Chapter 12 Podcast Transcript

The city of Florence is one of the most celebrated cities in Italy. During the late Middle Ages, Florence was the center of the Italian Renaissance. Donatello, Leonardo da Vinci, and Michelangelo were all either born in the Republic of Florence or worked in the city itself. These three artists, alone, span almost 150 years of art history, from Donatello's birth in the late 1300s to Michelangelo's death in the mid-1500s. Donatello's and Michelangelo's most famous sculptures—both called *David*—remain on display in Florence today.

To see one of the greatest artifacts of the Renaissance in Florence, though, you'll have to step outside. It doesn't really matter where in the city you are . . . you can't miss it. I'm referring, of course, to the Cathedral of Santa Maria del Fiore—Saint Mary of the Flowers, better known as the Duomo. To be more exact, I am referring to the brick dome of the cathedral—the largest in the world.

Construction on the Duomo began in 1296 AD. The new cathedral was intended to replace an old, dilapidated church that was too small for the growing city. Originally designed by the architect Arnolfo Campio, the project would take 140 years to complete. To be honest, decorative improvements actually continued into the late 1800s!

By 1418, though, most of the Cathedral had been built. Only one major part remained. Campio's original plan called for the construction of a large dome. It was intended to sit over the crossing of the cathedral, where the shorter transept intersects the longer nave (forming, obviously, the shape of a cross). Europeans were familiar with domes. The Romans had been quite good at building them. You can still visit the Pantheon in Rome today, and the Hagia Sophia in Istanbul, for example. After the Hagia Sophia was built, in the sixth century, there weren't very many new domes built, and those that were, were much smaller in size.

It takes a lot of engineering and architectural knowledge to build megastructures like the Hagia Sophia. When the Roman Empire—West or East—declined, those skills slowly slipped away. By 1418, it seemed that no one knew how to build a dome at that scale. There was one other challenge in this project. In the late 1300s, the project's overseers had determined they wanted to move away from the medieval use of buttresses and frames to support the dome. Instead, they wanted an open dome, one that afforded unobstructed view from the cathedral floor. In this way, it would look a lot like the Roman Pantheon, though without the benefit of Roman concrete, the secrets of which had been lost.

And so in 1418 the project's overseers held a competition to solicit designs for building the cathedral's dome. Each applicant constructed a scale model of the dome in the area around the cathedral. Some of these were quite large. The request for proposals, as we would call it, generated great interest in the artisan community—the winner stood to gain a substantial amount of money. Twelve competitors submitted at least seventeen proposals for the project. Two names stand out: Lorenzo Ghiberti and Filippo Brunelleschi. Both were goldsmiths rather than masons or architects, and both were long-time competitors for similar projects. In an

earlier competition, Ghiberti's design for the bronze doors of the baptistery was selected over that of Brunelleschi. They were rivals, essentially.

Designers only had a few weeks to complete and submit their proposals, but the competition dragged on for years. Only in 1420, more than a year after the competition began, did the selection committee finally choose a winner. Or winners, rather. Brunelleschi's design was superior, but the committee granted Ghiberti an equal position with an equal salary. They had tried to do something similar with the baptistery doors for the Cathedral twenty years earlier, but Brunelleschi refused to cooperate. This time, he did.

Brunelleschi's design was remarkably innovative. He proposed a structure composed of two domes, an inner dome and an outer dome, that would be attached internally to maintain structural integrity. Stone, Iron, and Wood "Chains" would wrap around the dome, ensuring it would not spread (and collapse) under its own weight. Brunelleschi also designed special machines to lift, move, and place heavy stones during the construction process. In the end, the dome of Santa Maria del Fiore—the Duomo—would require 37,000 tons of material including over 4,000,000 bricks.

It remains there today, towering over the tan and terracotta buildings of ancient Florence: a symbol of the remarkable accomplishments of Italy during the Renaissance—and of the plucky determination of an underdog artist—one Filippo Brunelleschi.

