

# History of Ideas Timeline

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### 3000 B.C. Egypt Organized and Unified

From the time of its founding, Egypt, for the most part, maintained its independence from other nations. This independence was partly because of Egypt's relatively isolated location. Egypt is notable for how it conserved many societal beliefs for long periods of time. The Egyptian system of life was apparently working, and so, any attempts to introduce changes were dismissed. Egypt, like other nations, adopted a hierarchical structure for society.<sup>1</sup> Egyptian social ranks consisted of a large noble class, an official class, a literary class, and the regular population.<sup>2</sup>

**Divine Leaders: The Pharaoh was viewed as being more than just a man. He held a special position as being a link between the earthly and the transcendent realms.**

### 2500 B.C. Indus Valley Civilization Established

In and surrounding the cities of Mohenjo-daro and Harappa near the Indus river in what is now western Pakistan, a great civilization arose which consisted of over 50,000 people. It is believed that this people were organized in a caste system similar to that of modern India.<sup>3</sup>

**The Caste System: Citizens were born into a certain societal class (caste) based on their family. This organized society into priests, warriors, commoners or merchants, and artisans or laborers.**

### 625 B.C. Thales

Thales, a Greek philosopher from Miletus, is commonly referred to as the first philosopher and scientist. According to many, Thales was the first philosopher to offer a theory for a universal of reality. Allegedly, Thales speculated that everything in the universe, when broken down to its most fundamental level, consists of water.<sup>4</sup>

**Metaphysics: Thales proposed that there is one underlying principle for all matter.**

### 580 B.C. Pythagoras

Pythagoras established a system of philosophy which attempted to understand the world by relating it to mathematics. Beginning by observing how music could be translated into ratios, Pythagoras set out to find other connections between reality and numbers.<sup>5</sup>

**All is Math: Pythagoras and his followers attempted to explain the universe through mathematics.**

### 563 B.C. Siddhartha Gautama, the Buddha

Gautama was born into a family of Indian royalty and lived a life of pleasure in his younger years. But, when he reached the age of 29, he experienced a change in perspective as he witnessed the suffering in the world. This led him to depart from his lavish lifestyle and begin a journey to discover the reason for suffering. After seeking the answer in various philosophical schools of thought and failing to arrive at a

<sup>1</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 4-5.

<sup>2</sup> George Rawlinson, *The Story of the Nations, Ancient Egypt* (London: G.P Putnam's Sons), 1887, 43-44.

<sup>3</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 6.

<sup>4</sup> *Ibid.*, 31.

<sup>5</sup> *Ibid.*, 34-35.

satisfying answer, he began to meditate. He claimed to have come to an enlightenment of the Truth. His philosophy is expressed in the Buddhist eight-fold path.<sup>6</sup>

**Religious-based Moderation: Gautama taught people to find the balance between indulgence and self-mortification, for both were forms of overindulgence.**

#### 551 – 479 B.C. Confucius

Confucius, an orphan from a family of Chinese nobility, lived a difficult life, yet managed to educate himself and to gather a group of followers. According to his teachings, one's place in society should not be based on one's birth, but on merit. Although Confucius' ideas never took hold during his life, they were later adopted by the Chinese leader Shih Huang-ti.<sup>7</sup>

**Merit System: Societal hierarchy should be based on merit alone rather than birth.**

#### 550 B.C. Reign of Cyrus the Great of Persia

#### 525-465 B.C. Aeschylus

Aeschylus, a veteran of the famous battle of Marathon, is often referred to as the father of drama. He introduced the concept of multiple characters interacting on stage rather than simply a dialogue between one character and a god.<sup>8</sup>

**Drama: Aeschylus incorporated the interaction of multiple characters into his plays.**

#### 520 B.C. Reign of Darius the Great of Persia

496-406 B.C. Sophocles added some elements to Greek tragic drama.

490 B.C. First major Persian attack on Greece

The Persians were defeated at the battle of Marathon.<sup>9</sup>

#### 484-406 B.C. Herodotus

Herodotus was an avid traveler and historian. His writings concern the events surrounding the Persian wars, the rise of the Medes and Persians, and even a history of Egypt.

#### 480-465 B.C. Reign of Xerxes of Persia

480 B.C. Second Persian attack on Greece

Xerxes, the newly crowned king of Persia, personally led a vast army of men and ships to conquer Greece once and for all. Leonidas led a small detachment of Spartans against them, using the narrow pass of Thermopylae as a choke point. After fighting valiantly for days, the Spartans were betrayed by one of their own, surrounded, and defeated. Xerxes' army then invaded Athens, destroying much of the city with fire. Meanwhile, the Persian navy was destroyed at Salamis by Athenian ships which were

<sup>6</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 21-22.

<sup>7</sup> *Ibid.*, 8.

<sup>8</sup> *Ibid.*, 51.

