this pursuit through the "reform of natural philosophy" (Matthews 47). Entitled *Instauration Magna,* it sought to remind readers of the biblical verse in Daniel 12:4 that states "But thou, O Daniel, shut up the words, and seal the book, even to the time of the end: many shall run to and fro, and knowledge shall be increased" (KJV). Bacon believed the time had come for this to occur. The term "instauration" means to restore, therefore "If human power and dominion is being restored, then it follows that there was a previous period when the human race had power and dominion over the universe." Bacon sought no less than to restore the knowledge humans had lost in the Fall of Adam and Eve (Matthews 47-8). Bacon's arguments created the mindset that allowed the Royal Society to emerge in later decades of the seventeenth century (Ash 186-7). The shift away from the concept that curiosity was a sin that dominated Marlowe's world was underway just a quarter of a century after

his death.

Johannes Kepler was a contemporary of Francis Bacon, but he had a different attitude towards seeking knowledge. As an astronomer and mathematician, Kepler had little use for practical knowledge, so that was not his motivation for observation and study. As a devout Lutheran, he believed that "the order of the world was a shadow of the mind of God" and that the study of the heavens and mathematics "trained the mind" to recognize the "truth of God" (Connor 41). Given Philipp Melanchthon's dismissal of the Copernican model of the cosmos, it is perhaps surprising to note that this was Melanchthon's position as well. Keep in mind, however, Lutheran leaders privileged the authority of the Bible above all else; even mathematics, and even first-hand observation (Weinberg 156).

It was Kepler's insatiable drive to glorify God by revealing the truth of Copernicus's heliocentric cosmos that drove him to persevere in the face of several steps of opposition to having his book published. The authorities, the Senate of Tübingen, could not square the argument for the Earth moving with biblical verses that clearly stated that the sun moved. Kepler also claimed that the sun exerted influence over the planets, which discomfited the Senate and caused them to worry "that the average reader, who did not have Kepler's knowledge of Copernicus, would be led astray," (Connor 94).

Galileo was perhaps somewhat cautious early in his career about making his own support for the heliocentric model of the cosmos known. In 1597 Galileo read Johannes Kepler's *Mysterium Cosmographicum* and subsequently wrote a letter to Kepler, in which he stated his support of Copernicanism. Kepler, in a written reply, implored "Stand forth, O Galileo" (Weinberg 173)! By the early seventeenth century, even Jesuits were studying

the heavens and considering observable phenomena such as sunspots (Weinberg 181), the presence of which defy the Aristotelian assumption that heavenly bodies are perfect. This demonstrates that Galileo was punished more for the political sin of defying the will of the pope than for making the discoveries through observation with his spyglass that supported the Copernican model of the cosmos (Weinberg 186-7). Galileo received two orders from the Inquisition in 1616 in which he was ordered not to ""hold, defend or teach Copernicanism in any way" (Weinberg 184). Galileo turned his attention to other scientific issues and did not attempt to share his conclusions based upon observation again until the 1632 publication of *Dialogue Concerning the Two Chief Systems of the World-Ptolemaic and Copernican.* The pope at that time, Pope Urban VIII, believed that a character in the *Dialogue*, Simplico, was modeled after him and was insulted by the portrayal (Weinberg 185). Additionally, Galileo published the work in Italian instead of Latin, which made the knowledge available to a much wider audience. Pope Urban showed his displeasure by having Galileo arrested, "shown the instruments of torture" and subject to house arrest for failing to sufficiently repudiate the heliocentric model in violation of the 1616 order from the Inquisition (Weinberg 186). This had the chilling effect of suppressing Catholic support for scientific study and discovery, and thus the gain of knowledge, for two more centuries. Galileo's books were not removed from the Index of Prohibited Books until 1835 (Weinberg 187).

Despite this setback in the acceptance of the pursuit of new knowledge, which convinced even René Descartes to veil his support for a heliocentric cosmos in "ambiguous terms" (Hall 121), the advancements made during the prior century was a cause for optimism that knowledge of nature's secrets not only could be found, but should

be found.

> "New textbooks, compendia, astronomical tables, anatomical atlases dominated the scene. One could find everywhere confidence in past achievement as well as optimistic expectation for further intellectual conquests in the future, and their utility in everyday life. Some imagined that the human quest for understanding of the ultimate mathematical and natural truths might be completed in two or three generations if enthusiastically undertaken" (Hall 74).

Outside of Roman Catholic controlled lands these ideas took root and found acceptance over time. From roughly 1580 through 1630, Aristotle's chokehold on the conception of the cosmological order gradually diminished while the heliocentric model gained wider acceptance (Hall 121-2).

Rene Descartes posed a challenge to the accepted methods of gaining knowledge, particularly Aristotelianism, through his philosophical opposition to receiving knowledge through the words of authorities or even through one's own senses. In his 1637 work *Discourse on Method of Rightly Conducting One's Reason and of Seeking Truth in the Sciences,* Descartes traced his thought process from the rejection of literally everything to the one fact he could be sure of, which was his own existence ("I think, therefore I exist"), and extrapolating from that the existence of the world and ultimately, of God (Weinberg 203). Further, Descartes wrote *Principles of Philosophy* (*Principia Philosophia)* in Latin in 1644, and then in French, and thus to wider readership, in 1647 (Weinberg 203). Together, these works constituted a complete system of thought combining

natural philosophy with theology, making it a contender for replacing the flawed and increasingly untenable Aristotelianism (Henry 132). Descartes offered a complete rejection of the acceptance of knowledge or limits on knowledge imposed by any authority outside one's own reason.

Unfortunately, Descartes' system as a whole had weaknesses, which opened it to criticism from the very proponents of the Mechanical Philosophy it was intended to support. For one thing, his system was dependent on deductive reasoning instead of experimental data to draw conclusions about physical phenomena (Weinberg 205), which is actually a major flaw of Aristotelianism as well. For another, Descartes was fully committed to the idea that "action at a distance," that is, the action of one body influencing the action of another body without physical contact, such as through magnetism, is impossible (Henry 136). These flaws limited the system's usefulness to contemporary and future scientists. Additionally, Descartes' *Discourse on Method* was roundly condemned by various European authorities, both ecclesiastic and secular, " . . . as a first step towards irreligion and atheism" (Radical18) due to its initial premise that one must doubt the existence of God, even though Descartes quickly restored God to the system of thought (Gottlieb 13-4). The whiff of atheism was enough to make many natural philosophers withhold support of the system in order to avoid inviting official scrutiny of their own philosophies (Gottlieb 24). Even so, Descartes' system of thought impacted the European intellectual zeitgeist as an alternative mode of gathering information, thus weakening the resilient Aristotelian worldview (Gottlieb 26).

Another signifier of the growing acceptance of curiosity and scientific knowledge was the establishment of the Royal Society of London. It started as a group of like-minded men in 1660 for the discussion of natural philosophy and to perform and observe scientific experiments. The initial group included the natural philosophers Robert Boyle, Robert Hooke, Christian Huygens, and the architect Christopher Wren (Weinberg 217). They claimed that they performed experiments and recorded the results, and that they started each inquiry free of preconceived notions so that they could draw their conclusions from the data alone. In this way, they sought to actualize Bacon's vision of a 'Soloman's House' (Henry 140-1). The Royal Society acknowledged Bacon's advocacy of experimental science and regarded him as something of "a mascot" (Gottleib x). The Royal Society's motto was "Nullius in verba," which may be expressed in English "Look for yourself. Don't take anyone else's word for it" (Gottlieb 123). It is remarkable that less than a century after Marlowe's death the search for scientific discovery would be tolerated enough to have a respected institution established expressly for that purpose.

Newton, a member of the Royal Society who is famous for his pursuit of knowledge through rigorous experimentation, believed himself exonerated from accusations curiosity and pride in making scientific discoveries, because as a religious man, he believed that he was merely recovering the wisdom of the ancients. It was a widespread belief that humans had "perfect understanding" of the workings of nature prior to the Fall. "God had revealed these truths long ago, but they had been lost. The ancient Egyptians and Hebrews had rediscovered them. So had the Greeks, and now so had Newton" (Dolnick 36). Despite this seeming humbleness in the face of his world-changing discoveries, Newton did not believe that everyone was worthy of possessing the

knowledge he had discovered. Newton believed that "The great thinkers of past ages had expressed their discoveries in cryptic language, to hide them from the unworthy, but Newton cracked the code" (Dolnick 36). In this attitude, Newton has something in common with Agrippa and other occult philosophers. Agrippa believed that in order to consort with angels, the practitioner needed to be spiritually prepared. For this reason, most people were unworthy of the knowledge that could be gained by occult means (Lehrich 38). Despite Goethe's attack on Newtonian science, he too felt that not everyone was ready for knowledge of the underpinnings of reality and nature. His failure with the Erdgeist was a result of being unprepared.

With the acceptance of experimentation and observations as the authoritative methods for acquiring and developing new knowledge, curiosity seemed almost completely rehabilitated by the end of the eighteenth century. John Milton, however, having met with Galileo in 1638 while Galileo was under house arrest near the end of his life and also having taken part in Cromwell's rule of England, was not sanguine about human curiosity. With his epic poem *Paradise Lost*, published in 1667 (Hawkes xii), Milton urged people to learn only what God intended for them, saying:

> "Whether the sun predominant in heaven
> Rise on the earth, or earth rise on the sun;" (lines 160-161)
>
> "Solicit not thy thoughts with matters hid,
> Leave them to God above, him serve and fear;
> Of other creatures, as him pleases best,
> Whatever plac'd, let him dispose; joy thou
> In what he gives to thee, this Paradise

And thy fair Eve; heaven is for thee too high

To know what passes there; be lowly wise:

Think only what concerns thee and thy being;"

(Book VIII, 167-174)

Milton, as a younger man, railed against the intellectual strictures placed upon Galileo: "a prisner to the Inquistition, for thinking in Astronomy otherwise then the Franciscan and Dominican licencers thought" (Lipking 3). This was before the events of the middle of the seventeenth century in England changed his mind, however.

Scholastic Aristotelianism's hold on university education was tenacious into the middle of the seventeenth century, despite the widespread publication of discoveries and developments (Dolnick 62). In fact, the University of Utrecht was the first institution to teach "modern natural philosophy, with experimental demonstrations," in 1672 (Hall 176). Prior to this time, natural philosophers and curious seekers were compelled to rely upon published works of "recent mathematical, mechanical and chemical philosophers" (ibid) and informal networks of knowledge. Although Marlowe was in England and Goethe in Germany, there were thriving networks of correspondence via letters between scientists as well as the circulation of printed books, which facilitated the transmission of knowledge and information about discoveries throughout Europe and England during those centuries. Evidence of these networks is found in the documented existence in the mid seventeenth century of an "Office of Address" in London operated by a German immigrant, which managed "an international web of communication for those interested in scientific knowledge, . . . "(Monad 24). The history of the scientific revolution is rife with evidence of extensive correspondence between widely scattered practitioners of

natural philosophy, as well as with patrons who supported their explorations and made use of their services, particularly as astrologers. The existence of letters often provides support for historical claims of scientific discovery or the development of ideas as well as for the development of scientific instruments, such as the telescope.

