

The Old Sacristy of San Lorenzo in Florence, Italy was built from 1421 to 1428. Italian architect, Filippo Brunelleschi, designed this building for the Medici Family, a well-known and powerful family living in Florence during this period. The Old Sacristy was used for priests to prepare for services held at the San Lorenzo Church. This building was also intended to be used as a burial place for the Medici family. A unique characteristic of the building is that it is a perfect square with a dome. The interior of this building consists of a table placed in the center of the square, marking the burial place for the Medici family. Placed symmetrically on all four sides of the building are windows, as well as twelve arches surrounding the dome. Brunelleschi was known for his use of classical vocabulary and proportional systems, which are evident in this building. The room is a perfect cube, with equal height, width, and length, creating a 1:1 ratio. Corinthian columns and arches are used throughout the entire building, adding a classical element alongside the Renaissance architectural design. The idea behind the Old Sacristy was to be a religious space for priests to prepare for their services held at the church, incorporating religious elements within its design. The twelve arches placed around the dome represent a perfect order in company with the 1:1 proportional system that Brunelleschi uses. Along with being a preparation room, it was also intended to serve as a final resting place for the Medici family who helped finance this building. The cultural belief that this building embodied was that it was considered to be a place for individuals to transition to heaven. The use of light shining through the building is evident, as all the windows are placed at the top of the walls. Additionally, light shines through each section of the dome between the arches and on the top of the dome. This directly illuminates the burial place for the Medici family, symbolizing the transition to heaven. The Old Sacristy helped advance architecture thanks to Brunelleschi's proportional system. Brunelleschi skillfully used parallel lines in his design to emphasize

symmetry and order. Additionally, columns and arches used in Brunelleschi's design were heavily used in Renaissance architecture as well. In conclusion, the Old Sacristy of San Lorenzo, constructed by Brunelleschi exemplifies Renaissance architecture, featuring classical elements and a strong proportional system. The incorporation of religious elements reflects not only the needs of the priests but also the will of the Medici family.

HISTORY II | WEEK 1 WRITING ASSIGNMENT |

This week's lectures related primarily to Florence, Italy in the time leading into the Renaissance. Several factors, from the Schism in the Catholic Church to high death tolls caused by the Black Plague, to wealth disparity all contributed to the cultural and architectural climate of this era, leading to some profound and innovative landmarks.

Leading into this period, the Crusades contributed to the establishment of trade routes, causing a concentration of economic and cultural prosperity to settle into the region of Florence. Wealthy families like the Medici's converged in the city establishing banking systems and a coin currency called the Florin. When the Plague hit the region, high death tolls across all classes caused wealth to be further concentrated among remaining upper class family members. With all of that extra money, these wealthy families started patronizing the arts and funding social projects like the construction of churches and dwellings for mendicant orders within the city.

The Dominican orders focused on scholarship and theology and the Franciscans were invested in service to the community. While these orders had sponsorship from different wealthy families in different parts of the city, the Florence Cathedral, begun in 1296, became the true religious center of the city, and indeed a symbol of the city itself. During this period of two popes (one in Italy and one in France), these large, elaborate cathedrals were erected all over Europe as a representation of the city's pride and religious devotion, a departure from the Gothic notion of the cathedral serving to connect the earthly and heavenly realms through the use of vaulting and clerestory lighting. The Florence Cathedral was an impressive structure, but its great dome remained unfinished for two centuries until Brunelleschi came along with the solution to its construction. Brunelleschi devised the means and methods with which to build the dome in a series of stacked rings, each tighter than the one below it.

It is around this time in the 1400's that there was a cultural shift in how the arts are viewed, giving rise to the notion of the individual artist or architect, with Brunelleschi becoming among the first in this way of thinking. A prolific architect, Brunelleschi designed several key buildings around Florence, many of which were religious structures. In addition to solving the problem of the dome at Florence Cathedral, he designed the Old Sacristy and chapel at S. Lorenzo, exploring proportion with "flat" ornamentation of pilasters and ornamental rather than functional brackets, blending medieval and classical styles. Both in this example as well as S. Spirito, which featured three dimensional columns rather than flat ornamentation, there was a proportional conflict regarding corner conditions, resulting in somewhat unresolved corners with partial pilasters, or priority given to keeping proportionality on one axis at the expense of proportions on the adjacent wall. These studies of proportion would be continued by the likes of da Vinci, Alberti and others in their quest for beauty through scientific and mathematical understanding of natural proportion and order heading into the Renaissance.