<sup>9</sup> *Ibid.*, 49.

more maneuverable. Then, a coalition of Greek armies pushed back the Persians at the battle of Plataea. In the end, Xerxes returned to Persia, giving up the campaign.<sup>10</sup>

#### 470 B.C. Socrates

Socrates, a successful veteran of the Peloponnesian wars, made more enemies than friends with his philosophical methods. Unlike other philosophers who asserted their own knowledge, Socrates admitted his own lack of knowledge, and set out to prove that others were equally ignorant. His method of exposing their folly was to question the basis of their underlying assumptions. Thus, he would ask abstract questions such as “What is beauty?” or “What is goodness?” Eventually, a rather annoyed Greek society condemned him to death by poisoning, having found him guilty of corrupting the youth and impiety.<sup>11</sup>

**Socratic Method: Socrates evaluated philosophies by questioning their presuppositions.**

460 B.C. Thucydides was a historian who recorded the events of the Peloponnesian wars.

#### 460 B.C. Democritus

Born in Thrace, not far from Macedonia, Democritus was one of three heirs to his father’s great wealth. Instead of inheriting lands or buildings, Democritus selected his father’s money as his portion with the intent of using it to travel abroad. Over the course of many years, he learned geometry in Egypt, Chaldean knowledge in Persia, Hindu philosophy in what is now Pakistan and India. Like Thales, he sought to discover a single unchangeable principle underlying all matter. As a result, he devised an atomic theory.<sup>12</sup>

**Atomic Theory: Democritus proposed that all matter consists of very small atoms; that those atoms are in perpetual motion; that atoms had intrinsic self-sustained motion; and that neither weight nor gravity was a property of atoms.**

450 B.C. Roman Law codified on twelve tablets.

434-431 B.C. The Peloponnesian Wars (civil war between Athens and Sparta)

#### 427 B.C. Plato

Plato was a follower of Socrates, and it only through his writings that any of Socrates’ teachings have come down to us. He established an academy in Athens in 387 B.C. for the purpose of furthering philosophy and mathematics.<sup>13</sup> His most famous work is *The Republic*, in which he presents his vision of a utopian society ruled by philosopher kings.

**Rationalism: Plato believed that reality could be understood through logical reasoning.**

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<sup>10</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 49.

<sup>11</sup> Ibid., 42-43.

<sup>12</sup> Ibid., 38-40.

<sup>13</sup> Ibid., 43.

### 384 B.C. Aristotle

Aristotle was born in Stagira, Macedonia, and was sent to Plato's academy at a young age. While Aristotle was Plato's student for twenty years, the two had numerous disagreements. Following Plato's death, Aristotle traveled about establishing other academies. He also served as a personal tutor to Alexander the Great. In 335 B.C., he opened the Lyceum in Athens. This was to be a center for science.

**The Science of Logic: Aristotle devised a system of rules for thinking.**

**Empiricism: Aristotle believed that scientific observation was the best method for finding truth.**

**Science: Aristotle categorized knowledge into specific areas for study.**

In contrast to Plato, who searched for truth using rationalism, Aristotle believed that making observations of the world was the best way to discover truth.<sup>14</sup>

### 341 B.C. Epicurus

Epicurus started out in Samos where he was born, and then spent the remainder of his life in Athens. He gathered his followers at an informal school called the Garden. He taught that the measure of goodness is one's happiness. He urged his followers to live in simplicity and temperance.<sup>15</sup>

**Epicureanism: Epicurus taught that pleasure or happiness is the ultimate good.**

### 336-323 B.C. Reign of Alexander the Great

After being crowned king of Macedonia in 336 B.C., in the spring of 334 B.C., Alexander began his famous campaign which would conquer much of the known world. From 334-333, he conquered western Asia minor. In 332, he defeated the city of Tyre. Shortly thereafter, he conquered Egypt. By the year 330 B.C., he had conquered all of the major Persian cities.<sup>16</sup>

### 335-263 B.C. Zeno the Stoic

Zeno, another Greek philosopher with a school in Athens, taught that one can attain happiness by conforming to the Divine reason, by simply being content with everything as it is.<sup>17</sup>

**Stoicism: Zeno taught that people should endure hardship without acknowledging feelings or passions.**

312 B.C. Construction begins on the first major Roman road, the Via Appia.

250-150 B.C. War between Rome and Carthage

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<sup>14</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 43-44.

<sup>15</sup> Ibid., 71.

<sup>16</sup> Ibid., 50, 62.

<sup>17</sup> Ibid., 71.