Less well documented is the circulation of information about esoteric matters, but given the close identification of natural magic with science, it is reasonable to assume that this information traveled through similar networks. Printed books such as Cornelius Agrippa's *De occulta philosophia* as well as books of "popular" magic (meaning books of simple charms and spells intended to alleviate everyday problems) were widely available during this time period, (Davies 45). Also during the mid-seventeenth century, several published works on the occult and especially on alchemy had been translated from Latin into the vernacular, which widened the range of people who could learn about these fraught topics (Monad 28-29). This circulation of knowledge is important to the story of the changes between the two Faust tales by these two writers, because it demonstrates that concerning both scientific thinking and occult philosophy, it is reasonable that both men would have had access to similar bodies of knowledge, Marlowe's being two centuries less advanced, of course.

John Locke was less of a scientist and more of a philosopher, but he was influential in the history of curiosity and knowledge nonetheless. Locke's own English university education had been in the traditional scholastic Aristotelian mode, and "He thought that by modeling themselves on the medieval schoolmen and copying their narrow prejudices, the academic establishment of his day was wasting its chance to contribute to human progress" (Gottlieb 121). As a result of this insight, Locke pursued

an interest in "practical affairs" and decided to learn more about the "mechanical philosophy" once graduation had freed him from college in 1658 (ibid). After some years of associating with doctors as they treated patients, Locke joined the Royal Society in 1668. In 1689, Locke published *The Essay Concerning Human Understanding.* This influential essay encountered resistance initially due to its opposition to the scholastic Aristotelianism that still dominated English university natural philosophy. The essay opposed the archaic philosophy by promoting the ideas of "thinking for oneself" and "questioning past wisdom" as well as by making clear "its outspoken distaste for the pseudo-logical quibbling that still lingered in European universities" (Gottlieb 120). Locke's ideas, along with Newton's, would be vastly touted in the 1730s and 40s in part due to the "anglomania" that "swept the continent" at that time (Israel 515).

In 1751, Denis Diderot in partnership with Jean le Rond d'Alembert co-edited and published the landmark work:

> *Encyclopédie, or a Systematic Dictionary of the Sciences, Arts, and Crafts,* by a Society of Men of Letters. Edited by Mr. Diderot, of the Royal Academy of Sciences and Belles-Lettres of Prussia; and, regarding the mathematical parts, by Mr. D'Alembert, of the Royal Academy of Prussia and the Royal Society of London (Curran 102).

This hefty title signals the intent to reveal many secrets of nature as well as secrets of artisan guilds. It was the ultimate guide to knowledge for the curious person. While not universally embraced at the time of its publication, it demonstrates the thoroughly rehabilitated status of knowledge in Europe. "the *Encyclopédie* was expressly designed to pass on the temptation and method of intellectual freedom to a huge audience in Europe

and, to a lesser extent, in faraway lands like Saint Petersburg and Philadelphia" (Curran 102).

The *Encyclopédie* was not the first work of exhaustive knowledge of arts and sciences to be published; a *Cyclopaedia* was published in English in 1728. Diderot became involved in the translation of that work into French in 1747 (Curran 103). The translation project transformed into a much larger, more interconnected work involving thousands of new articles from many experts in their scientific fields, all cross referenced with each other (Curran 112-3). In the "Preliminary Discourse," which is an introductory section of the *Encyclopédie*, D'Alembert outlines the organization of the knowledge found in the work. "Borrowing this idea directly from the English philosopher, statesman, and scientist Francis Bacon and his 1605 *Advancement of Learning*, D'Alembert "asserts that our Memory gives rise the discipline of History; our Imagination corresponds to the category of Poetry (or artistic creativity); and our ability to Reason relates to the discipline of Philosophy" (Curran 113-4).

The *Encyclopédie* neatly touches both Marlowe's and Goethe's eras, considering its association with Bacon's organization of the branches of human knowledge coupled with its publication during Goethe's early childhood. This is a work for which Marlowe's Doctor Faustus would have sold his soul, but which Goethe's Faust would have found only too superficial and constrained. As marvelous as it was to have exhaustive knowledge available, for Goethe and his Faust, much of the information contained in the *Encyclopédie* was exactly the dry, isolated facts that Goethe felt actually obstructed true understanding of nature and her secrets, as well as the ultimate underpinnings of reality. Diderot wrote introductory articles as well as an outline of his "System of Human

Knowledge," which he used as a means of demonstrating his disdain for religion. Using the same categories as D'Alembert, Diderot places the "Science of God" under the Reason category, indicating that religion is mental activity and not based upon objective reality. Even more telling is the further breakdown of the Science of God into religion, superstition, divination, and black magic (Curran 117). Diderot lumps religion and magic together in the *Encyclopédie*, thus privileging empirical science and mathematics as the only valid methods for discovering new scientific knowledge. It is this worldview that Goethe was doing battle against in his attack on Newton's color theory (Jackson 678). So while curiosity was more than celebrated in Goethe's lifetime, the approved methods of learning and gaining new knowledge, particularly scientific knowledge, were constrained to only knowledge gained through the senses and verified by mathematics.

During the nearly two centuries between Marlowe's lifetime and Goethe's, the transformation of the status of curiosity from a vice to a virtue was pretty much complete. Rationalism and empiricism had won out, making experimental science and the mechanical philosophy perfectly acceptable. In 1784, Kant was bold enough to encourage people to "'Sapere Aude!" Have courage to use your own understanding!"", declaring it the motto of the Enlightenment (Kant 522). Despite the triumph of curiosity and empirical science, Goethe believed that religious dogma had simply been replaced by another dogma, the mechanical philosophy, as the only valid method of acquiring knowledge. He was to spend a great deal of his energy arguing against this, starting with his treatise on color. So while Goethe's Faust may have been more likely to be redeemed at the end of the story than Marlowe's Faustus due to the acceptance of curiosity and innovation at that point in history, it is not the only reason Faust was redeemed. He was

redeemed because he strived to learn not through isolated, divided, empirical data about nature, but through holistic experience of nature.

Faust in Context: Change in the Relationship Between Religion, Science and Magic.

Exploration of the underlying assumptions about the study and understanding the natural world during each author's lifetime and how this understanding changed between their respective historical periods will assist in understanding the worldviews from which each author wrote their version of Doctor Faustus's story. Especially during Marlowe's lifetime, theology, science, and magic were inextricably linked in the understanding of nature and natural processes. The passage of two hundred years between the two plays brought profound changes to almost every aspect of life in Europe, but especially to the development of scientific knowledge and its separation from magic, as well as the diminishment of natural philosophy's "handmaiden" status in relation to theology. During the sixteenth century, the relationship between the domains of theology, science, and magic were overlapping and contradictory because the boundaries between each area were still unclear (Traister 3). Theology's domain was mainly over spiritual matters, and science's domain was over knowledge of the material world, although it was understood that science would always defer to theology if there were an apparent contradiction (Kocher 3). Magic, however, was concerned with the effect of spirit on matter, or matter on spirit. It was therefore the most difficult to define or understand, and so provoked the greatest condemnation from religious authorities (Woodman 24-5).

The changing attitudes towards curiosity and accepted methods of acquiring knowledge greatly impacted natural philosophers, their methods, and the subjects they pursued. The hard line taken by both Catholic and Protestant theologians against

exploration of natural phenomena caused many of these phenomena to be considered magical until well after Marlowe's era. The period of time between Marlowe and Goethe's lives witnessed a remarkable change in worldview that raised the status of intellectual curiosity and permitted scientific experimentation, which led to remarkable advances in scientific knowledge. The relative levels of authority of the domains of theology, science, and magic were rebalanced as a result.

European universities developed in association with cathedrals and were thus closely aligned with Roman Catholic theology. This sheds light upon the reasons that the curriculum about the natural world was dependent upon the church-accepted Aristotelian natural philosophy (Henry 47). Since natural philosophy was so closely aligned with Christian theology, as well as belonging to a superior ancient age, it was not a practical discipline. Innovation, discovery, and practical application of scientific knowledge was not even considered; it was only required that students be able to engage in disputation of natural philosophy (Henry 90). The universities were not the sources of scientific or technological discoveries in this age as a result. Additionally, application of knowledge, particularly the fabrication of useful things, was denigrated as work suited to craftsmen and artisans, and thus beneath the concern of scholars and gentlemen (Ash 188). Scientific discovery and innovation was more likely to occur independent of universities, as in the case of Copernicus (Weinberg 147), or under the patronage of a monarch or wealthy aristocrat, as in the case of John Dee (Wilson 78-9). It is notable that the prominent innovators of the study of science in the late sixteenth and early seventeenth century, such as Bacon, Kepler and Descartes, were free of the constraints of universities (Hall 74), and instead were reliant on private patronage.

The Church and Aristotelian natural philosophy dominated the conceptualization of the natural world through the sixteenth century, but even so, improvements in theories about motion and other natural phenomena occurred during this historical period. Aristotelianism was so influential, however, that any new scientific information was adapted to fit into the existing worldview. This adaptation came to be known as scholastic Aristotelianism, or more simply, Scholasticism (Henry pg 44). In the thirteenth century, the theologian and eventual saint Thomas Aquinas further formalized scholastic Aristotelianism and closely associated it with Roman Catholic theology, even going so far as to explain the doctrine of transubstantiation using the natural philosophical Aristotelian concepts of form, substance, and accidents (Henry 44-5). In this justification for declaring the miraculous real transformation of ordinary bread into the body of Christ, consecration by the priest caused the bread to become the substance of the body of Christ so that the body of Christ thus becomes the bread's essential property while the form remains the bread. The continued appearance, feel, scent, and taste of bread were accidental properties of the body of Christ (Henry 46). This utility supported the development of the relationship between Aristotelian natural philosophy and the Roman Catholic Church.

The result of this alignment of Aristotelian natural philosophy and Catholic theology was to stifle Western thought, particularly scientific innovation, through the sixteenth century and into the seventeenth. However, the acceptance of Aristotelian ideas eventually benefitted the development of Western science in this important sense: the idea that laws of nature existed at all, and that God did not simply will every phenomenon into being in every moment, was crucial in inspiring natural philosophers to

look for consistent natural processes (Weinberg 131).

Perhaps surprisingly in light of the undefined limitations placed upon the scope of permissible knowledge, the study of natural philosophy was considered an essential part of the education of a Protestant. As John Henry puts it: "In Christianity the really important questions were not just concerned with God's commands but also with his nature, and his nature could not easily be discussed without considering his relationship to his creation" (49). In light of the rejection of Roman Catholic doctrines and dogma that resulted from the Reformation, it is perhaps surprising that scholastic Aristotelianism continued its dominance over university studies of natural philosophy in predominately Protestant lands for centuries after the Reformation took place. The explanation for this is that many of the people who were influential in promoting the Reformation were educated in the traditional liberal arts. They even advocated for the expansion of liberal arts learning to people of lower socio-economic status (Kocher 15). Additionally, Protestants were fellow Christians with essential beliefs in common with Catholics, and many of the advantages that scholastic Aristotelianism offered to Roman Catholicism were advantageous for Protestants as well. The acquisition of knowledge primarily through the senses and the substance and form argument so useful to Roman Catholicism in explaining transubstantiation proved useful to Protestants as well, which kept Aristotelianism "the officially and ecclesiastically sanctioned philosophy prevailing in universities and academies, and dominating philosophical and scientific discourse and textbooks" (Israel 16). In this worldview, working towards developing or discovering more knowledge was unnecessary because the natural philosophical knowledge studied in university was aligned with theology, which was intended to be timeless and changeless

(Henry 47).