The Middle Ages and the Renaissance were a period of dramatic contrasts. Western Europe experienced the heights of political, cultural, and artistic accomplishment, but it also witnessed the depths of war, famine, disease, and suffering. During the High Middle Ages, Europe experienced good weather, strong farms, population growth, and a vibrant economy. It was an optimistic era, one characterized by the construction of many of the great cathedrals of Europe—Salisbury in England, Notre Dame in Paris, the Duomo in Italy. These were incredible works of engineering, architecture, and artistry that took over 100 years to build. The people who financed and designed the cathedrals knew they would never live to see them completed.

In the Late Middle Ages, though, climate change, famine, and plague transformed Europe. As Europe emerged from this difficult period, many scholars and artists looked to influences from the distant past—Greece and Rome—providing an opportunity for "Rebirth," or Renaissance as they described it. Indeed, many characteristics we associate with the modern world emerged during this transformative period.

The textbook traces the details of Medieval and Renaissance European culture and history. For today, though, let's focus on a few critical questions about this period. What was feudalism? How did climate change affect European society? Why did the Renaissance happen when and where it did?

We left Medieval Europe in rough condition. The fragile empire Charlemagne had assembled by the early 800s lasted only a few decades before fragmenting into numerous states. War with Vikings in the North; Magyars in the East, and the Islamic caliphate in the South transformed Europe. England, Hungary, and a unique Islamic state in Spain all emerge from this period.

The form of government that emerged in Western Europe is known as feudalism. Feudalism is a decentralized form of government. In other words, there is no emperor or king who is truly in control of everything. That surprises some people, as we often have this idea of medieval kings being all-powerful. That idea really goes better with the sixteenth and seventeenth centuries, though. Although many kings aspired to be the next Augustus or even Charlemagne, that type of authority remained out of reach. Other nobles—great landholders—controlled too much land, too much wealth, and too many people for individual kings to truly fly solo. In Western Europe, kings maintained legitimacy by recognizing the titles and property of the nobility. In exchange for this recognition, the nobility would agree to support the king in times of need, like war.

These nobles—dukes, counts, marquesses, barons—would then grant smaller tracts of land to individual knights. Knights would ensure the productivity and (ideally) security of the land, while also using the produce of the land to outfit themselves for war. At the bottom of this chain of relationships were serfs—the common farmers who worked the land. Knights would offer protection to serfs—to their homes and to their crops—in exchange for service on the knight's own agricultural lands. This service varied over time, but it often involved a few days of labor each week along with more extensive labor during planting and harvest. Serfs often worked in mines, forests, and construction, as well. On paper, it looks like a rather stable, mutually-beneficial system. In reality, though, feudalism had several weaknesses: It restricted personal freedom and private property; it limited personal initiative and industry; and it encouraged ambitious nobles to challenge each other and the king. The number of castles that spread across Europe during the Middle Ages is an obvious reminder of this.

Europe's population and economy grew dramatically during this period, though. Why? In part, new tools and technology, like the iron plow, made it possible for European farmers to grow more food and support larger populations. But climate change provided an important assist in the Middle Ages. Our climate has changed many times over the last two thousand years. At the height of the Roman Empire, Europe's climate was relatively warm and good for agriculture. A colder climate settled in during the late Roman Empire and early Middle Ages, bringing with it famine and disease. After the year 1000 AD, Europe's climate grew warmer and more friendly to agriculture. This period, which lasted until about 1300 AD, is known as the Medieval Warm Period. Economic growth and population growth encouraged the redevelopment of trade, which had been greatly reduced after the Fall of Rome. Markets grew up near important castles and churches, and cities grew up around these markets. The people that lived in these cities, often known as the bourgeoisie or burghers, developed unique identities associated with self-government, manufacturing, trade, and individual rights.

The climate began to change again in the early 1300s, when a series of cold, stormy years devastated crops in Europe. As average temperatures dropped, farms located at high elevations—or high latitudes farther north in general—failed. Crops could no longer support the large populations that had been growing for centuries. Some starved, many suffered from malnutrition, and many migrated to cities in search of food and work. Temperatures would remain rather cool in Europe for almost 500 years, reaching particularly low levels during the late 1500s and 1600s. We call this period of colder, stormier weather, "The Little Ice Age". It came to an end during the 1800s, and we have remained in a warming climate since that time, one also affected by industry and the emission of warming greenhouse gasses.