Carthage was defeated in 201 B.C. as Scipio Africanus defeated Hannibal in the plains of Zama, Tunisia. Carthage did recover, but was conquered again and completely destroyed in 146 B.C.<sup>18</sup>

#### 234-149 B.C. Cato the Censor

Cato, upon being elected as a censor in 184 B.C., worked to prevent Greek morals and customs from being adopted by Romans.<sup>19</sup>

#### 220 B.C. The Great Wall of China is completed

#### 106 B.C. Marcus Tullius Cicero

Although Cicero was not born into nobility, he made himself quite valuable to the Roman emperor by studying in Greece. In fact, his talent and knowledge was sought after by both Caesar and Pompey who were battling for control of the republic. Cicero prided himself on taking Greek ideas and translating them into the vernacular. Cicero encouraged people to obey the law and do what was right. He believed that everyone had an intrinsic knowledge of right and wrong, and urged them to live according to it. He viewed governing of oneself as the fundamental key to striking the difficult balance between personal freedom and peace.<sup>20</sup>

**Self-government: Cicero taught that a balance between personal freedom and societal peace could be attained if everyone followed an intrinsic understanding of good.**

#### 95-51 B.C. Lucretius Carus

Lucretius wrote his famous poem, "On the Nature of Things," a philosophical work which implies that happiness results from moderation. He believed that happiness was the reward for a life of virtue. He was a follower of Epicurus.<sup>21</sup>

#### 70-19 B.C. Virgil

Virgil wrote his famous Latin epic, Aeneid, which is his attempt at informing Romans about their history.<sup>22</sup>

#### 63 B.C. The Romans conquered the Jews

#### 27 B.C.-14 A.D. Reign of Augustus

Augustus' reign lasted from 30 B.C. to his death in 14 A.D. Throughout this time, he attempted to restore the Roman empire to its former grandeur.<sup>23</sup>

#### 14-37 A.D. Reign of Tiberius

#### 37-41 A.D. Reign of Caligula

#### 41-54 A.D. Reign of Claudius

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<sup>18</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 63.

<sup>19</sup> Ibid., 65.

<sup>20</sup> Ibid., 72-76.

<sup>21</sup> Ibid., 70-71.

<sup>22</sup> Ibid., 60.

<sup>23</sup> Ibid., 63.

54-68 A.D. Reign of Nero

56 A.D. Tacitus

Tacitus, who lived a life in Roman politics, is the author of *Histories* and the *Annals*.<sup>24</sup>

68-69 A.D. Civil War in Roman Empire

During this period, there were four rulers competing for the position as emperor: Galba, Vitellius, Otho, and Vespasian.

79-81 A.D. Reign of Titus

81-96 A.D. Reign of Domitian

96-98 A.D. Reign of Nerva

98-117 A.D. Reign of Trajan

105 A.D. Ts'ai Lun invents paper in China.

117-138 A.D. Reign of Hadrian

138-161 A.D. Reign of Antoninus Pius

161-169 A.D. Reign of Marcus Aurelius with Lucius Verus

169-180 A.D. Reign of Marcus Aurelius

180-192 A.D. Reign of Commodus

193-193 A.D. Reign of Pertinax (ruled from January 1 to March 28)

193-193 A.D. Reign of Didius Julianus (ruled from March 28 to June 1)

193-193 A.D. Reign of Niger, Albinus, Septimius Severus

193-211 A.D. Reign of Septimius Severus

211-211 A.D. Reign of Geta and Caracalla

211-217 A.D. Reign of Caracalla

217-218 A.D. Reign of Macrinus

218-222 A.D. Reign of Elagabalus

222-235 A.D. Reign of Alexander Severus

235-238 A.D. Reign of Maximinus Thrax

238-238 A.D. Reign of Gordian, Gordian II, Pupienus, Balbinus

238-244 A.D. Reign of Gordian III

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<sup>24</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 83.

244-249 A.D. Reign of Phillipus Arabs

249-251 A.D. Reign of Decius

251-253 A.D. Reign of Trebonianus Gallus

253-253 A.D. Reign of Aemilius Aemilianus

253-260 A.D. Reign of Valerian and Gallienus

260-268 A.D. Reign of Gallienus

268-270 A.D. Reign of Claudius II

270-270 A.D. Reign of Quintillus

270-275 A.D. Reign of Aurelian

275-276 A.D. Reign of Tacitus

276-276 A.D. Reign of Florianus

276-282 A.D. Reign of Probus

282-283 A.D. Reign of Carus

283-284 A.D. Reign of Numerian and Carinas

284-285 A.D. Reign of Carinas and Diocletian

285-286 A.D. Reign of Diocletian (Diocletian split the Roman Empire into two parts, east and west)

286-305 A.D. Reign of Diocletian (Eastern Empire) and Maximium (Western Empire)

304-305 A.D. Diocletian persecution of Christians

305-306 A.D. Reign of Constantius I (Western Empire)

305-308 A.D. Reign of Galerius (Eastern Empire)

306-307 A.D. Reign of Severus II and Maxentius (Western Empire)

307-308 A.D. Reign of Maxentius, Maximium, Constantine (Western Empire)