Protestants actually venerated the study of the natural world as a manifestation of God's creation, even if they did not typically endorse the pursuit of more of nature's secrets. John Calvin encouraged the study of the natural world, believing, as stated by Kocher "that those who neglect the knowledge of God which may only be attained through a study of his works is just as guilty as those who, studying only his works, neglect the God who made them" (10). The stumbling block in this veneration of the natural world and of learning about it is that any observation or discovery that was found to be in conflict with the Bible was rejected. Natural philosophy was acceptable to a point, but it had to align with the worldview established by theology. Natural philosophy was conceptualized as being "a handmaiden" to theology, which meant that no matter what observation or mathematical proof was brought forward, the Bible always overruled it (Kocher 19). As stated by Thomas Becon in his 1563 work *A New Catechism*, science and other "mundane studies" should

> " . . . serve to set forth the honor and glory [of God] thereof. For unto this end should all liberal sciences to be studied and learned, even that they might not depress but advance the true religion of God. For eloquence without godliness is as a ring in a swine's snout; yea, all arts and sciences, not coupled with the love of religion, are rather instruments of wickedness than of godliness" (Kocher 11).

Through Marlowe's era, utterly objective activities such as mathematics and geometry were frequently suspected of being associated with witchcraft and sorcery as well. The average person did not understand the operations of mathematics and the drawings created for geometry were incomprehensible for many, resembling charms and

possibly spells (Harrison 277). Marlowe took advantage of this suspicion through his use of mathematics and geometry to signal the audience the depth of Doctor Faustus's interest in diabolical magic with his declaration: "Lines, circles, scenes, letters, and characters-/ Ay, these are those that Faustus most desires" (Marlowe 1.1.51-2). Suspicion of these activities started to fade during the seventeenth century, but did not disappear entirely. Despite the enthusiasm surrounding scientific discovery, there were still those who questioned the purpose of learning about the cosmos and nature's secrets (Dolnick 88-89).

Likewise, the "mechanical arts" were often held in suspicion, particularly machines and apparatus that involved the use of natural forces that did not have an obvious cause. For example, many people defined as magical the action of a jug with a hole in the bottom that only dispensed liquid when the top of the jug was uncovered (Dolnick 84). Magnets are another common example of a phenomenon that was considered natural magic (Falk loc. 1511). Medieval automatons, essentially apparently self-moving figures of people, animals, or other objects, are another example of mechanical functions moving due to the effects of perfectly natural forces that were often believed to be animated using magical means. "The men who made them were philosophers as well as sorcerers," (Truitt 8). Technology in the form of machinery was considered to be well beyond the scope of natural philosophy, because as objects fabricated by man, they were by definition not natural and therefore outside of the scope of concern for Aristotelian natural philosophy (Weinberg 24). Additionally, crafts people used technical knowledge to carry out practical aims, but their activities were either beneath the notice of scholars or else so "abstracted" that scholars would not know what to do with the knowledge. Even the crafts people could not describe why a particular

function worked, only how it worked and what they could do with it (Ash 11-2). Craft people's understanding of forces enabled them to create feats of "technological wizardry", such as clocks or automatons that mystified non-crafts people (Henry 78). Some of these crafts people were "natural magicians," who believed that there were hidden, or occult, connections between things and that these connections could be discovered and controlled (Henry 77). These long entrenched attitudes had the effect that it was primarily outside of university and in crafts people's shops that advances in practical knowledge took place through Marlowe's era.

Cracks in this stagnant worldview were already starting to appear during Marlowe's lifetime, however, driven by such publications as Nicolas Copernicus's *De revolutionibus orbium coelestium* in 1543 (Weinberg 153). Despite the publisher's claim that the work merely presented a convenient mathematical model intended to make calculations of the movement of heavenly bodies easier (Weinberg 156-7), many readers embraced the controversial work as a presentation of facts and they promoted the ideas it elucidated. Thomas Diggs, in fact, updated his father's almanac *A Prognostication Everlasting* in 1576 to include an explanation in English of the Copernican cosmos as well as a diagram of it, featuring the sun in the center with the earth in orbit around it (Falk loc. 1274-1315). Natural philosophy definitely did not behave as a handmaiden to theology in this instance, and Copernicus's heliocentric model, whether presented as simply a mathematical model or not, influenced the thinking and fates of later scientists. Acceptance of the heliocentric model would mean modifying the belief in the literal truth of the Bible, something neither Roman Catholicism nor Protestantism had any interest in allowing, both from the standpoint of the control of scientific knowledge and from the

standpoint of theology's absolute control over beliefs of all types.

An additional factor that contributed to the weakening of Aristotelian natural philosophy's absolute authority was the recovery of many more works from the classical world. Up until the fifteenth century, Aristotle was the undisputed authority because he stood out in a field of few other authors and works from the Roman and Greek classical world. This began to change when refugees from the expansion of the Ottoman Empire brought books from authors of the classical world. There was now a greater variety of works by a greater variety of ancient philosophers than had been known in Europe before and of the known authors, there were better translations (Wilson 43-5). This spurred a movement by scholars in the 15th century to search for other sources of ancient knowledge in Europe. Additional works by classical authors were discovered in monasteries, such as Lucretius's *De Rerum Natura*, which was discovered in a run-down monastery in Germany in 1417 (Greenblatt Chapter 2). It became clear that Aristotle was not the only philosopher, and that other views on natural philosophy were in circulation in the classical world (Henry 53). As these newly discovered works started to circulate, Aristotle's authority, and thus Roman Catholic authority, started to weaken, leading to a weakening of absolute authority in general, and allowing new perspectives on the natural world to begin to take shape (Henry 54).

Perhaps surprisingly, an exploration of shifts in scientific and theological worldviews in the sixteenth and seventeenth centuries would not be complete without discussing magic. Magic and occult philosophy actually greatly influenced the progression of science, particularly in the areas of practical application and experimental method. In fact, from thirteenth century work of Roger Bacon all the way to John Dee in

the sixteenth century, what was natural and what was supernatural were difficult to distinguish. This uncertain territory was often designated "natural magic" to differentiate it from ceremonial magic or magic involving demons (Clulee 67). With the slow breakdown of non-empirical, Aristotelian authority occurring in natural sciences, new methods for exploring and learning about the natural world were needed to take advantage of the new relative freedom to use sensory data in drawing conclusions about "nature's secrets." In addition, it was realized that simply observing phenomena in their natural settings would not yield many of nature's secrets, and so methods needed to be developed to systematize the exploration. On top of that, by manipulating natural materials, by burning, boiling, liquefying, etc, one could learn even more about their properties. As it happened, occult and natural magic practitioners had already been engaging in exactly these activities. An experimental method already existed in magical studies and alchemical practices, which had already developed a robust set of equipment used for manipulating substances (Henry 76-77).

Magic had long been forbidden in the Western world, starting with Saint Augustine's assertion that all magic involved entering into a pact with demons, and therefore constituted a "false religion" (Marrone 12-14). Protestants strengthened the stigmatization of magical practice by ruling all inexplicable "forces as necessarily demonic" (Bailey 196). It is important to note that theology did not "rule out magic," it just forbad its practice (Bailey 200). Completely natural forces that did not have an observable cause were considered "occult" and frequently labeled "natural magic" (Monod 4). During the mid-sixteenth century, natural magic was defined by Giambattista della Porta as "the practical part of natural philosophy" (Monod 202-3). The unknown

and difficult to understand or explain, especially through observation with the senses as educated men were taught to do in the Aristotelian dominated world view, frequently led to suspicions demonic magic, however (Marrone 96). The word "occult" today has evolved to mean demonic magic, but the word simply meant "hidden forces" or causes in centuries past. In the seventeenth century, there were many who realized that what had been in the past taken to be "natural magic" was actually simply forces that the causes for which were not yet known (Monod 4).

Demonic magic is literally magic facilitated by demons. Further, it was generally believed that demons were placed on the earth by God "to test the faithful and punish the faithless" (Bailey 196). Pre-modern Europeans believed that the earth's atmosphere teemed with demons who were cast out of heaven, but that they were no less real for being invisible and incorporeal (Cohn 22). Practitioners of magic, such as Cornelius Agrippa, insisted that their own magical practices were capable of enlisting the help of angels if the magician was properly spiritually prepared (Marrone 204-5), but theological authorities believed that the performance of magic of any kind inherently involved congress with demons (Davies 48). This would seem to make demons a problem for magicians only, but since the division between science and magic was nearly non-existent until the mid to late seventeenth century, suspicion fell upon natural philosophers as well (Dolnick 88-9). Demons were believed to be extremely knowledgeable about the natural world and could manipulate natural phenomena (Clark 163). The danger to a natural magician dabbling in these practices would be the perception that the cooperation of demons was involved.

Nor was mathematics and geometry free from suspicion of demonic influence:

"Even such apparently harmless pursuits as mathematics and the mechanical arts were frequently associated throughout the Renaissance with the proscribed practices of witchcraft and magic. Calvin complained that mathematics was often a refuge for astrologers seeking a cloak of respectability for their nefarious activities" (Harrison 277). The use of geometry in astrology aroused suspicion that it too was one of the black arts (Thomas loc 6814-6828). Astrology was claimed as a "scientific" practice due to its basis in mathematics, and practitioners argued that predictions made using it were superior to religiously inspired revelations (Thomas loc. 6862). The scientific basis was not completely refuted by religious authorities, who surprisingly argued that "Planetary influences may be countered by genuine religious belief" (Thomas loc. 6879), and thus human free will may be rescued from the determinism of the stars. Marlowe's Doctor Faustus signaled his intent to pursue magic by rhapsodizing about "Lines, circles, scenes, letters, and characters-" (Marlowe 1.1.51). This was apparently well enough known to his audience to indicate Doctor Faustus's intent.

In a career stretching from early in the reign of Queen Elizabeth until his ignoble and penurious retirement during the first years of the seventeenth century, John Dee, one time court astrologer and close advisor to the queen (Falk loc. 1397), pursued knowledge relentlessly. Today, he is often characterized as part charlatan and part dupe (Yates 37), but examination of his life reveals a person we would recognize today as a mathematician, astronomer, and experimental chemist (Yates 83-4). During the second half of the sixteenth century, scientific knowledge had not yet separated from occult knowledge, so magic provided as legitimate a set of methods for the pursuit of knowledge as any other means. As a result, Dee seemed to turn his back on the

respectable, rational pursuits we recognize today as science, and instead delved into the predictive arts using astrology. He eventually started employing the assistance of a medium, a person allegedly capable of communicating with spiritual beings, and a special mirror, called a "scrying mirror," used to induce supernatural visions, to facilitate conversations with angels (Yates 82-3).