Lecture Synopsis – Week 1

In the first two classes we began to talk about Humanist Italy. This period really defined the way Renaissance Architecture differed from Roman-Greco Architecture. The Renaissance style encompassed important ideals like its harmonious detail, proportions within structural elements like the classical column, and how this all really defined a new revolutionary period of architecture in the European world dating from the early 1400's all the way through the early 1500's.

In that time Northern Italy was seeing a strong concentration of wealth. The black plague really had wiped out much of the middle and lower classes giving wealthier families the opportunity to flourish and establish their name. Florence would soon become the banking center of the world, and coins would be pressed here for most of Europe.

At that time a French pope was elected which created some heavy controversy in Italy. The pope was essentially pushed out by the Italian churches. The French pope left Italy and was established as Pope in Avignon, France. A new Pope of Italy was then elected, and this was the first time Europe had ever had two popes at one time.

Florence was essentially divided into two extents of the Italian catholic church, the Dominicans and the Franciscans. The mendicant orders were formed, and this essentially consisted of 5 councils within the church, (Dominicans, Franciscans, Augustinians, Carmelites, and the Trinitarians).

One of the most famous names of that time was Fillipo Brunelleschi.

Brunelleschi was responsible for designing and building these beautifully renowned catholic cathedrals that were the center pieces of the city especially in Florence.

In 1418 Brunelleschi had won the competition to design and construct the dome on the Florence Cathedral. The Florence Cathedral Dome construction was started in 1419 but was not finished until later 1446 because it took so long for them to figure out how to even construct it in the first place. Th Florence cathedral was less about is connection between heaven and earth, but more about its civic duty for the city of Florence. The cathedral was symbolic of the power that Florence had at the time and its status and wealth. At that time most of these big prestigious cathedrals and other important buildings were financed by a wealth family. For example the Florence Cathedral was financed by one of Florence's most

powerful families, the Medici family. The Medici family was a prestigious banking family and also a political dynasty who held great power and controlled the city of Florence from the 14th – 18th century.

Most public works of Florence in the late 1400's used rounded arches, symmetrically placed bays, and harmonious proportions based on whole numbers such as 1:1, 1:2. And 2:3. This proportional system paved the way for how cathedrals and public spaces were designed in the fourteenth century. In 1419 the same year that construction began on the dome, Brunelleschi also began designing the Founding Hospital (Ospedale Degli Innocenti), also known as the Hospital of Innocent, was the cities orphanage; 1419 – 1424.

The Loggia of the orphanage used this proportional system of a 1:1 ratio. A Loggia is much nicer than a “porch or a patio”. A loggia is a covered exterior gallery or corridor. This Loggia was open to the public and supported by Corinthian columns. The Loggia Façade contained these Corinthian Columns with tapestry on top of each column that contained a light blue circular plaque above each column that depicted a swaddled infant.

Brunelleschi's own guild and the Silk Merchants financed this project as a shelter for unwanted children. This hospital was likely the first ever orphanage in history and is also an architectural staple of Florence still to this day.

Leon Battista Alberti also known as the “Florentine Vitruvius”, publishes The Ten Books of Architecture in 1452. The Ten Books of Architecture became very influential for the future of architecture, establishing architecture as a profession. The difference between Vitruvius and Alberti: Vitruvius wrote about how buildings were built in the past, Alberti wrote about how buildings should be constructed for the present and future. Alberti wrote about things like how a city should be designed and constructed so that roads and city layouts would respond to a war or a riot. Alberti's writings had a certain focus on architecture, he believed architecture needed to have strength, functionality, and beauty.

The Santa Maria Del Fiore in Florence, Italy was one of the buildings that helped propel Italy into its architectural renaissance. Those growing up at that time were taught about the importance of Greek and Roman philosophy, art, and science. This led many architects of that time to pursue and try to outshine the grandiose architecture from the peak of the Roman and Greek empires, all while trying to flash their wealth and power to the surrounding cities. Architect Arnolfo di Cambio started the project in the late 13th century, drafting a simple Gothic cathedral designed with Roman proportions and geometry.