308-312 A.D. Reign of Maxentius and Constantine (Western Empire)

308-310 A.D. Reign of Galerius and Licinius (Eastern Empire)

310-311 A.D. Reign of Galerius, Maximinus Daia, and Licinius (Eastern Empire)

311-313 A.D. Reign of Maximinus Daia and Licinius (Eastern Empire)

312-337 A.D. Reign of Constantine (Western Empire)

Constantine was the son of a Roman officer in line to become Caesar. Constantine's own rise to the position of Caesar came after he defeated his brother-in-law, Maxentius, at the famous battle of Milvian



Bridge. It was on the night before this battle that Constantine had a dream in which an angel held a cross and said, "In this sign thou shalt conquer!" The next day, he ordered his men to paint crosses on their shields and equipment before the battle; and when Constantine's army prevailed, his victory served for him as personal confirmation for the Christian faith. As a result, he made Christianity the official religion of the Roman Empire.<sup>25</sup>

313-324 A.D. Reign of Licinius (Eastern Empire)

324-337 A.D. Reign of Constantine over newly unified Empire

337-340 A.D. Reign of Constantine II, Constans, and Constantius II

340-350 A.D. Reign of Constans and Constantius II

350-360 A.D. Reign of Constantius II

354-430 A.D. Augustine

Aurelius Augustinus was born in Tagaste, Africa. Even in his young years, his family began to realize his potential and sent him to New Carthage to study. As he was exposed to various philosophical works, Augustine's interest was sparked. After dabbling in Manicheanism and Neoplatonism, Augustine eventually came to an understanding of the Scriptures. From the time of his conversion to Christianity in 386 A.D., he spent his time working in ministry and writing. His most influential book is *The City of God*, in which he exposes the internal contradictions of Roman paganism and sets forth Christianity as a more rational explanation of reality. He suggested that there are two cities, an earthly city and a heavenly city. All people who lived for temporal things were subjects of the earthly, and all people who lived for eternal things were subjects of the heavenly. This book, which was actually a long letter, had a massive impact on how people thought for the next eight centuries.<sup>26</sup>

City of God: Augustine taught that all people lived for either the heavenly city, representing a life lived unto God, or the earthly city, representing a life lived for temporal and passing things.

360-361 A.D. Reign of Constantius II and Julian

361-363 A.D. Reign of Julian

Often called Julian the Apostate, he attempted to make paganism the official religion of the Roman Empire.<sup>27</sup>

363-364 A.D. Reign of Jovian (The Empire is divided again upon his death)

364-367 A.D. Reign of Valentinian (Western Empire)

364-378 A.D. Reign of Valens (Eastern Empire)

367-375 A.D. Reign of Valentinian and Gratian (Western Empire)

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<sup>25</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 91.

<sup>26</sup> Ibid., 92-95.

<sup>27</sup> Ibid., 92.

375-383 A.D. Reign of Gratian and Valentinian II (Western Empire)

379-395 A.D. Reign of Theodosius (Eastern Empire)

383-392 A.D. Reign of Valentinian II (Western Empire)

392-394 A.D. Reign of Eugenius (Western Empire)

395-423 A.D. Reign of Honorius (Western Empire)

395-408 A.D. Reign of Arcadius (Eastern Empire)

402 A.D. The capital of the Roman Empire was moved from Rome to Ravenna.

408-450 A.D. Reign of Theodosius II (Eastern Empire)

410 A.D. The Visigoths sacked Rome.

423-425 A.D. Reign of John (Western Empire)

425-455 A.D. Reign of Valentinian III (Western Empire)

450-457 A.D. Reign of Marcian (Eastern Empire)

451 A.D. The Huns, under Attila, were defeated by a combined Roman and Visigoth army.

455 A.D. The Vandals sacked Rome.

455-455 A.D. Reign of Petronius Maximus (Western Empire)

455-456 A.D. Reign of Avitus (Western Empire)

457-461 A.D. Reign of Majorian (Western Empire)

457-474 A.D. Reign of Leo (Eastern Empire)

461-465 A.D. Reign of Severus III (Western Empire)

467-472 A.D. Reign of Anthemius (Western Empire)

472-472 A.D. Reign of Alybrius (Western Empire)

473-474 A.D. Reign of Glycerius (Western Empire)

474-475 A.D. Reign of Julius Nepos (Western Empire)

474-476 A.D. Reign of Zeno (Eastern Empire)

475-476 A.D. Reign of Romulus Augustus (Western Empire)

480 A.D. Boethius

Boethius, who was born in Rome, endeavored to translate the works of Aristotle from Greek into Latin. Although he fell short of translating all of Aristotle's work, he was able to translate the *Organon*, which concerns Aristotle's rules of logic.<sup>28</sup>

493 A.D. The Ostrogoths took Ravenna and most of Italy.

480-547 A.D. Benedict

When Benedict saw the luxuries of Rome, he was shocked and determined to live a life of poverty, prayer, and good works. He decided to live in a cave which was located near the remains of Nero's palace near Subiaco. After living there for three years, he began to attract the attention of the public. Eventually, he developed a system of rules for monks who would live in monasteries. And so began the Benedictine traditions which has come down through the centuries.<sup>29</sup>

**Monasticism: In contrast to the lives of church officials in Rome, Benedict taught his followers that a holy life was a life of poverty, prayer, and good works.**

521-527 A.D. Reign of Justinian

Justinian reigned from 517 to 565 A.D. from the city of Constantinople. He developed the Codex Constitutionum which remains the basis for much of modern law.