Predictably, however, Dee was eventually accused of necromancy while in Prague. The Emperor Rudolf himself ordered three of Dee's books that recorded angelic conversations publically burned (Barone 74). So great was the perceived menace of his book collection, that his home was broken into while he was traveling abroad seeking patronage. Many of the books in his prodigious library were looted and destroyed (Barone 80). John Dee's knowledge, much of which was contained in books collected over several decades, was the locus of the anger and suspicion of the attackers. John Dee, although he was not to meet his end for over a decade after Marlowe's death, is believed to be another model for Marlow's Doctor Faustus character (Yates 119).

Despite prohibitions against astrology and the march of progress in scientific discovery, many people, including commoners, the clergy, and nobility, turned to astrologers for advice, even well after science and scientific thinking was becoming acceptable. In 1671, for example, an English astronomer was quoted as claiming "The truth is, after the ministers had preached against me and my art, I had twice so much custom as I had before," (Thomas loc. 6912). Queen Elizabeth, it should be noted, employed John Dee as Court Astrologer (Wilson 78-9), and even Johannes Kepler, the devoutly Lutheran scientist, made part of his living by casting horoscopes. Kepler believed in the validity of astrology, but he also formulated the laws of planetary motion,

work that provided the key ideas for Newton to eventually discover the laws of gravity (Connor 42). The thorough entanglement of religion, science, and magic is nowhere better demonstrated than in the practice of astrology.

Kepler, perhaps surprisingly to the modern reader, believed in the validity of astrology as a means of acquiring knowledge due to the orderliness of the movements of the sun, moon, and stars, and their unfailing ability to regulate planting and harvesting, and thus economic activity. In the movements of the stars and planets, Kepler saw a "template for human morality" (Connor 42). Kepler, like other scientific and mathematical minds of the sixteenth and seventeenth centuries, had a mind capacious enough to accept both methodical, rational, mathematical, and scientific modes as well as mystical modes such as astrology as equally valid methods of acquiring knowledge. Kepler's drive to detect the order that revealed "shadow of the mind of God" may have actually distracted him from advancing his scientific ideas even further. Instead of continuing to develop his ideas towards the concept of gravity, Kepler, as a lifelong Platonist, searched for the reasons for the sizes of the orbits of the planets in regular polyhedrons. He also considered the possibility that the periods of the orbits were related to a musical scale (Weinberg 171). What people today would consider Kepler's waste of time in exploring these esoteric subjects, in Kepler's time were simply phenomena, and the study of the orbits of the planets had intellectual credibility equal to the search for musical order in the planet's movements.

Because of the lack of knowledge of natural phenomena, those who would delve into the workings of nature were often one in the same as practitioners of natural magic. Natural scientists and magicians were indistinguishable in the eyes of Church and

university authorities in many cases, and indeed there is evidence of university-based, learned magicians into the middle of the seventeenth century (Thomas loc. 4342), much like the type described by our Faust characters. And yet, learned magicians were often practicing what people today would recognize as science. At the time, due to the overarching suspicion of both the practice of science and the practice of magic making exploration of either of them risky to the practitioner, "magic and science advanced side by side" (Thomas loc 12003).

Francis Bacon wished to disassociate scientific methodologies from the disreputable occult practices, but even he had respect for the discoveries made by occult philosophers, particularly in natural magic (Henry 88). Natural magic was synonymous with occult forces because they each referred to forces that were observed to behave in the same fashion under the same conditions repeatedly, but for which no explanation was observable through ordinary means (Monod 4). Bacon's view was that nature had to be "put to the torture" though controlled and repeated experimentation in order to induce her to reveal her secrets (Dolnick 65). Bacon was not a scientist himself, but instead had been trained as a civil servant. He used his position at court to influence the development of new approaches to scientific practice with an aim of practical application of the knowledge for the betterment of people's lives. His arguments paved the way for later scientists to legitimize their inquiries into natural processes (Harrison 282).

The scientific breakthroughs of the sixteenth century set the stage for the widespread development of experimental and mathematical data-supported science of the seventeenth century. The boundaries of "what men are permitted to know" were expanding rapidly at this time in history. Scientists were devising ever more creative

experiments with which to torture nature (Weinberg 200) while repurposing the equipment from occult philosophy, particularly alchemy (Henry 76-77), but the separation between science (material) and theology (spiritual) was becoming more well defined (Kocher 3). Forces, such as magnetism, that was once considered occult was now being understood as natural forces and not magical or diabolical (Falk loc. 1512).

Scientists were, for the most part, devout Christians; Kepler was a devout Lutheran (Connor 39) and "Newton devoted thousands of hours-as much time as he spent on the secrets of gravity and light-in looking for concealed messages in the dimensions of the temple of Solomon and trying to match the prophesies in Revelation with the battles and revolutions of later days" (Dolnick 18). Nor is it to be supposed that magic and the occult fully separated from science during the seventeenth century; Newton was an avid alchemist and conducted his alchemical experiments during the same time periods that he was conducting his scientific experiments (Thomas loc. 12003). Newton even injected mysticism into his most famous scientific discovery:

> "Marking the seven different colors along the spectrum, he insisted, matched the positions where you would have to bridge a monochord of corresponding length to sound the seven notes comprising the octave . . . Therefore, white light was a glorious harmony of all the other colours 'sounding' together" (Henry 155).

It shouldn't be imagined that science was free of religious strictures and the influence of magical tradition at the point of the establishment of the Royal Society, however. On the contrary; the natural philosophers involved in the Royal Society were largely religious men and even though they saw themselves as "paying homage to God" through their work, suspicion of sorcery fell upon them anyway (Dolnick 88-9).

Science came a long way in gaining legitimacy as a method of acquiring knowledge during the seventeenth century nonetheless. As the century progressed, the mechanical philosophy shed light upon phenomena that were once occult, thus formerly in the domain of magic, enabling these phenomena to be understood through scientific principles, which in turn caused magic to gradually retreat from the serious consideration of scientific thinkers (Israel 6). Despite the flaws in Descartes' mechanical philosophy, its emphasis on a universe governed by mathematical formulas gained ever more adherents at the end of the seventeenth and into the eighteenth century. By insisting upon the idea that every phenomenon in nature had a physical cause involving matter acting upon other matter, Descartes invalidated all claims of "action at a distance" (Gottlieb 3). There were widespread objections and resistance to Descartes claims, so his system of thought did not displace centuries-old worldviews unequivocally. Descartes, a Frenchman, was a devout Christian, and he was aware of the Inquisition's handling of Galileo, so he labored to make his system of thought acceptable to the Catholic Church, believing that the "*Discourse* would show, among other things, how religion and science could proceed best if they walked hand in hand" (Gottlieb 7). Despite his discretion, Descartes' *Discourse on Method* was placed on the Roman Catholic Index of Prohibited Books in 1664 (Weinberg 203). It was widely published nonetheless, and it reached and inspired many other scientists, including Baruch Spinoza (Wilson 190).

One of the major implications of the Mechanical Philosophy is that, if strictly applied, it ruled out any occult phenomena, thereby nullifying the possibility of both magic and miracles, both demons and angels (Bailey 200). Diminishment of the belief in magic and superstition from the world did not trouble religious authorities, but naturally,

the loss of miracles did. Descartes was a man of faith who was careful to prove the existence of God in his method (Gottlieb 8), but other philosophers, such as Spinoza, ignored those divine caveats and spun out the rest of the method to its logical conclusion; Spinoza did not seem to consider magic at all, but he explicitly ruled out miracles in his insistence on a universe governed by consistent, unbreakable laws (Israel 218). Spinoza was very controversial due to his identification of God with nature, which was regarded as pantheism at best, and atheism at worst (Gottlieb 110).

It had long been recognized that Aristotelianism lacked any practical, applicable knowledge (Henry 90-1), but with the encouragement of the Royal Society, scientific discoveries were considered in light of the practical uses to which they could be put. All aspects of life were apparently considered: "they had given considerable thought to cheese and also to finding better ways to make candles, pump water, tan leather, and dye cloth" (Dolnick 84). Robert Boyle was especially interested in resisting "any attempts to separate science from technology" (ibid), thus demonstrating the profound shift in the relationship between learning and craft, as well as an a new drive to consciously look for ways to better the lives of ordinary people through the application of scientific principles.

While telescopes existed decades earlier, in 1677, microscopes joined the tools with which scientists could extend human vision (Dolnick 115). The telescope and the microscope served the purpose of enhancing human vision, to literally see worlds that were invisible before their existence, but the greater implication of them, in the minds of scientists, was that "God was a Mathematician" (Dolnick 120). Both of the devices revealed geometric regularity, which was dubbed "the Geometry of the Cosmos" (ibid). The structure they revealed, both in the cosmos and in the microscopic realm,

"strengthened the case for God as designer" (Dolnick 115). The idea that God was a mathematician led to the idea that every phenomena was explainable through mathematics, and that this was the most valid method of analyzing nature. This pointed to an "underlying simplicity" in "the few simple laws of nature" (Dolnick 124). This attitude among scientists and mathematicians such as Kepler, Descartes, Newton, Leibniz, and many others led to a great many discoveries, but there were those who believed that the reliance on mathematics "abstracted" scientific phenomena to a degree that it was no longer useful or applicable to the material world (Henry 109). Others were still concerned that math was an "arcane science" that could not "not just explain him [God], but explain him away" (Wilson 196).

While magic and esoteric practices did not entirely disappear from European thought during the seventeenth century, much occurred during that century to "demystify" the world. Scientific inquiry was largely condoned, and scientists became freer to experiment and expand the boundaries of human knowledge. As a result, many phenomena that had once been inexplicable became understood through scientific observation, quantification, and experimentation:

> "Natural science did not advance by brushing aside the occult, or by disproving magic. On the contrary, when occult claims were submitted to scientific scrutiny, few definite conclusions were drawn, and no concerted process of outright debunking took place. . . . In the eighteenth century, to be sure, the formal dialogue between natural science and the occult gradually died out . . . Scientists ceased to write about occult qualities in nature, and natural magic, in Della Porta's sense of the term, either became experimental science or faded

away" (Monod 16).

According to Paul Klebér Monod, the occult "lost much of its intellectual coherence after 1715, at least until 1780" (17). But it never entirely went away; it simply morphed into other forms, and mostly left the intellectual spotlight. Monad continues "the occult appealed to many on the margins of intellectual respectability, who sought to counter mechanistic explanations by espousing various spiritual or supernatural theories that drew on one aspect or another of occult philosophy" (17). The eventual outcome of this diminishment of the occult was greater rationality and secularization of society. According to Jonathan Israel, "In Holland medals were issued in the 1690s celebrating the slaying of Satan and the end of the belief in magic and witchcraft" (6).

Goethe, despite his undoubted literary genius, could certainly be considered among the scientists on the "margin of intellectual respectability" for his opposition to Newton's color theory, but he wasn't alone. Interest in magic lingered and books on magic were commonly available in Europe throughout the eighteenth century (Davies 93). The last two decades of the eighteenth century saw the rise of Freemasonry and they involved a "complex mix of the mundane and the occult" (Davies 94). There was also a resurgence of study of magic by the middle and upper classes in Europe in the late eighteenth century. The practitioners claimed to be participating in ancient magical traditions, but their practices were actually only loosely based upon older traditions. This interest arose as a reaction against the rigidly rational Enlightenment worldview (Bailey 205).

