

The History of Visual Technology

4th Edition

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College of Computing and Digital Media
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Rev 2

UNIT 2

Workbook pages 55-86 only



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The History of Visual Technology

4th Edition

James Janossy

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NOTE

This is an extract of the full workbook, provided for the convenience of students enrolled in GPH-205 Historical Foundations of Visual Technology at DePaul University. This extract includes only the pages for the unit of the course identified on the cover.

The full workbook, in one .pdf file, is available for download at the course web site “startup” page. Students may use whichever version of the workbook download they wish as best suits their own learning purposes.

Visit the class web site at <http://gph205.info>

Unit 2 - The Middle Ages, AD 600 to 1300

We now consider Europe in the centuries after the fall of Rome, about AD 600, through the Middle Ages, Post-Roman Europe, the International Style and the Gothic Eras. This period was marked by turmoil as invaders from the east and north ravaged Europe. The church became the only unifying influence tying together various areas that had formerly been united under Rome. The church grew rich during this time as the wealthy often bequeathed their lands to it.

We also examine developments in the lands east and south of the Mediterranean Ocean, which was soon dominated by Islam. Islam originated in the early seventh century (AD 622-30) and spread by conquest throughout much of northern Africa and the Middle East within 100 years. The conquest of Hispania (Spain) between AD 711 and 718 brought this European territory under Muslim control. Known to Muslims by the Arabic name al-Andalus, the territory became the Caliphate of Córdoba. Muslim conquest of Europe continued with the Battle of Toulouse (France) in AD 721. Charles Martel defeated the Muslims at the Battle of Tours (Poitiers) in AD 732 and Muslim control in what was to become France ended in AD 759; were it not for this defeat, Europe would probably have come under Muslim control and the history of western civilization been written much differently.

We take a brief look at how the art of India was influenced by Rome at the height of Roman power, which stretched for a time that eastward to that extent. Roman trade with India began with overland caravans and later by direct maritime trade following the conquest of Egypt by Augustus in 30 BCE. Not long after, up to 120 ships were setting sail every year from Egypt to India. Multiple stashes of Roman coins used in trade have been found in southern India in archeological explorations. Roman influence can be seen in some of the early art of India.

Finally, we take a brief look at the unique aspects of Chinese art of the period known in the west as the “Dark Ages.” We see that not only were methods of creation and the rules for art different in China, but the status by which society regarded the creators of art was also vastly different.

What to read, view, and do

Assigned reading and viewing

1. *The Story of Art, any edition* (Gombrich), chapters 6 through 11
2. *History of Visual Technology, 4th edition* (Janossy) Unit 2 (this material)
3. **Web lectures and supplementary videos;** links provided on the Unit 2 web page

Work due

1. **Unit Summary Form 2**
2. **Project 2** Historiated Initials, rose window, Celtic knots
3. *Extra credit:* 32-petal rose window design

GPH-205 Unit 2 Summary Form (USF2) Page 1

THIS IS BOTH A STUDY AID AND HOMEWORK ASSIGNMENT. Use a printed copy of this page for hand-written notes that you prepare as you accomplish the required reading and viewing. Put concise phrases in the boxes, not sentences! Then download the editable .docx or .rtf copy of this form from the link on the course Unit 2 web page and type in your responses. **DO NOT COPY AND PASTE FROM TEXT OR WEB SOURCES.** The boxes for your responses on this form will automatically expand as necessary. **Submit your word-processed document NOT a scanned copy of your hand-written responses!** This work is integrated with your reflective essay and take-home final exam. The facts you gather form the basis for your essay and the Conclusions Work.

Civilization/Art movement	Art purpose(s)	Art formation rules	Art technologies	Their art's impact on our modern life
Byzantium				
Islam (decoration of the mosque)				
China				

GPH-205 Unit 2 Summary Form (USF2) Page 2

THIS IS BOTH A STUDY AID AND HOMEWORK ASSIGNMENT. Use a printed copy of this page for hand-written notes that you prepare as you accomplish the required reading and viewing. Put concise phrases in the boxes, not sentences! Then download the editable .docx or .rtf copy of this form from the link on the course Unit 2 web page and type in your responses. **DO NOT COPY AND PASTE FROM TEXT OR WEB SOURCES.** The boxes for your responses on this form will automatically expand as necessary. **Submit your word-processed document NOT a scanned copy of your hand-written responses!** This work is integrated with your reflective essay and take-home final exam. The facts you gather form the basis for your essay and the Conclusions Work.

Civilization/Art movement	Art purpose(s)	Art formation rules	Art technologies	Their art's impact on our modern life
Middle Ages: Post-Roman Europe				
Gothic era				
International Style				

Icons and the Byzantine Church



Chapter 6 of *The Story of Art*, entitled “A Parting of Ways,” relates the controversy that arose in the seventh and eighth centuries about the role of images—paintings, mosaics, and statuary—in the Christian church. At that time “the church” was one church: there was no separation, as there is today, between the Roman Catholic (western) and Eastern Orthodox Christian churches, nor were there any significant non-Catholic denominations which arose only with the Protestant Reformation of the sixteenth century. But even in AD 600 there were definitely different ideas in different parts of the church about the role images should be allowed to play in church.