570-632 A.D. Muhammed

Muhammed is the founder of the religion of Islam. When he was approximately 40 years old, he allegedly received a message from Allah (The Muslim god) through the angel Gabriel. Over time, he continued to receive messages which were later recorded as the Quran.<sup>30</sup>

**Religious World Domination: Islam means submission, and is a religion of forced conversions under the fear of death: "Make war on them until idolatry is no more and Allah's religion reigns supreme" (Surah 8:39)**

642 A.D. Omar, successor of Muhammed, conquered Alexandria.

732 A.D. The western spread of Islam is stopped at Poitiers, France.

742-814 A.D. Charlemagne

980 A.D. Avicenna

Avicenna, who was born in Bukhara in 980, was soon recognized for his intellect. By the time he was ten years old, he had already committed the Quran to memory. Though he lived a difficult life, Avicenna was a prolific writer. One of his most notable works was *The Book of Healing*, which concerned philosophy and science. Also, he wrote *The Canon of Medicine*. Avicenna was a student of the Greek philosophers, and his works are laced with their ideas, especially those of Aristotle. Overall, Avicenna proved himself to be one of the greatest Muslim philosophers of all time.<sup>31</sup>

<sup>28</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 113.

<sup>29</sup> Ibid., 96, 106.

<sup>30</sup> Ibid., 19-20.

<sup>31</sup> Ibid., 114-115.

1000 A.D. Gunpowder invented in China

1099 A.D. Jerusalem is taken by Catholic crusaders.

1079 A.D. Peter Abelard

Although he was the son of a knight, Abelard forfeited his potential military opportunities in favor of becoming a philosopher. His specialty was logic, and he used his talent to devise resolutions to many apparent theological contradictions in a book called *Sic et Non* (Yes and No).<sup>32</sup>

1126 A.D. Averroës

Averroës, one of the great Arabic philosophers, was born in Spain, in the city of Córdoba. From a young age, he developed a reputation for his learning. Between 1169 and 1195, he wrote many commentaries on the works of Aristotle, hoping that Greek philosophy could be introduced into the Muslim culture.<sup>33</sup>

1148 A.D. The second crusade ends in failure.

1167-1227 A.D. Genghis Khan

Genghis Khan unified the Mongols and set out to conquer China. From 1206 to about 1226, the Mongol armies took most of northern China followed by Asia all the way to the Caucasus. Khan Ogedai finished conquering China and Korea. Ogedai may very well have taken Europe if it had not been for his death in December of 1241.<sup>34</sup>

1189 A.D. The third crusade ends in failure.

1198 A.D. The fourth crusade ends in failure.

1215-1294 A.D. Kublai Khan

Kublai Khan reunited the Chinese Empire, founding the Yüan dynasty.<sup>35</sup>

1224 A.D. Thomas Aquinas

Thomas Aquinas was one of the most influential theologians in the history of the Catholic church. He was born between Naples and Rome. Aquinas began his studies at the monastery at Monte Cassino, but later moved to Naples and finally to Paris. Aquinas' greatest endeavor was an attempt to reconcile Augustine's city of God with the city of man.<sup>36</sup>

1254-1324 A.D. Marco Polo

As a young boy, Polo was very familiar with the trade between the east and west. In fact, his family had traveled from Constantinople to Asia in 1260. Kublai Khan sent Polo's father back with a request for a hundred men who could teach his people the seven liberal arts. Unfortunately, this request was not met, but Polo and his father decided to return to Asia anyway. They left on their second journey in

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<sup>32</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 115-116.

<sup>33</sup> Ibid., 117.

<sup>34</sup> Ibid., 169.

<sup>35</sup> Ibid., 169.

<sup>36</sup> Ibid., 119-122.