Francesco Talenti continued the project after the plague, making the nave longer and planning a large dome at the head. The dome was meant to imitate the grand size of the Roman Pantheon. But they bit off more than they could chew, and no one was able to come up with an idea for constructing it without a catastrophic failure.

In 1418 Filippo Brunelleschi was chosen to complete the dome with his strategy of building locking rings that gradually sloped to the center, supported by an inner shell. Even though this was the first of its kind in this era, it had been done before by the Romans (The technology and documentation had since been lost) and by the Persians roughly 200 years before.

This cathedral was the first of many designed in this style by Brunelleschi, with the likes of the Old Sacristy, the Santo Spirito, and the Pazzi Chapel. The architecture of these buildings was driven by the philosophy of proportion over figure, often cutting corners of columns to keep the geometry sound rather than completing the aesthetic of the building. In my opinion, if the goal of your architecture is geometric precision, then it is better to have the aesthetics slightly off than ruin the rhythm of the entire structure.

The Florence Cathedral stood without a dome for roughly 200 years. Spanning such a large area, many designers were too scared to attempt a design, but Filippo Brunelleschi proposed a solution. Brunelleschi's Dome of Florence was made up of a double shell structure consisting of horizontal and vertical ribs, tension rings, interlocking masonry, and a cupola/shell. It was entirely self-supporting and a major feat for the time. The structure was similar to the dome of the Soltaniyeh Tomb that was built much earlier, but it is not known whether or not Brunelleschi had knowledge of the Soltaniyeh Tomb. Brunelleschi was recognized for his work on the Florence Cathedral, marking a cultural shift to recognizing the individual and the individual's accomplishments. Before this time, the idea of recognizing a specific individual would have been unheard of. Instead everything was seen as being predetermined and one's only purpose was to obey the rules of Christianity. While Filippo Brunelleschi was well known for his innovative design of the Dome of The Florence Cathedral, he also designed a number of other noteworthy buildings such as The Foundling Hospital, Old Sacristy S. Lorenzo, S. Spirito, and The Pazzi Chapel. Many aspects of the Foundling Hospital follow the same general shape as earlier hospitals, but Brunelleschi was also looking towards the classical language for inspiration. Two important aspects of the Foundling Hospital categorize it as a renaissance building. The first is the use of classical vocabulary, and the second is the use of a proportional system. The classical vocabulary can be seen in the use of the Corinthian order and arcades on the facade.

The Foundling Hospital was funded by the silk guild. Around this time it was common for buildings to gain funding either through wealthy families or different guilds throughout Florence. The guilds were responsible for training the next generation of craftspeople, and they held a lot of power in Florence. The same year that Brunelleschi started the Foundling Hospital, he designed another project, known as Old Sacristy of San Lorenzo, for one of the wealthiest and most powerful families in Florence, the Medici family. Old Sacristy of San Lorenzo had the challenge of building a rounded dome over a square base. The square base represented the Earth, and the rounded dome represented the transition to the heavens. This idea of the square representing the earth and the dome representing the heavens was common around this time. Brunelleschi's structural solution to this challenge was the use of pendentives. The husband and wife of the Medici family were to be buried under the floor in the center of the square base. Old Sacristy of San Lorenzo marks an important transition from medieval architecture to renaissance architecture. The brackets seen within the church are a medieval architectural feature, but the use of the corinthian order and proportional system define this as a renaissance building. Brunelleschi wanted the side chapels to be of 1:1 proportions, but they ended up being half his desired size. The facade of the building was also never finished, however, Michaelangelo made a wooden model of the facade that never got constructed. Brunelleschi used a gray stone that was local to the area against a white background in the interior of Old Sacristy of San Lorenzo. This gray and white material palette was carried throughout all of Brunelleschi's buildings. The Foundling Hospital and Old Sacristy of San Lorenzo both apply classical vocabulary and the use of a proportional system, classifying them as renaissance buildings. In general,

renaissance architecture is more similar to Greek architecture than it is to Roman architecture. This is because Roman architecture is all about participation and experience whereas Greek architecture is about perfection. Like Greek architecture, Renaissance architecture is designed to be viewed from afar as a whole.