The historical periods encompassing Marlowe's lifetime through Goethe's lifetime witnessed remarkable realignments of the domains of theology, science, and magic. In

Marlowe's lifetime, it was not unusual to execute a person for publicly claiming a dissenting theological opinion, and even sharing scientific information brought the threat of loss of freedom or loss of life. Marlowe's despairing Doctor Faustus was written as inescapably trapped in this stifling world. Through the seventeenth century, people were still not entirely free to express differing opinions, but there was more support for scientific experimentation and discovery. This experimentation revealed that many phenomena that were once considered magical were in fact completely natural, thus minimizing belief in magic. But as magic was more and more marginalized, religion suffered diminishment as well. Magic and religion relied on many of the same unseen supernatural entities for which science had found explanations. As we move into the late Enlightenment era, the rationalism of the mechanical philosophy weakened theology's hegemony on permissible knowledge and action, but it also marginalized methods of discovery that were not entirely objective, controlled, and quantifiable. It is in this rational world that Goethe wrote his play about Faust as a demonstration of an alternative to empirical, data-driven science.

Faust in Context: Impact of the Changed Worldview on the Fates of Faust.

What is truly remarkable about Goethe's worldview and his approach to religion, science, and magic is that for Goethe religion, science and magic are all one and the same domain of knowledge. Goethe had the good fortune to live during a more intellectually permissive time, the Enlightenment era, than Marlowe did. While Goethe's unique views on religion, science, and magic were not shared by many of his contemporaries, he did not have to hide or renounce his beliefs for fear of being executed for them, as people in Marlowe's era often did. Goethe's version of *Faust*, upon which he worked, off and on,

from the age of twenty-two until he shortly before his death at the age of eighty-three (Hamlin 505), can be read as a manifesto of his religious, scientific, and magical beliefs. In fact, many of the passages that are often puzzling to readers make sense when read through the lens of Goethe's unified view of science, religion and magic. An example of how *Faust* exemplifies Goethe's unified belief system is found in the underwater scene during Act three of *Part Two* in which the homunculus endeavors to acquire a material body. Beyond functioning an entertaining fantasy, this episode demonstrates Goethe's spiritual and scientific beliefs about evolution through the action of opposing polarities causing development through intensification as well as Goethe's belief that all life started in bodies of water (Smith 200). The homunculus represents one end of the ultimate polarity, that of the purely spiritual, but it required a material body with which to interact with the material world. Through trials in which the homunculus is challenged to strive through one stage of evolution after another, Goethe demonstrates that the spiritual end of the polarity is just as dependent on the material end of the polarity for its continued existence and development. Recall that in the Prologue of *Faust*, God, who is the ultimate representative of the spiritual end of the polarity can do nothing in the material world without Mephistopheles, who possesses a material body.

Goethe's religious beliefs were not aligned with any of the traditional Christian belief systems; not Protestantism, which he believed to be "moral code" and not really a religion, not Catholicism, which he believed to be plagued by superstition, although he appreciated the ceremony and pageantry (Safranski 45-6), nor any other recognizable Christian denomination. Goethe appears to have shared somewhat in his father's "natural" religion, in which the belief in a personified God was considered unimportant, and

"original sin" a concept not even worth consideration (Safranski 42-3). In his autobiography, *Poetry and Truth,* Goethe related an anecdote from his childhood in which he demonstrated that his reverence for nature was present even in childhood. He built an altar out of an ornate music stand and filled it with various objects such as plants and mineral specimens as an act of devotion to

> "The God who stands in immediate connection with nature, and owns and loves it as his work, seemed to him [young Goethe] the proper God, who might be brought into closer relationship with man, as with every thing else, and who would take care of him, as of the motion of the stars, the days and seasons, the animals and plants" (Goethe *Poetry* 111).

The anecdote ends with the child Goethe burning some incense on top of the altar shortly after dawn in an act of devotion, using a magnifying glass to concentrate the sun's energy and ignite the incense, because he felt that the smoke from the incense "seemed a better representation of what passes in the heart, than an open flame" (Goethe *Poetry* 112). Unfortunately, the smoldering incense damaged the lovely music stand, and Goethe interpreted the incident in this manner: "the accident might almost be considered a hint and warning of the danger there always is in wishing to approach the Deity in such a way" (Goethe *Poetry* 113). One can easily draw a parallel between this reported childhood incident and the Erdgeist's rebuke of Faust for summoning him while still spiritually unprepared. This anecdote also demonstrates Goethe's conception of science and religion as ways of understanding the natural world unified through mysticism.

Despite his disaffection for traditional organized religion, he allowed himself to be influenced by the highly emotional and introspective Pietists and the Herrnhutters as a

young man returned home from college to recover from a serious illness. Goethe's association with the Piestists demonstrated to him that emotion had a vital role to play in understanding and cognition, and so emotionalism became part of his philosophical position that complete, intuitive knowledge is unavoidably subjective (Safranski 47).

Also surprising in light of Goethe's disdain for traditional religious beliefs and expression is the fact that he loved the Holy Bible and read both the Old and the New Testaments. He considered them not religious literature, but instead works of poetry (Safranski 42-3). The Gospel of John, however, which in Goethe's version of *Faust* is the gospel that Faust sits down to translate as a way to distract himself, held particular significance for him. His transformation of the sentence "In the beginning was the Word" (Goethe *Faust* 1224) to "In the beginning was the Deed" (Goethe *Faust* 1237) exemplifies Goethe's belief in striving and activity (Bergstraesser 39). For this Faust character, "Neither books nor elaborate scientific instruments will afford the Faustian individual this knowledge. It is not the word that leads to understanding, but the deed" (Smith 201). This is in contrast to Marlowe's Doctor Faustus, who was also ravenously curious about nature's secrets, but was more interested in the riches, power, and prestige that having such knowledge would bring him. True understanding of the nature's secrets, while tempting, was not the main objective for Marlowe's Doctor Faustus. This is another reason why Goethe's Faust was able to attain salvation and Marlowe's Doctor Faustus was not. Marlowe's Doctor Faustus was greedy for earthly pleasures and power, but Goethe's Faust disdained those motivations and instead was driven by a need for not just knowledge, but understanding of that knowledge on all levels in its interconnected complexity.

Goethe's beliefs were not confined to spiritual matters alone, but instead were the underpinning of his entire unified philosophy of science and spirituality. Goethe's conception of God was not that of an all-powerful god who is separate from the material universe, but instead, he believed that the material universe was an expression, an "emanation" of god, otherwise known as the universal spirit. In Goethe's words (translated from German):

> "It is difficult and dangerous to speak separately of God and the nature of things, and likewise, to think disjointedly about body and soul. We do not know the soul except through the mediation of the body, nor God without cognition of nature; therefore it seems absurd to accuse those of absurdity who, with the best philosophical reasoning, associate God with the world" (Bergstraesser 37).

This quote reflects Goethe's insistence on unity, and not duality between the domain of the spirit and the domain of the material world. It also reflects a wide range of influences on his beliefs, from the Neo-Platonic "emanations" of a universal spirit as expressed by the classical Greek philosopher Plotinus (Bergstraesser 132), to the identification of God with nature of Baruch Spinoza (Israel 354), to Giordano Bruno's proposal of the "world soul," from which all souls arise, and to which all souls will return upon death and dissolution of the body. Bruno also proposed that each individual infinitesimally small particle contains a tiny piece of the world soul that is not destroyed upon death, but goes on to take part in another body, and in that way is immortal (Charlton 109).

It should be noted that two out of three of these influential figures, Plotinus and Bruno, did not differentiate between their scientific beliefs and their spiritual beliefs. The third author, Spinoza, attempted to argue that his belief system was in line and

compatible with his highly rational reading of the Bible, particularly the Hebrew Bible (Feldman xxxiii), but he was excommunicated from his Jewish community nonetheless, and his name became strongly associated with pantheism (Barzun 471). Unlike Bruno, however, Goethe did believe that humans have an "immortal part," the spirit, which survives the body after death. It is this immortal part that enables humans to conceive of the universal spirit, and to take part in the creative work of the spirit through artwork and creative acts (Bergstraesser 39).

Additional influences on Goethe's beliefs were some of the same Renaissance era occult philosophers, such as Pico di Mirandola, Paracelsus, and Cornelius Agrippa, whose books Christopher Marlowe would have had access to as well, given the interest in natural and ceremonial magic among MA students at Cambridge during his lifetime (Riggs 176-7). Herder greatly influenced Goethe's interest in medieval Germany and the Reformation era (Williams 133) and encouraged Goethe's reverence for Shakespeare (Safranski 75). Herder's influence, coupled with his association with the alchemist Dr. Metz (Safranski 51), would further shape Goethe's unique belief system.

Goethe's *Urfaust*, the play that was the precursor of later versions of *Faust*, demonstrates that he had already formed his religious beliefs at a young age, and they were already reflected in his writing. Mephistopheles, the Erdgeist, and Gretchen already appear in the *Urfaust* (Hamlin 508-10). His scientific beliefs continued to evolve throughout his life, however, and they are on full display in portions of *Faust Part Two* (Smith 200). Despite this refinement of his scientific thought throughout his life, the bones of the underlying philosophy were already present in the *Urfaust.* Goethe sees the Erdgeist as a manifestation of the creative spirit from which the entire material world

emanates, but Faust was bound to fail to comprehend it and the insights it could doubtlessly bestow upon him. Faust was not yet spiritually ready for that knowledge at the beginning of the play because he had very little subjective knowledge despite his lifetime spent with books and scientific equipment gaining objective knowledge. "Before instruments can be of help, "Geist," working through direct experience, must first grasp the subtle interrelatedness and lawfulness of the natural world" (Smith 201).

In contrast, during Christopher Marlowe's lifetime, theology definitely dominated the worldview, and science, or, more properly, natural philosophy, was subordinate to it. Magic was considered to be as real as any natural phenomena, and its practice was strongly discouraged, if not outright forbidden due to its presumed association with demonic activity (Yates *Bruno* 176-7). For centuries before the seventeenth century in Western Europe, religion had been the dominant cultural force and natural philosophy was idealized as a "handmaiden" to it (Kocher 15). Those various and inexplicable natural phenomena that were labeled natural magic or magic were viewed with distaste and suspicion. Seeking to learn more about natural phenomena had been long discouraged in the Christian world, and long associated with magical practice, as is demonstrated in this quote by Saint Augustine from his work, *The Confessions:*

> "[Out of curiosity] men go on to search out the hidden powers of nature (which is beyond us), which to know profits not, and wherein men desire nothing but to know. Hence is it also, if any perverted knowledge, for the same end, is sought by means of art magical" (Steiner 394).

Which is exactly what Marlowe's Doctor Faustus did. This may demonstrate that Marlowe's education included *The Confessions*. Regardless, it was a widespread belief at

the time that scholars routinely studied sorcery (Thomas loc. 4342).