1271, and eventually made it to the Mongol capital of Shang-tu after three years. When Polo finally returned to Europe about fifteen years later and wrote about his adventures in *Il Milione*.<sup>37</sup>

### 1304-1374 A.D. Francesco Petrarch

Petrarch, who was born in Arezzo, Italy, had a great love for the classic works of the Greek philosophers. Although he is probably most renowned for his poetry, and specifically the Petrarchan style sonnet, he is an important figure in man's continuing movement away from God and toward humanism.<sup>38</sup> In fact, Petrarch is often called the father of Italian Renaissance Humanism.<sup>39</sup>

**Modern Humanism: Though humanism has its roots in Greek philosophy, Petrarch is credited with reviving it. The medieval shift from Theocentric to Humanistic thinking begins with him.**

### 1347 A.D. The "Black Death" plague begins.

In 1347, an army of Kipchaks and Mongols were besieging a Genoese trading post in the Crimea. Some of these attackers from the east were carriers of the virus which would soon devastate Europe. One Genoese ship escaped from the attack, but the plague was carried with it to Sicily. By 1348, Italy and north Africa were becoming filled with cases of the disease; in 1349, Austria, Hungary, Switzerland, Germany, and England were infected. By 1350, the disease had spread as far as the Baltic region. During the plague, it is estimated that at least one third of Europe's population perished.<sup>40</sup>

### 1368 A.D. The Ming Dynasty takes control of China

### 1377-1446 A.D. Filippo Brunelleschi

In the 1440's, Francesca traveled to Florence where he received an education in art. At this time in history, art was going through a transition from flat two-dimensional images to perspective. Francesca's signature work is *Flagellation*, in which a few worldly men are shown in the foreground having a discussion and being completely ignorant to another figure behind them, presumably Christ, who is being whipped.<sup>41</sup>

**Perspective Art: Brunelleschi, an architect and designer, is credited as the first artist to incorporate linear perspective into art.**

### 1420-1492 A.D. Piero della Francesca

### 1440 A.D. Johann Gutenberg invented the printing press.

### 1451-1506 A.D. Christopher Columbus

Christopher Columbus, the son of Spanish-Jewish parents, was born in Italy, but eventually found his way to Portugal where he hoped to realize his dream. Columbus was firmly convinced that the world was round, and that he could discover a westward route to India and China. In 1490, He received the

<sup>37</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 170.

<sup>38</sup> Ibid., 130-131.

<sup>39</sup> Jackson J. Spielvogel, *Western Civilization* 9<sup>th</sup> ed., (Boston: Wadsworth Printing, 2014), 344.

<sup>40</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 151-152.

<sup>41</sup> Ibid., 130.

backing of the crown, and by August 3, 1492, he set out from Portugal with three ships. On October 12, 1492, he landed in the Bahamas on the island which is now called Guanahani.<sup>42</sup>

#### 1452-1519 A.D. Leonardo da Vinci

Leonardo da Vinci was born in the town of Vinci, Italy. During his youth, he had the privilege of learning from artists such as Verrocchio and Antonio Pollaiuolo. Although very few of his paintings survive, these few have had an enormous impact on the world of art from then even to the modern day.<sup>43</sup>

#### 1453 A.D. The Byzantine Empire falls

#### 1473-1543 A.D. Nicolaus Copernicus

Born in 1473, Copernicus soon excelled in learning, having an interest in science. Although he had mastered much of known science by 1500, he decided to set his focus on the study of astronomy. Over time, Copernicus became increasingly convinced that the earth was rotating and that the solar system was heliocentric. Due to his fears of creating religious controversy, he did not release his book *On the Revolutions of the Heavenly Orbs* until he was on his deathbed.<sup>44</sup>

**Rotating Earth and Heliocentric System: Copernicus is the first of the astronomers who began to question the commonly accepted theories that the universe rotated around the earth, and that the earth was the center of the universe.**

#### 1480-1521 A.D. Ferdinand Magellan

Though Magellan died toward the very end of the expedition, his ships were the first to circle the globe in 1521.<sup>45</sup>

#### 1550-1615 A.D. (approximately) Shakespeare

Although Shakespeare's authorship is debated, the enduring effects of his works are not. Shakespeare, who wrote about thirty-five plays, inspired many who followed by cleverly mixing tragedy with elements of comedy and complex characters. His works seem to embody the new thinking of the Renaissance era in that they were highly secular and overtly uncensored.<sup>46</sup>

**The New Secular Drama: Shakespeare's plays characterized the shift in thinking which occurred during the Renaissance. They mixed tragedy and comedy, and contained little if any censorship.**

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<sup>42</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 175-176.

<sup>43</sup> Ibid., 137-138.

<sup>44</sup> Ibid., 195-196.

<sup>45</sup> Ibid., 178.

<sup>46</sup> Ibid., 146-148.