The unique characteristics of Florence's monumental buildings, notably the Florence Cathedral and its iconic dome, are deeply rooted in the city's evolving economic, cultural, and architectural landscapes. These buildings showcase their periods' transformative ideas and theories, reflecting shifts from medieval to Renaissance ideals while embodying significant cultural beliefs and rituals.

The Florence Cathedral, or the Cathedral of Santa Maria del Fiore, represents a crucial turning point in architectural history. The building's most renowned feature, the dome designed by Filippo Brunelleschi, embodies the Renaissance's spirit of innovation and technical mastery. The dome's construction was a great challenge; spanning 140 feet required newfound engineering solutions due to the lack of sufficient scaffolding material and structural support in Italy at the time. Brunelleschi's ingenious design, including developing a double-shell structure and innovative hoisting techniques, significantly departed from medieval Gothic architecture and laid the groundwork for modern engineering practices.

In contrast to the Northern European Gothic style, which relied heavily on buttresses, Florence's Gothic architecture, including its cathedral, displayed a preference for verticality and simplicity, taking to some Northern European inspiration by way of pointed arches and ribbed vaults. The city's choice to retain separate bell towers rather than integrating them into the cathedral's body reflects a distinctive architectural identity, underscoring a desire to preserve sacred space and civic pride. This divergence illustrates Florence's unique approach to blending form with function, reflecting aesthetic preferences and practical considerations.

Florence's architectural projects were more than mere constructions; they embodied civic pride and religious devotion. The Florence Cathedral's grandeur was intended to surpass the achievements of the ancients, symbolizing the city's spiritual and temporal ambitions. The cathedral and its dome were architectural feats and statements of Florence's resilience and identity. The civic buildings of Florence, including palazzos and town halls, often featured defensive postures and multipurpose designs, reflecting the city's turbulent political climate and its citizens' need for protection and unity.

The significance of these structures was further amplified by their role in public rituals and civic events. Architectural feats like the Palazzo Vecchio served as venues for governance and public celebration, reinforcing the connection between the city's political power and architectural heritage. This integration of political, social, and religious functions within these buildings highlights the role of architecture in shaping and mirroring Florence's cultural and civic life.

The Ospedale degli Innocenti, or Foundling Hospital, designed by Filippo Brunelleschi and built in the 15th century, further epitomizes the innovative spirit of Renaissance architecture and the ever-changing socio-cultural landscape of its time.

The Ospedale degli Innocenti stands out for its pioneering use of Classical architectural forms and precise proportionality. Brunelleschi's design features a harmonious arrangement of Corinthian columns, rounded arches, and a distinct arcade, all rooted in a revival of Classical vocabulary. The building's façade is characterized by a loggia with a rhythmic sequence of columns and arches, creating a balanced and serene visual effect. Notably, the design incorporates a modular system where the height of the columns and arches adhere to a proportional grid, showcasing a commitment to Classical principles.

Informed by his study of ancient Roman architecture, the building embodies Renaissance theories, drawing inspiration from Vitruvius and other classical sources. These classical elements in a new context highlight Brunelleschi's role in bridging the gap between medieval and Renaissance architecture. This approach revived classical forms and adapted them to contemporary needs, illustrating the Renaissance's emphasis on continuity and innovation.

The Ospedale degli Innocenti was founded to address a pressing social need: caring for abandoned infants. Its design reflects the Renaissance's evolving attitudes towards charity and social responsibility. The building included a revolving door, allowing parents to leave their children anonymously, underscoring a compassionate approach to social welfare and anonymity. This practical feature, combined with the building's elegant design, embodies the cultural values of civic duty and humanitarianism prevalent in Florence at the time. The hospital's architecture symbolized the city's commitment to caring for the vulnerable and its moral duty to support those in need.

Florence's architectural advancements marked a clear departure from the medieval to the Renaissance period. The city's embrace of classical principles and innovative techniques signified a broader cultural shift towards humanism and empirical exploration. Brunelleschi's work demonstrated a new understanding of space and structure, setting a precedent for future architects. His solutions to the dome's construction challenges showcased the Renaissance ideal of combining artistic vision with scientific inquiry, influencing European architectural practices. These architectural achievements of Brunelleschi were not only feats of engineering but also reflections of the city's evolving identity and aspirations. These buildings encapsulate a transformative period in architectural history, marking Florence as a center of innovation and cultural significance during the Renaissance.