Although there was a great deal of interest in science and magic during Marlowe's lifetime, practitioners of these disciplines were frequent targets of persecution. A prominent example of this is Giordano Bruno, a person with whom Marlowe was very likely acquainted due to contemporaneous mutual association with Queen Elizabeth's court, English universities, and their employment as spies for the English crown (Charlton 106). Giordano Bruno fled from the Italian monastery at which he was studying after being warned that his life was in danger due to his objections to the corruption that he witnessed within the monastery, coupled with his radical scientific and mystical beliefs. Despite his constant movement through Europe in search of patronage and flight from accusations of sorcery, Bruno was eventually arrested, convicted of sorcery, hauled back to Rome, and burned at the stake in 1600 (Charlton 111). These facts demonstrate that Goethe was fortunate to live during the Enlightenment era, when his unorthodox religious thinking was tolerated, and he was in less danger of losing social status, or even his life as a result of his beliefs. Marlowe had to be much more careful in stating his beliefs, but he still found ways to encode them in *Doctor Faustus.*

Simply due to Marlowe's short life, commoner status, and the fact that he never wrote in his own voice about religion, science, and magic, it is very difficult to establish what Marlowe's beliefs about these topics were. There are claims in transcripts from interrogations of Marlowe's enemies recorded in Elizabethan prisons that he was an atheist, but the label "atheist" was the worst label that could be affixed to a person in Elizabethan England, because it was "believed 'That atheism in England is more to be feared than Popery.' Since atheists lacked any deep-seated loyalties to the Elizabethan

establishment, they would have no moral inhibitions about turning upon it, should the occasion arise" (Riggs 325). This was therefore the surest way to bring an enemy to the attention of authorities. Richard Baines was well known to have accused Marlowe of atheism and blasphemy, claiming that Marlowe had said "the first beginnings of Religion was only to keep men in awe" (Riggs 89) and claimed that "almost into every company he [Marlowe] cometh he persuades men to atheism" (Woods 222). Baines even claimed that Marlowe planned to convert to Roman Catholicism (Riggs 61). He clearly had a grudge against Marlowe and was trying to get the attention of authorities to arrest him, so it would be difficult to take Baines at his word (Woods 222). Thomas Kyd made similar accusations of blasphemy against Marlowe, but he made these claims when he himself was under suspicion of blasphemy. He had recently been released from prison and had written a letter to the authorities in an attempt to avoid being arrested again claiming that an anti-Trinitarian page of writing found among his belongings was actually written by Marlowe (Kuriyama 144). We have no way of knowing if these accusations are true, but if they are, then it is possible to read Marlowe's *Doctor Faustus* as a protest against the prevailing religious, political, and social order.

Marlowe was raised in the Church of England and the scholarships that he received were part of an effort to indoctrinate children into the faith early as well as to train large numbers of clergymen to minister the government-approved theology to the English people (Honan 67). The Church of England subscribed to the Calvinist ideology of predestination, meaning that some few people, the elect, were predestined for salvation and that the majority of humankind, the reprobates, were eternally damned. Since the fate of an individual's soul was a matter of divine grace and known by omniscient God since

the beginning of time, there was nothing a person could do to sway the destination of their eternal soul one way or the other, and there was no way to know for sure who was damned and who was saved (Riggs 95). Doubtlessly, this caused a great deal of anxiety among the many who had reason to believe that they were predestined to damnation.

Clues that Marlowe blamed the Calvinist doctrine of predestination for Doctor Faustus's inescapable fate are frequent in the text, and it is probable that Marlowe was playing on the audience's fears about the fates of their own souls (Woods 228). Despite the urging of the Good Angel and the Old Man (Marlowe 2.3.76-8, 5.1.36-56), it is clear that Doctor Faustus does not believe himself capable of repentance or worthy of salvation. In short, he believes he is a reprobate and lines in the play would have proven him right to his audience. For example, Doctor Faustus reads from the Bible "'The reward of sin is death.' That's hard" (Marlowe 1.1.40). What Doctor Faustus fails to remember is the next sentence in the Bible: "But the gift of God is eternal life" (Romans 6:23). This demonstrates that Doctor Faustus is blind to the full reading of that Bible verse (Riggs 240). In the Calvinist theology that dominated the Church of England, Calvin claimed that "'he [God] directs his voice to them but in order that they may become more deaf; he kindles a light but that they may be even more blind; he sets forth doctrine but that they may grow even more stupid'" (ibid). The doctrine of predestination drove some people who believed themselves to be reprobates to secret atheism in order to relieve the constant anxiety that knowledge of one's own imminent damnation was sure to cause. "Since the only God the reprobate could ever know was a God of wrath, they had a strong incentive not to believe in Him" (Riggs 43).

Another way to read this play is through the lens of the belief that Marlowe was

secretly a Roman Catholic. His spying activities were very likely centered around reporting on secret Roman Catholics. He was suspected of planning to travel to Rheims, France, to become a priest, which is what jeopardized the awarding of his MA (Pearce 85-6). It apparently would not be unusual for Catholics to spy on other Catholics in the interest of saving their own skin, and Marlowe was perhaps expressing his feelings of guilt for having betrayed his fellow Catholics with Doctor Faustus's insistence that God could never forgive him (Pearce 86-7). In light of the anti-Catholic sentiments expressed in some of his other plays, *The Massacre at Paris* in particular, however, this seems unlikely (White 78).

Still another way to consider the apparent cry despair is as a protest against the political and social order of Elizabethan England. Marlowe (and everyone else of common birth) was just as trapped in his circumstance as Doctor Faustus was. The social and political order was reinforced by the Church of England doctrine in which acceptance of one's place in the social and political order was the highest virtue, and disobedience was a sin (Honan 34). This applied from the top of the social and political order, the Queen's divine right to rule, down to the most impoverished beggar (White 72). Disobedience coupled with attempts to escape one's place in the social order was considered a sign of reprobate status (Riggs 42). Despite Marlowe's accomplishments as a scholar and his nominal "gentleman" status (Riggs 98), he was still born a lower class commoner (Riggs 200). His university education had given him a view of the condition of privileged people's lives (Riggs 69), and he had more than kept up with the sons of the aristocracy intellectually. He could see that he was just as capable and worthy of patronage as any of the upper class people with whom he attended university. He could

also see that his commoner birth was going to keep him hopelessly in his current place. Whether or not he believed in the doctrine of predestination, he apparently felt himself trapped in his current circumstances, and believed that he had metaphorically sold his soul to the English espionage machine (Pearce 87).

Marlowe had written his version of the Faustus tale in the midst of the scientific revolution, but had to be much more careful than Goethe was about expressing his beliefs about religion, science, and magic. Marlowe likely employed a strategy by which he was able to state his criticisms in the text of his play; by placing his actual beliefs in the mouth of the doomed anti-hero of the story, Doctor Faustus himself, the misguided fool who sold his soul to the devil, Marlowe was able to criticize religion, the impoverished state of scholarship students, and education in general (Honan 212). Marlowe also roped in the Evil Angel for this purpose. Marlowe's play is much shorter than Goethe's and he included some scenes, such as the clowns, that Goethe omitted, but still, in Marlowe's very economical way with words, he was able to encode some criticism of the state of religion and science. For example, with Marlowe having been taught the ancient classics such as Lucretius' *De rerum natura*, the already-damned Doctor Faustus is permitted to say "Philosophy is odious and obscure;/ Both law and physic are for petty wits;/ Divinity is the basest of the three:/ Unpleasant, harsh, contemptible, and vile" (1.1.106-9). As well as to make the absurd claim to a devil "Come, I think hell's a fable" (2.1.123) and follow that blasphemous line with "Think'st thou that Faustus is so fond as to imagine/ That, after this life, there is any pain" (2.1.129-30)? This is basically atheism on the stage, and yet Marlowe can get away with making these outrageous statements under the cover of the anti-hero Doctor Faustus, who is punished in the end.

Doctor Faustus did not necessarily have to be eternally damned; Marlowe could have made the choice as a playwright to engineer his salvation. It is true that the original German Doctor Faustus tale does gruesomely dispatch the title character at the end of the story, but there is a much longer tradition of folktales about people making deals with the devil in which the human's soul is sold in order to gain some advantage, but then the human figures out how to exploit some loophole in their agreement, thus enabling the human to keep the advantage but cheat the devil out of taking possession of their soul (Ball 400). Additionally, Marlowe's inclusion of elements of medieval morality plays, the Good Angel, the Evil Angel and the Old Man, suggests that Doctor Faustus might have been saved from damnation, as characters typically were in those plays (Woods 229). Later tales and plays of *Faust* feature a saved Doctor Faustus, which allows the popular character to have further adventures (*The Wonderful and Surprising Life and Horrid Death of Doctor John Faustus*). But Marlowe chose to stick with the original ending of the tale. Marlowe was trapped in the social structure and politics of Elizabethan England by his social status and history as a spy, which was his own deal with the devil (Pearce 87). Marlowe made a metaphor out of Calvinism's uncompromising trap for the majority of humanity to symbolize his own entrapment in the social, religious, and political order of Elizabethan England (Honan 202). His Doctor Faustus could not extract himself from it any more than Marlowe could extract himself from his own trap.

Marlowe had an interest in natural philosophy, but possessed no particular talent for science or math, nor any opportunity to gain patronage as a mathematician or astronomer, given his social status as the son of a cobbler and scholarship student (Riggs 159). Despite his likely association with natural philosophers such as Giordano Bruno

(Charlton 106), Thomas Harriot, and Sir Walter Raleigh (Kuriama 90-1), he did not contribute to the body of scientific knowledge. His talent lay in his ability to write remarkable poetry as well as dramatic works such as *Doctor Faustus*. That scientific ideas could be expressed in poetry was well established by the works of classical authors, such as Lucretius's *On the Nature of Things*, making a scientist a legitimate topic for a dramatic work (Riggs 170). A textbook entitled *Ethical, Scientific and Historical Interpretations of Ovid's Fables* was in use at Cambridge at the time of Marlowe's attendance, which supported and perhaps helped form Marlowe's attitude. In it, the author, George Sabinus claimed that "'Poetry is nothing' 'if not philosophy joined together with metre and story'" (Riggs 88). Marjorie Hope Nicolson recognized this and wrote with some evident regret:

> "The Elizabethan Dramatist whose imagination would have responded most sensitively to the poetic implications of the 'new astronomy' died too early to know them. Had he lived longer, Christopher Marlowe might well today pre-empt the place accorded by literary students to John Donne, as the first English poet whose imagination was stirred by the new discoveries" (Crane 252).

Crane disputes the idea that Marlowe 'died too early' to know about Copernicus's heliocentric model of the cosmos. Publications such as Thomas Digges's *A Perfit Description of the Caelestiall Orbes* contained a translation into English of part of Copernicus's *De Revolutionibus* (Crane 252).