### 1561 A.D. Francis Bacon

Francis Bacon spent the majority of his life working in politics for Queen Elizabeth and King James I, but after being accused of taking bribes and being sent to prison, his political career came to an end. Throughout the rest of his life, he created many notable works, including *Essays*, *Advancement of Learning*, and *Novum Organon*.<sup>47</sup>

**Inductive Science: Rather than making a hypothesis and testing it (deductive method), Bacon taught that a hypothesis should arise from observations (inductive method).**

### 1466-1536 A.D. Desiderius Erasmus

Erasmus was one of the greatest minds of his day, especially with respect to the study of ancient languages. Eventually, his love of Greek and Latin led him to the study of the New Testament. After comparing the Latin Vulgate to the Greek manuscripts he had collected, Erasmus realized that the Vulgate was lacking in accuracy. As a result, he published his own Greek New Testament in 1516. This work, and his later revisions of it, had explosive consequences, for it was soon recognized as a more accurate translation than that of the Catholic church.<sup>48</sup>

### 1483-1546 A.D. Martin Luther

Luther began his religious services as an Augustinian monk, and he was made the professor of theology at Wittenberg in 1510. In time, Luther began to recognize many differences between what he saw in the Scriptures and what he saw being done in the Catholic church. On October 31, 1517, Luther nailed ninety-five theses to the door of the church in Wittenberg. As a result, the protestant reformation began.<sup>49</sup>

**Protestant Reformation: Martin Luther initiated the protestant reformation when he nailed ninety-five theses to the church door in Wittenberg.**

### 1532 A.D. King Henry VIII disavowed the pope and declared himself England's spiritual authority.

### 1544-1603 A.D. William Gilbert

Gilbert discovered the earth's magnetism.<sup>50</sup>

### 1564-1646 A.D. Galileo Galilei

Galilei, who was from Pisa, was the preeminent mathematical physicist of his day. Following in the footsteps of Pythagoras, he showed how mathematics could indeed describe the universe. After hearing about the invention of the telescope in 1609, Galilei designed his own improved version. When he traveled to Rome in 1611, he explained to the pontifical court that Copernicus had been correct, that the earth went around the sun. Sadly, Galilei's assertions were not accepted.<sup>51</sup>

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<sup>47</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 139-140.

<sup>48</sup> Ibid., 159.

<sup>49</sup> Ibid., 163.

<sup>50</sup> Ibid., 197-198.

<sup>51</sup> Ibid., 199-203.

### 1571-1630 A.D. Johannes Kepler

Kepler was born in Wüttemberg, Germany in 1571. He received an exceptional education despite his poor upbringing, and soon became interested in astronomy. Over time, Kepler became convinced that the planets were moving freely through outer space. He published many papers detailing how this explanation was superior to the common views of his day. Eventually, he developed the three laws of planetary motion.<sup>52</sup>

**Kepler's Laws of Planetary Motion: Kepler proposed that planets do not travel in perfectly circular orbits, that planets vary in speed at different points in their orbits, and that there was a ratio between the period of a planet's orbit and its distance from the sun.**

### 1578-1657 A.D. William Harvey

Harvey discovered how the heart pumps blood through the body's arteries and veins.<sup>53</sup>

### 1596-1650 A.D. René Descartes

Descartes, who was originally from France, was a well-educated and devout Catholic. He was well-versed in the philosophy of Aristotle and in the scientific knowledge of the time. Though he had received such an extensive education, Descartes had the nagging feeling that he did not know anything with absolute certainty. He desired to bring a kind of mathematical certainty to every area of scientific knowledge. In 1639, he began his work on obtaining certainty in knowledge by building it up from certain axiomatic truths. But Descartes' methods had undesired consequences, for they ignited the modernism movement which exalted human reason.<sup>54</sup>

### 1618-1648 A.D. The Thirty Years' War in Germany

### 1632-1704 A.D. John Locke

In 1689, Locke's letter on *Toleration* was published. In it, he spoke against those who would torture or kill in the name of faith.

**Religious Tolerance: Locke taught that religion cannot be forced upon those who refuse it inwardly, and that violence committed in the name of religion was rationally unjustifiable.**

**Government for the People: Locke proposed that government was legitimate because of a need to protect personal property; and, a negligent or unjust government might be justly overthrown by those whom it should be serving.**

### 1642-1727 A.D. Isaac Newton

Isaac Newton was a distinguished student at Cambridge and eventually became the professor of mathematics. He is remembered in history for what we call Newtonian Mechanics. In his book,

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<sup>52</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 198-199.

<sup>53</sup> *Ibid.*, 197.

<sup>54</sup> *Ibid.*, 203-205.