08/19 Summary-

The shortest possible answer to the question, “What started the Renaissance?”, is economics. The very first step towards the Renaissance started with the Crusaders. This is because as the Crusaders went around fighting their war, they had to be funded somehow. Now at that time, no one carried around large sums of cash. All of their wealth was in their land, which cannot be sold instantly for cash. So, the funds of the Crusaders came in the form of loans. This is now known as the official start of banking in the world. As the Crusaders moved their fight towards Jerusalem trade became safer and easier for Italy. With the influx in trade, Italy became very wealthy in a short amount of time, and this is how Florence became the banking city of the world. Around that time, the first French pope was chosen, and shortly after left Rome and resided in France. He becomes the first pope ever to hold the title while not living in Rome. This creates a crisis in Christians because without seeing the pope, there is a feeling of being abandoned. So, the church decided to elect a new pope who would live in Rome. With there being two popes in power the people are more confused than ever. In 1340 the worst plague in humanity ran through Europe, the black death. The black death is estimated to have killed 25 to 50 percent of the entire population. With everyone dying there is a greater concentration of wealth. The rich get richer, and the poor get poorer. The problem with this is there is nothing to spend this money on so the rich are just sitting on all of this wealth and not reinvesting it into the economy. During all of this, the pope's power has only diminished more, and the local churches have had enough and decided to take matters into their own hands. This is how the Mendicant Orders came to be. The Mendicant orders are against the papacy. They claim that the pope is weak and corrupt. This is how the Dominicans and the Franciscans came to be. The two churches split Florence in half, one serving the west side and the other serving the east side. These groups were privately funded by the wealthiest families and guilds that were trying to establish their power in the city. These families would spend so much money on the churches because they always wanted to one up, and seem better than their rival family. It is with these funds that the city of Florence was able to build the Duomo. The Duomo was built as a symbol of the city. It was all about civic pride and was built to hold the entire city. The ribbed vaults and pointed arches are the only Gothic elements used in the Cathedral. The church was left uncompleted for 200 years because no one could solve the complicated 135-foot dome at the top. Florence was the start of the Renaissance and was where its main ideas started. The idea of the individual, in a body of one's work. The idea of looking back at the ancients (Greeks and Romans) to measure against and surpass them. Most importantly, the idea is that you need to take what nature gives you and it should be increased by industry, study, and practice.

8/22 Summary-

Something that I will circle back around to towards the end of this is the increase in literacy rate during this era. This is due to the Gutenberg Press. This allowed for around five million more books to be printed each year. Allowing them to be more accessible to the general public. Before I get to the conclusion of this “intro to the Renaissance” we must first go over the

work of Filippo Brunelleschi. One of Brunelleschi's first works is the Ospedale degli Innocenti or the Foundling Hospital. This building, almost closer to an orphanage was designed for mothers who could not afford to take care of their kids to drop their baby off through a revolving door during the night. This provided the babies with a safer and healthier upbringing. While at the same time, the hospital would pay mothers producing milk to feed the children that lived there. So in turn, it was beneficial to both parties involved. From an architectural standpoint, there are two main ideas used here for the first time that will define architecture from the Renaissance. The first one is that it is the first building which uses the classical vocabulary. The second one was that it was the first building to use the proportion system. Throughout the façade, you can see the proportions of the columns and how they relate to the rest of the façade. It is important to note here that none of the ornamentation that we see on the face today was done by Brunelleschi. The work from Brunelleschi that intrigued me the most was the Old Sacristy at San Lorenzo. Everything about Renaissance architecture is represented here. Starting with the overall shape of the interior. It is a perfect square, which sets a good base for future proportions. The building is set as a perfect square because the square is meant to represent the earth. While the dome above represents the heavens. This is important because this is a tomb for the Medici family and the building is meant to show their transformation from earth to heaven. Inside the dome are twelve ribs which are meant to represent the twelve apostles. Brunelleschi truly defined Renaissance architecture. Before Renaissance architecture, there was the idea of looking at architecture from a distance which is what the Greeks followed, and the idea that architecture should be in the participation of it, which was what the Romans used. Renaissance architecture as we know it today followed more closely with the Greek idea. Brunelleschi was also credited with reinventing one-point perspective. To tie back to the literacy rate increasing, this is important to show that the perspective of the world was changing. This is noted by Leon Battista Alberti. Alberti was an advocate for making architecture a true profession and not just a trade. Architecture is a science. Alberti believed that architecture must react to the world's perspective, and that is was Renaissance architecture started, because the world's perspective was advancing.