Marlowe's knowledge of the science taught at Cambridge, though outdated, is on display in *Doctor Faustus*. Doctor Faustus sells his soul for scientific knowledge, after all, because he despairs of gaining access to "nature's secrets" through the textbook-

dependent Aristotelian natural philosophy taught at university at the time. Marlowe has Doctor Faustus drill Mephistopheles on matters of cosmology, which compels Mephistopheles to obediently spew the well-known Ptolemaic description of the cosmos back at him during his failed attempt to take advantage of his deal with the devil (Riggs 166). After Mephistopheles's complacent, utterly orthodox, and uninformative answers to Faustus's burning questions, Faustus starts to realize that he was not getting what he had hoped to gain through his bargain with the devil, as revealed in his disgusted exclamation:

> "Tush, these slender trifles Wagner can decide.
>
> Hath Mephistopheles no greater skill?" (Marlowe 2.3.49-50)

Marlowe's decision to have Mephistopheles spew the outdated model of the universe, rather than the controversial but widely available Copernican heliocentric model of the universe serves the purpose of demonstrating that Doctor Faustus was not actually going to receive the benefit of learning the secrets of nature for which he had sold his soul (Brooks 284). It must be remembered that Mephistopheles' aim was to thwart Doctor Faustus's enjoyment of his twenty-four years, which evidently included frustrating his desire to learn nature's ultimate secrets. These lines also served as a critique of university education, which still taught the Ptolemaic version of cosmos, instead of considering the heliocentric model (Riggs 160). By echoing the university's orthodox teaching, Mephistopheles is equated with the university, thus implying that students were being deceived in the same way that Doctor Faustus is being deceived.

The added benefit of sticking with the Ptolemaic cosmos is that since Mephistopheles' was merely repeating the orthodox version of cosmology and not

repeating the Copernican model, it shielded Marlowe from accusations of promoting heresy. An additional point that demonstrates Marlowe's awareness of the attitude of religious authority towards scientific knowledge and the search for more is that for centuries before Marlowe's time and for another several decades after, demons were thought to have excellent knowledge of nature's secrets (Clark 162), and would prey upon the curiosity of humans, using those secrets to lure humans into their grasp, but never telling them everything, always promising to reveal more, in an effort to keep them in their thrall until their souls could be safely damned (Hanegraaff footnote 49 241-2). Marlowe's Mephistopheles was simply using one of his well-known snares to keep Faustus in his grip until the end of the term of the bargain.

Marlowe's knowledge of occult philosophy and necromantic practice is evident in *Doctor Faustus* as well, particularly in the simulation on the stage of the spell that Doctor Faustus used to summon Mephistopheles, which was very much like spells used by black magicians in their attempts to summon demons (Marcus 21). This attention to detail strongly implies that Marlowe was closely acquainted with occult philosophy and magic, the study of which he would likely have encountered as a student at Cambridge. While occult science, particularly astrology, was not an official topic of study in the university, there was enough interest in it that students routinely kept notebooks and attended lectures on the topic (Riggs 174). Books such as Agrippa's *De Occulta Philosophia*, which is essentially a handbook on occult practice, were readily available and Marlowe reveals his knowledge of them with his references to such books in *Doctor Faustus* (Honan 210).

Two hundred years later, Goethe also felt that scientific ideas and natural

philosophy could be expressed in poetry. In fact, he saw no division between the realms of poetry and of science, viewing various realms of knowledge and experience as inextricably linked. Indeed, "he admired Lucretius" for his ability to synthesize "man, Roman, poet and philosopher of nature" (Bergstaesser 150). He wrote poetry as a method of expressing his scientific views (Williams 98). Here is an example of his scientific poetry written in 1820. This is entitled *Parabasis*:

> "Years ago the mind with pleasure
> Keenly could investigate,
> Could experience the measure
> Nature lives by to create.
> And it is the One Eternal
> Multiply self-manifest:
> Small the big is, big the small,
> All things to their type attest.
> Self-insistent, always changing,
> Near and far and far and near,
> Birth of shapes, their rearranging-
> Wonder of wonders, I am here." (Goethe *Essential* 27)

In his autobiography, *Truth and Poetry,* the polymath Goethe related that he was impressed by the passionate interest in their studies displayed by a group medical students with whom he roomed while attending university in Strasburg. Their passion inspired him to attend courses in chemistry and anatomy that were taught by famous professors while he was supposed to be finishing his degree in jurisprudence (590). Later

in life, Goethe renewed his interest in science through his duties to the court of Weimar. Among his other duties, he worked with the management of mines and forests, which deepened his interest in "natural science" between the years of 1779 and 1783 (Williams 22). Goethe studied and contributed to several branches of science, including geology, botany, anatomy, morphology, and optics (Williams 29). Goethe would continue to combine his interest in science with his artistic pursuits throughout his life.

In a word, Goethe's scientific, religious, and occult worldview is "unity," because he felt strongly that the scientist should directly experience a natural phenomenon and consider it in light of the context, and not as an isolated mechanistic phenomenon, while considering its connections with everything else (Smith 195). It is this insistence on the unity and indivisibility of natural phenomena, and his fight against the proponents of isolating scientific phenomena that put Goethe at odds with other post-Newtonian scientists (Smith 194). Isolating experiences and testing them repeatedly leads to incomplete understanding, in Goethe's view. As he wrote in his work *Maxims and Reflections*:

> "The manifestation of a phenomenon is not detached from the observer-it is caught up and entangled in his individuality" (*Essential* 1003).

For both authors, knowledge from books was not enough, and for Goethe's Faust, even controlled experiments, something that aroused suspicion of sorcery during Marlowe's time (Dolnick 88-9), were not sufficient to gain an understanding of the underlying order of nature. Goethe's Faust acknowledged this shortly before his thwarted suicide attempt, proclaiming "Mysterious in bright daylight, never/ Will Nature be defrauded of her veil,/ What to your spirit she reveal not, that you fail/ To torture out of

her with screw or lever" (Goethe *Faust* 672-5). Sir Francis Bacon at the beginning of the seventeenth century employed the term "vex" to express how experiments aimed at learning "nature's secrets" dealt with their subject (McKnight 63). There was considered to be a certain amount of violence in the manner of isolating and manipulating natural phenomena, as well as repeating the experiments (Weinberg 200). Goethe felt that manipulating natural phenomena was essentially the torture of nature, and felt that isolating phenomena and subjecting them to various experiments yielded little to no useful information, as demonstrated by this maxim from his work *Maxims and Reflections:*

> Nature will reveal nothing under torture; its frank answer to an honest question is "Yes! Yes!--No! No!" (Goethe *Essentials* 1002).

Goethe strongly believed that natural phenomena had to be considered as part of a greater whole, and that the experimenter was an integral part of the experiment, as demonstrated by another maxim:

> "Insofar as he makes use of his healthy senses, man himself is the best and most exact scientific instrument possible. The greatest misfortune of modern physics is that its experiments have been set apart from man, as it were; physics refuses to recognize nature in anything not shown by artificial instruments, and even uses this as a measure of its accomplishments" (Goethe *Essentials* 1006).

Isolated, controlled experiments, such as the type that Goethe's Faust had been performing, yielded as incomplete information as Marlowe's Doctor Faustus's reliance on books.

A consequence of Goethe's holistic worldview is that he was driven to seek

unified underlying order in scientific phenomena. He called such phenomena *Urphanomen*, and felt that these "coherent and universal laws" were observable and self-evident, and could be applied to the complexity of the natural world to help make order out of seemingly disparate phenomena (Williams 259). In botany, for example, Goethe strove to find an example of the *Urpflanze*, or the primal form of a plant, from which all other plants were modeled (Williams 265-6). His search for an *urtyp* of animal to explain the similarities in the morphology of many animals led to his discovery of the intermaxillary bone in humans in 1784, although the discovery was not published until 1820 (Williams 265).

The elements to which Goethe most strenuously objected were central to the post-Newton scientific worldview. Goethe objected to the reliance upon scientific instrumentation to isolate and experiment upon individual elements of scientific problems (Smith 201), and the use of mathematics to reduce physical phenomena to numerical data (Williams 258). John R. Williams explains Goethe's attitude towards mathematics thus:

> "calculation is a process of abstraction that removes the natural world from the reality perceived by our senses and strips it of its richness, its diversity and its individuality. A system of quantitative signs cannot adequately represent what we know qualitatively through experience; at best, mathematics is a self-contained system of logic, at worst a manipulation of unreal ciphers within a self-justifying system that bears no true relation to essential reality" (258).

Goethe felt that math "abstracted" the phenomenon from the observer and removed the human element. The use of scientific instrumentation had a similar effect in Goethe's view, and although this isolation of the observed from the observer is typically the goal of

scientific experimentation, Goethe felt this actually prevented the scientist from truly engaging with the natural world (Smith 201). Additionally, Goethe was not a competent mathematician, and yet he believed that he had an excellent grasp of scientific phenomena despite this shortcoming, and did not believe that his insights were any less valuable due to the lack of numerical data attached to them. In a response to a critic's attack on a critic of a Newtonian scientist on the basis of lack of mathematical data, Goethe said "what wonderful expressions! - as if there were no accuracy other than a mathematical one" (Jackson 678). Goethe referred to the prevailing European scientific community as the "physico-mathematical guild" (Williams 258).

Goethe's Faust introduces the idea that experimentation upon isolated phenomena does not yield complete, unified, intuitive knowledge. After his encounter with the Erdgeist, Faust despairs of his capacity to learn anything about nature's ultimate secrets (Goethe *Faust* 656-686), berating his books and even his experimental instruments, "You instruments, you mock me, I can see,/ With wheel and pulley, cylinder and cords:/ I faced the gate, you were to be the key" (Goethe *Faust* 668-670). Goethe clearly did not feel that organized systems of education such as European universities of his day offered much in the way of practical, applicable learning, and used his character Faust to express his dissatisfaction with those shortcomings. Moreover, with these lines the author demonstrates his conviction that "neither books nor elaborate scientific instruments will afford the Faustian individual this knowledge. It is not the 'wort' [word] that leads to understanding, but the deed" (Williams 201).

The scientific work to which Goethe devoted the most time and care was *Zur Farbenlehre*, which was a treatise on optics and color. Goethe started the work in the

1790's and finally published it in 1810, to an extremely unenthusiastic response (Williams 32). He devoted so much time to this work because although it was intended to disrupt the thinking of the scientific community about instrument-mediated, math-dependent scientific research methods, it was also a deeply personal work that reflected Goethe's spiritual beliefs. *Zur Farbenlehre* was intended as a rebuttal to Newton's deconstruction of white light into seven separate colors using an instrument, a prism, and in opposition to the evidence of the senses. This offended the unity-minded, holistic Goethe deeply. In his words, he believed "That [Newton's crucial experiment] is a priestly invasion because the Church divided You, God, in three, as they divided Light into seven" (Jackson 683). It was, in fact a "theology of color" (Williams 263) and the ideas that underlie the explanation of the phenomenon of color are also the ideas that form the basis of Goethe's scientific views. Goethe agitated for reform in the scientific community and actually connected his own struggle against Newtonian science and color theory with the Reformation movement of the sixteenth century, casting himself in the subversive role of Martin Luther in his battle against the Newtonian scientific establishment (Jackson 682).

The cornerstone of Goethe's color theory is that light and darkness are two ends of a polarity and that the mixing of these two opposites produces all of the colors. It is worth mentioning that the mix of light and darkness was, for Goethe, a metaphor for the human condition and the mix of good and evil striving against each other that makes up day-to-day experiences (Williams 262). Additionally, Goethe posited that the eye is an active observer of color, and that in perceiving one color, it will "demand" its complementary color (Williams 262). There are only two primary colors in this system, which are yellow,

an active "plus" color, and blue, a passive "minus" color. Green is a balanced mixture of the two, and "if they are in perfect balance, our senses wish for nothing further" (Williams 263). This single color theory provides two examples of "polarities," or polar opposites, and the striving against each other of these opposing pairs is what brings all the activity to our universe and underlies all phenomena. These two *Urphanom*, polarity and intensification, are the driving phenomena in nature. Goethe believed that the principle of polarity was most clearly demonstrated by magnets; "where attraction and repulsion, north pole and south pole, together-and only together-produce the phenomenon of magnetism" (Williams 260).