*Mathematical Principles of Natural Philosophy*, Newton described his famous four laws of motion. Overnight, Newton seemed to have unlocked the secrets of the universe.<sup>55</sup>

**Newtonian Mechanics: Newton described motion in four laws.**

1723-1790 A.D. Adam Smith

In his book *The Wealth of Nations*, Smith used a pin factory as an example of the marvelous productivity which could be achieved using division of labor.<sup>56</sup>

1729-1797 A.D. Thomas Jefferson

Thomas Jefferson was very familiar with John Locke's views on government, and he was in just the situation to put them into practice. As a result of the harsh treatment and many abuses which the American colonists endured at the hands of the British, many people desired to declare their independence. They found the solution by turning to Thomas Jefferson and his knowledge of John Locke's principles. The result was the American Declaration of Independence in 1776.<sup>57</sup>

1789 A.D. The French Revolution

1800 A.D. Alessandro Volta invents the first battery.

1808 A.D. Sir Humphrey Davy discovered how electricity could be used to produce heat or light.

1809-1882 A.D. Charles Darwin

Charles Darwin was born in Shrewsbury, England. Although he did not invent the concept of evolution, his theory of how evolution could have occurred seemed to make it a viable possibility to many. In 1859, Darwin published the famous book, *On the Origin of Species*, in 1859; and, as if overnight, the world seemed to be flipped upside-down by Darwinian evolution. Darwin based his theory on two main principles. First, there was the common descent of all living organisms. Secondly, Darwin proposed that organisms evolved over long periods of time as the process of natural selection allowed only organisms with beneficial mutations to survive.<sup>58</sup>

**Darwinian Evolution: Darwin proposed that through the process of natural selection and slight modification by mutations, all organisms had evolved from a common ancestor.**

1818-1883 A.D. Karl Marx

Karl Marx was born in Trier, Germany. Although he studied law at the University of Berlin, he left prior to getting his degree in order to join the Left Republicans. Being inspired by the philosophy of G. W. F. Hegel, Marx developed his own system of philosophy which he called dialectical materialism. He

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<sup>55</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 205-209.

<sup>56</sup> Ibid., 214-216.

<sup>57</sup> Ibid., 224-225.

<sup>58</sup> Ibid., 280.

believed that all of social history could be explained by a continuous battle between various classes, and that the only final solution was communism.<sup>59</sup>

**Marxism: Karl Marx theorized that all social history is the consequence of an ongoing battle between classes, and that communism would be the final solution.**

1820 A.D. Hans Christian Orsted discovered how an electric current could generate an electric field around a conductor.<sup>60</sup>

1820 A.D. Britain's industrial labor surpasses agricultural labor.

1826 A.D. The first successful photograph was taken by Nicéphore Niepce.

1831 A.D. Michael Faraday discovered how a magnetic field could generate an electric current in a conductor. This led to the invention of the dynamo, the electric motor, and the transformer.<sup>61</sup>

1847-1931 A.D. Thomas Edison

From the time he was a young boy, Edison exhibited an exceptionally inventive mind. Even in his father's house, he set up a laboratory. He began by taking a special interest in telegraphy. In 1877, he invented the phonograph, and in 1889, the carbon filament lamp.<sup>62</sup>

1856-1939 A.D. Sigmund Freud

Sigmund Freud was a student of medicine at Vienna, and took special interest in neurology and psychiatry. In his early career, he developed some effective treatments for hysteria which involved the patient making associations. It was during this time that Freud discerned the existence of the subconscious. Over time, and after observing many patients, Freud became convinced that the underlying drives of human consciousness were sexual desire and fear.<sup>63</sup>

**Freudian Psychology: Freud proposed that the subconscious mind is driven by hidden sexual desires and fear.**

1861 A.D. The Civil War Begins.

1864 A.D. James Clerk Maxwell shows how electricity, magnetism, and optic phenomena were connected in electromagnetism.<sup>64</sup>

1865 A.D. The Thirteenth Amendment to the Constitution officially abolishes slavery.<sup>65</sup>

1868 A.D. Japan decides to begin imitating the industrial west for its own preservation.

1870-1924 A.D. V.I. Lenin

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<sup>59</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 257-258.

<sup>60</sup> Ibid., 269.

<sup>61</sup> Ibid., 269.

<sup>62</sup> Ibid., 269-270.

<sup>63</sup> Ibid., 281-283.

<sup>64</sup> Ibid., 269.

<sup>65</sup> Ibid., 276.

Lenin was the figurehead for the 1917 Russian revolution. Lenin took Marxist ideas and used them to inspire revolutionaries.<sup>66</sup>

1820 A.D. The United States' industrial labor surpasses agricultural labor.

1884 Hiram Stevens Maxim builds the first machine gun.<sup>67</sup>

1914 A.D. World War 1 begins.

1917 A.D. The United States enters World War 1.

1918 A.D. The Germans surrender, ending World War 1.

1929 A.D. The Great Depression begins.

1939 A.D. World War 2 begins.

1945 A.D. The United States drops two atomic bombs on the cities of Hiroshima and Nagasaki in Japan.<sup>68</sup>  
It is estimated that 225,000 people were killed by the two bombs.

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<sup>66</sup> Charles Van Doren, *A History of Knowledge*, (New York: Ballantine Books, 1991), 260-261.

<sup>67</sup> *Ibid.*, 267.

<sup>68</sup> *Ibid.*, 291-292.