Weekly Assignment 1

August 25, 2024

The following buildings have all been designed or worked on by Brunelleschi, a true pioneer of Renaissance architecture not only from the design aspect (bringing in classical Roman forms and refining design from antiquity) but also the profession itself, as architecture evolved from a trade into a science and art form. All of these works represent a progressive 15th-century Florence that reassessed civic life, relationship to the church, and the role of upper-class families in society who had amassed a greater saturation of wealth after the black plague of the 14th century.

Florence Cathedral

The Florence Cathedral stands out as a monumental effort of design, construction, and technology, a building that would be greater in scale and beauty than anything from Greek or Roman antiquity. It arrived during a shift in the way the church, the aristocracy, and the people were related to one another; the church suddenly became an example of a city's wealth, and the responsibilities of the church also changed by aiding the poor and becoming a more integral part of civic life. Architecturally, the most unique aspect of the cathedral is the dome, an element that wasn't completed for another 200 years thanks to its sheer size and difficulty of construction. Generations of architects would propose solutions to the construction of the dome, but there were simply too many obstacles: not enough wood for the scaffolding, the unbelievable weight of a 140' span, and a lack of construction machinery that would leave the area wide open to the elements. These issues required creative solutions, which Brunelleschi could provide in the 15th century. He developed new machinery and construction techniques, including a unique hoisting mechanism and a method for lifting materials up to the construction site. This technology was crucial in overcoming the logistical challenges posed by the dome's size.

Brunelleschi's Hospital for Innocents

The Hospital for Innocents exemplifies the evolution from Gothic design principles into the proportional simplicity and repose that's found in the Renaissance's most important buildings. It features a return to classical Roman architecture with its use of pilasters, columns, and rounded arches, also helping develop the piazza in front as a more mature public space that would be widely used and replicated throughout Italy. In a social context, this building is also

significant because it shows the humanistic ideals found in 15th century Florence, by providing orphans with a dignified space to grow into functioning members of society. In this way, and the way mothers could be employed by the hospital, we're seeing an early version of the social safety nets that are provided today, and an understanding of some of society's struggles.

Church of San Lorenzo

Another masterpiece by Brunelleschi, the Church of San Lorenzo epitomizes the design principles of Renaissance architecture and benefits from the efficient spatial organization, even though his original design for the side aisles was never realized. Along with the classical elements found in the Hospital for Innocents, the church also features a number of nods to Christianity, such as the 12 ribs in the vaulted dome for the 12 apostles, or the representation of transitioning from earth to heaven through the movement from 4-corners at ground level to the infinite life of a dome above. San Lorenzo also shows the ties between Brunelleschi and the Medici family who had financed the project; wealthy families such as these took a responsibility to build great works partly for society and partly for their own image and social status.

25 August 2024

Arch History II

Weekly Assignment 1

The Florence Cathedral, also known as Santa Maria del Fiore, stands as an iconic symbol of Florence's greatness and unity. Before this grand structure was conceived, the smaller Santa Reparata served as Florence's cathedral until the early 15th century when it was replaced by the ambitious new design. The Florence Cathedral was intended to embody the culmination of both Greek and Roman power, reflecting the city's civic pride and harking back to a golden age of culture and achievement.

Designed in the Gothic style by Arnolfo di Cambio, the cathedral's construction was a monumental undertaking that spanned nearly 200 years, largely due to the complexity of its massive dome. The dome, measuring approximately 140 feet across, posed significant engineering challenges that delayed the project's completion. However, it was the brilliance of Filippo Brunelleschi that finally brought the dome to fruition. Brunelleschi engineered a double-shelled structure supported by a ribbed skeleton with horizontal supports, a design that was revolutionary for its time and embodied the spirit of the Renaissance. His work on the dome not only showcased his ingenuity but also marked the emergence of the modern concept of an "architect" as a creative and inventive force in society.