Pope Gregory the Great, who was the Bishop of Rome from AD 590 to 604 is quoted as having said,

“Illiterate men can contemplate in the lines of a picture what they cannot learn by means of the written word.”

This was taken to mean that images of Jesus, Mary, the apostles and later saints and depictions of biblical stories and events could be used to decorate churches. But their aim had to be communicating church history and doctrine without being overly artful—that is, the artistry of the image was not the point and should not distract the viewer.

Some prominent people in the church disagreed with Pope Gregory based on the commandment “thou shalt not worship graven image”. They feared that recently-converted pagans would do precisely that since they were accustomed to worshipping idols. The people against the use of images were known as *iconoclasts*. This same sentiment has also arisen at other later times, such as in the Protestant Reformation in which various denominations broke away from Roman Catholicism

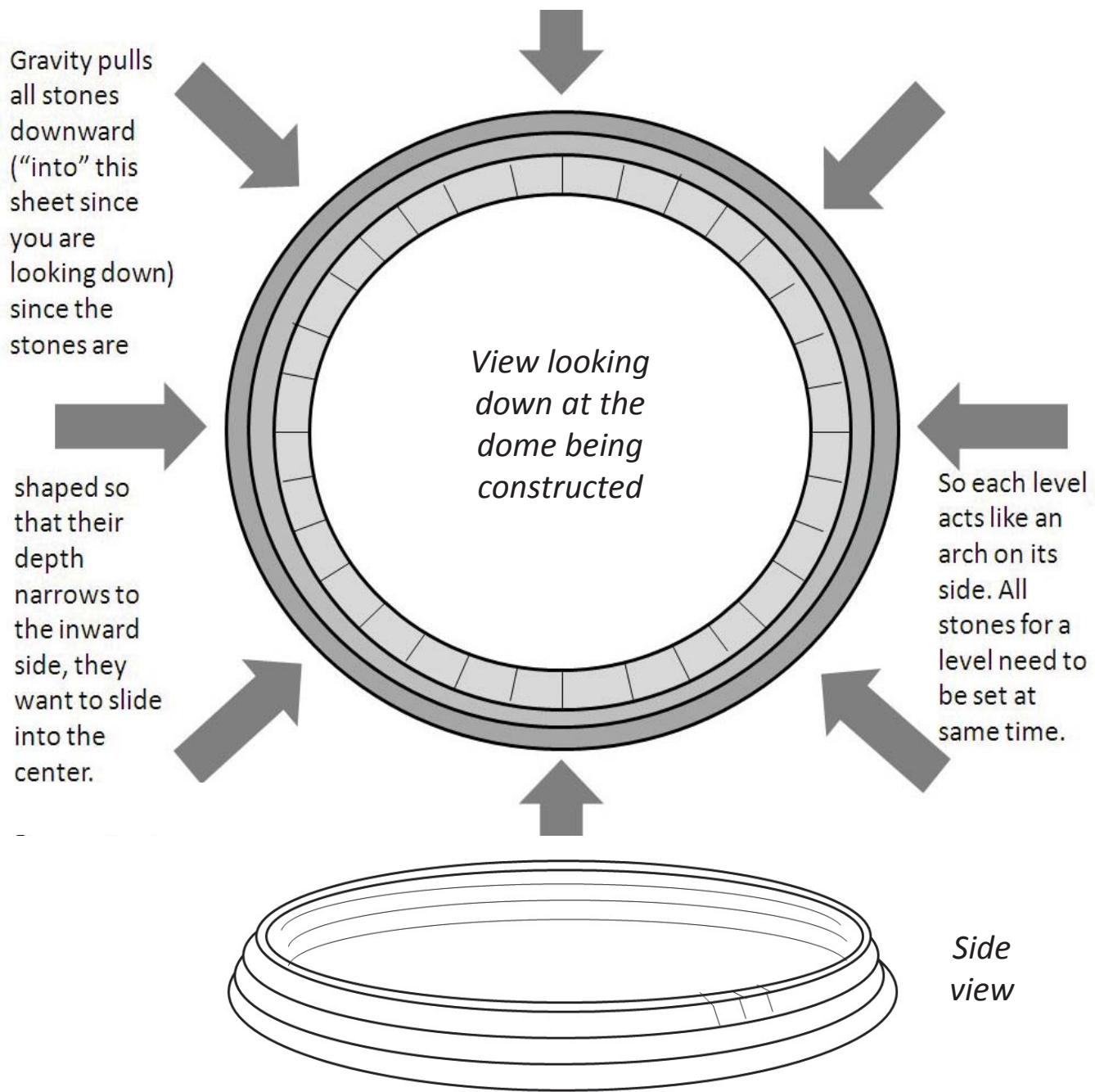


and formed separate Christian denominations. In the iconoclasm of the seventh century images in churches were often painted over as shown in this manuscript illumination.