Polarities are pairs of opposites: heat and cold, activity and passivity, heavy and light, hard and soft, male and female, up and down, expansion and contraction, are all examples of these opposing pairs. Even experiences and emotions, like love and hate, are examples of these polarities. Accompanying the constant push-pull of polarities is the striving to increase, or intensify, in the process. "In polarities, Goethe saw the rhythm of the universe, the heartbeat of creation that produced the dynamic *steigerung* (increase) of existence" (Williams 259).

This holistic approach coupled with the assumption of polarities leading to "intensification," a term which may be considered to mean developmental differentiation, was how Goethe identified the intermaxillary bone in a human fetus in 1784 (Boerner chapter 5). Goethe discovered this bone in humans by considering the intermaxillary bone in other mammals, including apes. Goethe was convinced of the presence of patterns underlying the entire natural world and had already conceived of a kind of evolutionary progression, called "the Great Chain of Being," from the original patterns of

plants and animals to the variety of organisms in the world at present. Based upon the belief in original patterns and reasoning that humans are higher on the chain of being than apes, Goethe came to the realization that humans must have the intermaxillary bone as well, surmising that it must disappear after infancy (Safranski 255-6). Goethe interpreted " . . . the discovery of the intermaxillary bone in humans (which he also describes as a sudden insight) as a glimpse into the total interconnectedness of nature," (Safranski 66).

Goethe's longing for unity is expressed and demonstrated in *Faust*, both Part One and Part Two. Although his most mature scientific ideas were written in the last twenty years of the writing of *Faust,* some of his developing ideas on the unity of all phenomena are evident in the *Urfaust.* The Erdgeist has been included since the first versions of the play and he introduces and demonstrates Faust's desperate attempt to have direct, unmediated experience of nature and its secrets. Faust manages to summon the Erdgeist through the use of a book, and discovers that he is not able to withstand the direct experience and thus not able to take in the knowledge that the Erdgeist possesses (Goethe *Faust* 481-521). Goethe's Faust had not yet accomplished the necessary experiences that would enable him to understand the direct experience of ultimate reality, which is essentially what the rest of the play, both Part One and Part Two, is all about. Faust is plunged into a pit of self-loathing as a result, and plunged even deeper by the appearance of his famulus, Wagner, and the ensuing vapid conversation. Wagner, content with his proscribed scholarly existence, says to Faust immediately after the departure of the Erdgeist:

"Ah me, thus pent within one's study walls,

Seeing the world on holidays at best,

By spyglass afar, on rare occasion," (Goethe lines 530-532)

Thus reinforcing Faust's disgust with the artificiality of scholarly life. Faust recognizes the futility of second-hand knowledge gleaned from books, saying:

"These hundred shelves, is it not dust that bent
Their lofty walls into a cell which stifles,
A universe of moths where I am pent
Into a dustbin with a thousand trifles?
Here would I find the thing I lack?
Am I to plow a thousand books to read" (Goethe lines 656-660)

Note the use of the word "pent" in both quotes. Wagner accepts it as a positive aspect of scholarly life, and Faust regards it as a prison. Faust's failure and frustration in regards to his lack of first-hand knowledge from experience leaves him vulnerable to Mephistopheles's manipulation, but this very manipulation is what goaded Faust to constant activity. Faust was not saved simply because Goethe lived in a time that valued curiosity and the pursuit of scientific knowledge. Faust was saved because he continually strived for unified knowledge through direct experience.

Although occult and magic subjects were no longer topics for which mainstream intellectuals had any respect, they were still alive and well, if forced underground (Principe 89). Goethe did not write about magic as a separate domain of knowledge outside of his fictional writings, but he did not dismiss it either. If the word "mystical" is substituted for the word "magic" in the discussion of Goethe's conceptualization of science and religion, then it captures, at least in part, Goethe's unified approach to all three domains. It reveals the rationale behind Goethe's belief that the mechanical

philosophy and mathematics-dependent experimental science had swung the permissible "ways of knowing" the secrets of nature too far towards the rational, materialist conception of reality, at the expense of holistic knowledge (Jackson 678). He was not alone in this view; practicing alchemists and other scientists possessing a mystical worldview held similar views (Principe 91). The popularity of secret societies such as Freemasonry and the Rosicrucians surged during Goethe's lifetime as a result, providing supportive and secretive communities in which to continue occult practices (Principe 91). Many of Goethe's public battles would involve attempts to crack the solid wall of Newtonian dogmatism that excluded the interaction of mystical elements in scientific study (Williams 195-6). This early experience with Dr. Metz elucidates the origin of Goethe's worldview, and it is strongly reflected in characters and events in *Faust.* Goethe's conception of the intertwined nature of science, magic, and religion, combined with the encouragement to strive to learn nature's secrets as a participant in nature, is what ultimately enables the salvation of Goethe's Faust character.

Marlowe experienced religion, science, and magic in a completely different way than Goethe did due to their differing historical contexts. Marlowe's era was very proscriptive, but there were clandestine avenues through which information could flow. Marlowe was a spy, after all, and would have known how to tap into these avenues. As a spy and a member of society in Elizabethan England, he understood better than most people the need to cloak his real thoughts and ideas in coded language in his plays. His Doctor Faustus character needed to be damned from the beginning of the play to ensure that no one accused Marlowe of heresy. Doctor Faustus had to be damned, in order for Marlowe to get away with having that character say the blasphemous lines he said, as

well as deliver the social criticisms. In contrast, Goethe live at a time when holding a different opinion on religion, science, and magic was less likely to end in execution. Goethe's Faust was free to renounce his university studies and embark upon a life of activity, exploring mystical and scientific ideas along the way. The problem for Goethe's Faust was not that he could not study science at university, but that the objective methods in which science was studied did not yield complete, intuitive knowledge, which frustrated him to the point of suicidal despair. The play deals with a character that grows spiritually as well as in scientific knowledge through continuous activity, thereby ensuring his salvation. The Scientific Revolution opened up the study of the natural world in a fashion that was unimaginable to people of Marlowe's era, but by the time of Goethe's era, it had gone too far towards the rational, in Goethe's opinion. These differences in historical context and the relative authority of religion, science, and magic doomed Marlowe's Doctor Faustus and enabled the salvation of Goethe's Faust.

Faust in Context: Conclusion.

Marlowe's play did not make any secret of the fate of Doctor Faustus's soul; it was clear from the beginning that he was damned. It can even be considered clear that in Calvinist Elizabethan England, Doctor Faustus was damned long before he sold his soul to the devil. In light of the doctrine of predestination, it wouldn't make a difference if Doctor Faustus sold his soul to the devil or not. There was nothing he could do or not do to earn God's grace. Regardless, Marlowe could have found a way to save his Doctor Faustus character. Marlowe included traditional morality play characters suggesting that such redemption was possible, but he only used them to demonstrate how thoroughly ensnared Doctor Faustus was. Doctor Faustus would not have been in the untenable

position he was if not for centuries of rigid control of permissible knowledge and permissible ways to gain that knowledge, as well as the condemnation of curiosity. At that time in history, so many natural phenomena had unknown causes that people who delved into natures secrets were suspected of dealing with demons in any case, so Doctor Faustus's resort to black magic would have still been reprehensible, but not surprising.

The already-damned Doctor Faustus made a perfect vehicle to utter the criticisms that Marlowe did not dare to express openly. The outrageous statements Doctor Faustus made were rendered innocuous by the fact that his punishment was a foregone conclusion. But the statements were made and the audience heard them, and it is reasonable to believe that like-minded members of the audience understood the criticisms Marlowe was making. It is entirely possible that Marlowe was an atheist, having been influenced by classical humanist literature while attending college. Whether or not this is the case, Marlowe's Doctor Faustus, as a reprobate, is trapped in a situation not of his own making who makes his situation worse by making a desperate deal with the devil in an attempt to get the things out of life that he wants that he is prevented from obtaining through approved means: knowledge, power, and social status. A person of his station is simply not supposed to have any of them. Marlowe's Doctor Faustus resembled the scholarship student that Marlowe was in so many ways that it is reasonable to believe that Marlowe identified with him. Marlowe was likely trapped every bit as much as Doctor Faustus was, in the dangerous world of espionage, having made a deal with his own devil in exchange for the funds he needed to complete his MA.

We probably would not be still talking about this play today if Doctor Faustus had been saved, however. It would have disappointed audiences who attended the play hoping

to see a dramatization of a popular tale, the end of which everyone already knew. Taking the risk of changing Doctor Faustus's fate might have negatively impacted the popularity of the stage production thus making later playwriting gigs fewer and farther between. This is an outcome that an author dependent on income from playwriting would be motivated to avoid. For all of these reasons, and not simply because it was consistent with the original Faust tale, Marlowe's Doctor Faustus was doomed to damnation.

The elevation of the status of science to be nearly equal with religion as the gate-keepers of permissible knowledge, coupled with the reformation of curiosity from a vice in the sixteenth century to a virtue in the eighteenth century was among the differences between the circumstances of the two authors that enabled the change of the Faust character's status from degenerate sinner to redeemed hero. But Lessing's insight that the Faust character should not lose his eternal soul due to his curiosity was just a starting point for Goethe; mere salvation due to the elevated status of curiosity and demystification of natural phenomena was hardly the issue for Goethe. For Goethe, the real issue was demonstrating a hero who develops scientific understanding that involves the whole person actively engaged with the phenomena. It was Goethe's belief that objectivity in observation of physical phenomena actually distanced the observer from the phenomena. Goethe believed that strictures upon knowledge imposed by religion were replaced by a system that is just as controlling of knowledge and how one discovers knowledge: empirically based, mathematics dependent experimental science, and its chief prophet whose methods may not be questioned was Isaac Newton. Goethe's *Faust,* particularly *Part Two*, was a reaction against that newer dogma and a demonstration of the superior value of direct, interconnected experience in scientific research. Only

subjectivity, in Goethe's view, could yield full, complete, and intuitive knowledge of natural phenomena. Goethe's Faust was engaged with striving for greater, more complete knowledge through constant activity from the beginning of the play until the end, and that is ultimately what earned him salvation.

The historical context of each author suggested the fates of each of their Faust characters, but because they were both authors and creative people, they could have chosen to depart from the story provided by the source material and from the prevailing zeitgeist of the era, as each of them had several times in their respective plays. What ultimately determined the fates of the two Faust characters were the authors' personal motivations for writing their plays. Marlowe's motivations were to write a popular play and to use it to criticize the repressive social hierarchy that used religion and science to stifle social mobility. For this, Doctor Faustus had to be damned. Goethe's motivation initially was to reclaim the German folk tale for German people, but then over the years, his motivation expanded into using the play to protest what he saw as the stifling prevailing scientific dogma and to demonstrate an alternative method that would create a unified body of knowledge. Goethe's Faust succeeded, and this enabled his salvation.

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On my honor, I have neither given, nor received, nor witnessed any unauthorized assistance on this work.