Brunelleschi's influence extended beyond the Florence Cathedral as he went on to design several other renowned structures, including the Ospedale degli Innocenti, San Lorenzo, Santo Spirito, and the Pazzi Chapel at Santa Croce. Each of these works reflected his commitment to proportional correctness, the articulation of classical orders, and symmetry, with clear

implications of *all'antica* (in the manner of the ancients). His designs embodied his belief in the role of the architect to contribute meaningfully to society.

Another significant Renaissance architectural achievement was the Tempio Malatestiano, a church in Rimini commissioned by the lord Sigismondo Malatesta to be transformed into a mausoleum. This project was led by the architect and theorist Leon Battista Alberti, one of the greatest humanists of his time. Alberti's ideas were radical and revolutionary, promoting the notion that humans have the power to change their circumstances and achieve knowledge through relentless effort. His theories redefined the role of the architect as a distinct profession, separating the designer from the engineer and craftspeople.

Alberti's design for the Tempio Malatestiano was guided by a clear sense of function and purpose, with a strong emphasis on aesthetic appeal. He encased the structure in white marble, added deep arches, and incorporated fluted half-columns. Notably, Alberti personalized this public building by inscribing the patron's name and the date 1450 on the front, an unusual and unprecedented choice for a public edifice at the time. Unfortunately, the dome of the Tempio Malatestiano remained unfinished when the patron fell from power, leaving the building incomplete. Despite this, Alberti's work on the Tempio Malatestiano stands as a testament to his innovative approach to architecture and his lasting impact on the Renaissance.

ARCH 5230, Week 1: The Architecture of the Italian Renaissance

Mid-15th century Italy was in social, economic, and political disarray under the republic's societal structure, where wealthy families superseded religious official rulership using commerce and trade. House Medici, the wealthiest merchant family in Florence, Italy, had a pivotal influence on Italian Renaissance architecture and combating families like the Pazzi. A task carried out by artisans' guilds, families would finance the design and construction of religious and civil projects to display families' economic and political power as monuments publicly. Arguably the most monumental structure in Italy, the Florence Cathedral, later coined the Duomo, was unfinished with no domed roof until the Medici family commissioned Filippo Brunelleschi (the '*Godfather*' of Italian Renaissance Architecture) to finish the Florence Cathedral, along with constructing several other religious and civil projects around the city.

The Florence Cathedral, completed in 1436, is a marvelous feat of architecture and engineering influenced by humanist ideals of classical form and human-scaled proportion, such as 1:1, 1:2, and 1:3. Marble, being sourced from local mines, was the ideal building material considering its local accessibility, structural properties, and aesthetic qualities, except when building 150ft diameter domes. Enough wood was locally available to construct the gridded structural system within the double-shelled structure, but more was needed to supply the construction scaffolding and building materials. The interlocking of masonry with the wooden structure allowed self-support during construction, and the internal atop the dome kept the dome from unraveling and collapsing. To aid construction, Brunelleschi invented engineering feats like vertical pulleys and hoists powered by oxen. Brunelleschi's dome maintained classical forms, using new engineering methods of double-shelled construction to build the dome over Florence's skyline, evoking a sense of Medici wealth over the city below.

Other projects by Brunelleschi, and commissioned by different guilds or wealthy families, are the Hospital of the Innocents, the Basilica of San Lorenzo, and the Pazzi Chapel. When designing the Hospital of the Innocent, which served as a local orphanage, the programming of courtyards and aesthetic design of classical elements maintained humanist ideals while invoking public interaction with building operations by setting the loggia facade base at eye level. The grandiose loggia arcades with classical columns and stairs rising to level forced building occupants to be publicly viewed from the piazza as they came and went, forcing the public to integrate orphans into society instead of confining them into a hidden space.

Throughout Florence, the piazza, like Piazza di Santa Croce, was an urban space designed to converge political, social, and religious activities, with easy accessibility for the military if uprisings were to occur. Public ceremonies, markets, and festivals frequently took place in these piazzas, making them focal points for governing bodies to influence community interaction. About a quarter mile west of Piazza di Santa Croce is Piazza della Signoria, where Palazzo Vecchio, previously owned by the Medici family, overlooks the piazza below, evoking a sense of social, economic, and military authority over the surrounding public.