As cities became more crowded in the 1300s, the risk of disease worsened. It is perhaps no surprise that that the Black Death—caused by the flea-borne bacteria *Yersinia Pestis*—spread so rapidly in the 1340s. The Black Death devastated Europe. Approximately 30-50% of the population of Western Europe died during the plague. Some cities saw even higher percentages. That is roughly 100 times more deadly that the Covid-19 pandemic in the United States. We can barely imagine, then, how disruptive the Black Death was for Europe. It challenged every aspect of society. Family and kinship networks were broken. Trust in the Catholic Church was shaken. Traditional forms of medicine were shown to be insufficient. Women and peasants—at least those who survived—briefly experienced new economic opportunities and greater levels of wealth.

The Fourteenth Century devastated Europe. One poet of the era described it as an age of sorrows. The Black Death was only one challenge from this era. France and England were at war for over a century; the Catholic Church fragmented, with as many as three individuals calling themselves Pope at one point; revolts and political unrest occurred in France and England. At the same time, though, a new intellectual and artistic movement was emerging in Italy. We call it the Renaissance, or the Italian Renaissance, because it involved a "rebirth" of classical art, ideas, literature, and language. Why did the Renaissance happen, though, and why did it happen when and where it did?

Geography, again, played an important role. Italy is located in the center of the Mediterranean Sea, at the point where trade from the continent of Europe (France, Germany, etc.) intersects with trade from the Mediterranean and the East (Byzantium, the Ottoman Empire, and trade routes to China and India). City States in Italy—Florence, Genoa, Venice, and Milan, for example—were thus in a great position to make money as trade expanded in the Middle Ages. As the Byzantine Empire weakened in the 1100s and 1200s, wealth, knowledge, and artistry slowly migrated west to Italy. This was particularly pronounced after the sack of Constantinople in 1204 (by a Christian army sent to protect it), and after the Fall of Constantinople to the Ottomans in 1453. Scholars and artists brought their libraries and expertise to Italy, where city states were eager to invest their new wealth in art as demonstration of their power and accomplishment. These individuals established schools, libraries, and publishing offices where ancient works could be preserved, copied, and translated into more familiar languages.

The Renaissance transformed Italy and, in time, Western Europe as a whole. Renaissance scholars focused on literature for its own value, rather than interpreting it solely through the lens of theology or philosophy. We call this approach “humanism” as it places primary value on the human experience itself. Renaissance sculptors, artists, and architects also rediscovered classical disciplines and techniques, devising sculptures and buildings unlike anything seen in Europe for a thousand years. Donatello’s *David*, Michelangelo’s *David*, and the dome Brunelleschi designed for the Duomo in Florence are exemplary examples, but there were hundreds of similar achievements.

Renaissance scholars focused on studying ancient texts in the earliest, most original format possible. This encouraged many scholars to develop ideas very different from those of their medieval cousins. This presented yet another challenge to the Catholic Church, as some scholars recommended radical reforms based on their reading of early Christian, Greek, and Roman documents. The study of history in this environment also encouraged more comparative, “realist” interpretation of the past and present. Scholars like Machiavelli sought to understand how politics “actually” functioned, rather than how we imagine it “should” function. Explorers and early scientists engaged with the world in a similar fashion, relying on observation and experience rather than exclusively on received knowledge or tradition.

It is fitting that this class—a college-level class—ends with this chapter. The University itself, and the liberal arts education that modern Universities encourage, both emerged from the period of time we are discussing. The first Universities in Europe were established at the height of the Middle Ages—Bologna in 1088; Oxford in 1096; Cambridge in 1209. Giovanni Pico Della Mirandola, an Italian scholar during the Renaissance, perhaps best expressed the opportunities that had been afforded to humans in this thing we call life. In his *Oration on the Dignity of Man*, Mirandola writes: “Imagine! The great generosity of God! The happiness of man! To man it is allowed to be whatever he chooses to be . . . Whatever seeds each man sows and cultivates will grow and bear him their proper fruit” [Giovanni Pico Della Mirandola, “Oration on the Dignity of Man,” trans. Richard Hooker, Internet Medieval Sourcebook]. This is a fitting quote to close with. It is our hope that this class will provide you with seeds to cultivate your own learning, your own growth, and your own future happiness.