Alberti, another key figure in Renaissance architecture who exemplified his humanist design principles, contributed significantly by both his practicing architectural projects, including the Basilica of Santa Maria Novella, Palazzo Rucellai, and Malatestiano Temple, and his literary

ARCH 5230, Week 1: The Architecture of the Italian Renaissance

works like *On the Art of Building*. They integrated classical elements with a modern sensibility of symmetry and proportion, ambitioning to reference yet rival Roman architectural traditions while addressing humanist aesthetic values. *On the Art of Building* provided a comprehensive guide on architectural principles, emphasizing the importance of proportion, symmetry, and the use of classical orders by synthesizing ancient Roman architectural knowledge with humanist ideals, laying the groundwork for Renaissance architectural theory. These architectural design principles manifested in his works, such as the Santa Maria Novella façade, which harmonizes with the existing Gothic structure with classical elements of order and proportion. Alberti redefined architectural aesthetics by advocating for mathematical precision in design, emphasizing the rational order as a pathway to beauty. This approach underscored the belief that architecture was a man-made extension of natural order, aligning human creation with divine symmetry, bridging the divide between art, science, and mathematics, and aligning with the Renaissance ideal of the "universal man" who possessed vast knowledge and skills.

History and Theory of Architecture
Assignment #1
8/23/24

The Renaissance movement was brought about through the wealth concentration in Italy. Crusaders moving in the area, trade and the ease of trade, and movement of troops all contributed to the wealth brought into Italy. The distribution of wealth was very concentrated in a small percentage of the population. Rich families sponsored the building of churches to promote the importance of their family. The Medici family was the most notable and wealthy family.

In Florence both Santa Maria Novella and Santa Croce were built by different Mendicant orders. This was a break from the traditional faith. Mendicant orders wanted to look after the poor and denounced wealth. The Mendicant order was divided into two faiths: the Dominicans who favored scholasticism, and the Franciscans who desired to engage with and look after the poor. Both Santa Maria Novella and Santa Croce cathedrals were financed by wealthy families who believed that worth can only be acknowledged with outward manifestations. Both these cathedrals were large and tall and grand as a result. Height was equal to importance. Because the different guilds such as goldsmiths or architects or stonemasons were funded by the wealthy families as they built these cathedrals they also developed more power.

The Palazzo Vecchio in Florence set a precedent for civic buildings with a plaza out front for public meetings and a multi purpose space inside.

The Florence Cathedral or Duomo is an example of the renaissance movement and encompasses the feeling and purpose of architecture at the time. Bigger was always better and an indication of wealth and importance. A dome was planned for this cathedral before the architects knew how to accomplish this task. It was 200 years until Brunelleschi figured out how to construct a dome. The duomo was built for civic pride and was made large so the entire population of the city could fit. This differed from Gothic architecture which was large and details were meant to point the inhabitant towards God.

Before the Renaissance it was thought that everything in life was predetermined and that the individual had no control. During the renaissance it was thought that the individual was able to learn and achieve of their own free will. This brought about the individual architect and being known for their body of work.

One of the first architects known for their body of work was Filippo Brunelleschi. The Ospedale Degli Innocenti or hospital for displaced babies was the first account of using classical language in architecture. He used a 9 bay system ending in a pilaster with an entablature on top. Proportion in architecture was based on the human form and was used in all of his architecture. Each of his projects had "the corner issue" which wasn't solved during Brunelleschi's time. Facades of buildings were often not completed as the importance was inside the building.

Brunelleschi reinvented the 1 point perspective space. These spaces related more to Greek architecture which was more to look at and not participate in. It was seen as one whole object.

The Proportional system was started by Brunelleschi. The proportion system started with the width of the column. The column height was proportional to the height of the entablature. Even the floor would articulate proportion.

Proportion was articulated even more by Alberti in his ten books of architecture. He proposed that it is proportion, not size that is important in architecture. Not only that but he saw architecture as a science and not just a trade. In fact, we are in school here because of his ideas about architecture. He divided architecture into two parts. The first is design, or the mind. The second is matter, or preparation and choice. He proposed that architecture should be evidence of your world and culture and how the world follows math and science.