Against the charge of idolatry the Orthodox Church tells the faithful not to worship the wood and paint but to deeply respect and venerate the person depicted. It distinguishes between adoration (worship, due to God alone) and veneration (deep respect). Pagans worshiped idols because they believed that the deity was present in

the idol. The Orthodox make no such claim concerning icons; they are only images of the person depicted. By the end of the eighth century icons were restored in the Orthodox Church. Notice the icon images on the wall decoration in the background in this picture from an Eastern Orthodox household. Revered icons are often formed using encaustic techniques where pigment is mixed with hot wax and the mixture applied to a wooden panel using a small knife.





How a dome can be built without falsework

Domes like that of the Pantheon in Rome, Hagia Sophia in Istanbul, and the Duomo of the cathedral of Florence are too large to be supported with a temporary wooden structure known as “falsework” as they rise. The Romans figured out how to raise a dome **without** falsework and the architects who built Hagia Sophia probably inherited the knowledge from them. But that knowledge was lost in the Middle Ages. When Filippo Brunelleschi designed and constructed the dome in Florence he had to rediscover how to accomplish it. A dome constructed in this way will need some form of circular banding around some of the courses (layers) of stone to keep the downward pressure from pushing one or more rings of stone out in a direction from the center.

Hagia Sophia History

Extracted from Al Altan's Hagia Sophia at www.focusmm.com on April 25, 2010 and edited to include additional illustrations



Hagia Sophia is a magnificent domed church constructed in the early Middle Ages in Constantinople (Istanbul) and converted to a mosque when the Turkish forces conquered the city nearly a thousand years later in 1453. Although there are no artifacts confirming it, it is said that Hagia Sophia was built on the site of an ancient pagan temple. Hagia Sophia underwent two phases of construction before attaining its present state.



Documents indicate that the first Hagia Sophia was built by Emperor Constantius, son of Emperor Constantinos I, and was opened for services in 360 AD. Although very little is known about this Church it's assumed that it was a basilica-type structure with a rectangular floor plan, circular apse and timbered roof. It was similar to St. Studios, a basilica in Istanbul, the ruins of which still exist. Ancient sources emphasize that the eastern wall was circular. Constantius donated gold and silver as well as religious objects to his church but these were vandalized by Arians during the Council of 381 AD.

Hagia Sophia was first named "Megale Ekklesia" (the Great Church) as it was the largest Church in Constantinople, and was later renamed Sophia. The name given to the church symbolized the second divine attribute of the Holy Trinity. Originally, Sophia, which means "Holy Wisdom", was a name given to Christ by 4th century theologians. Both names, Megale Ekklesia and Hagia Sophia are used today.



The original Church was destroyed in 404 AD by mobs during the riots when Emperor Arcadius sent the Patriarch of Constantinople, John Chrysostom, into exile for his open criticism of the Empress. Emperor Theodosius II built a new Church which was completed in 415 AD. The architect of this second church was Ruffinos. This church was constructed in basilica style and had five naves. In common with other basilicas of that age it had a covered roof. The remains of this Church, excavated in 1935, show that a staircase of five steps led to a columned propylaeum in front of the entrance of the building. Including the imperial entrance, there were three doorways in the facade. The results of excavations indicate that this Hagia Sophia was 60 metres wide. The length is unknown since further excavations inside the present-day building are not permitted.



During the rebellion of Monophysites in 532 the second Hagia Sophia was destroyed along with many other important buildings, among which were the church of St. Eirene, Zorzip Bath and Samsun Hospital. After resorting to bloodshed, Emperor Justinian succeeded in saving his throne. This revolt is known as the "Nike Revolt" in Byzantine history, since the rebels repeatedly shouted "Nike", the name of the goddess of victory.

Following these events, Emperor Justinian ordered the construction of a new church which was to surpass in

magnificence all earlier churches. His ambition to make this new church unique spurred him on to unremitting effort. Historians write that he personally supervised the construction and made full use of all the resources his empire could offer. The two most famous architects of the age, Anthemius of Tralles (Aydin) and Isidorus of Miletus, were entrusted with the construction of the building. They supervised one hundred master builders and ten thousand laborers.

The finest and rarest materials from the four corners of the empire were brought to Constantinople to be used in the construction of the new Hagia Sophia. The prophyry columns previously taken to Rome from an Egyptian temple in Heliopolis, ivory and gold icons and ornaments from ancient temples in Ephesus, Kizikos and Baalbek were among them. The construction was completed in a very short time: less than 6 years, from February 23rd 532 AD to December 27th 537 AD. During the dedication ceremony Emperor Justinian put aside formalities of state and entered the Church excitedly to say a prayer of thanks to God for allowing him to fulfill his dearest wish. He cried with pride, remembering the temple in Jerusalem "Oh, Solomon, I have surpassed thee!" Later, the Church was damaged many times by earthquakes and fires, and had to be repaired and reinforced:

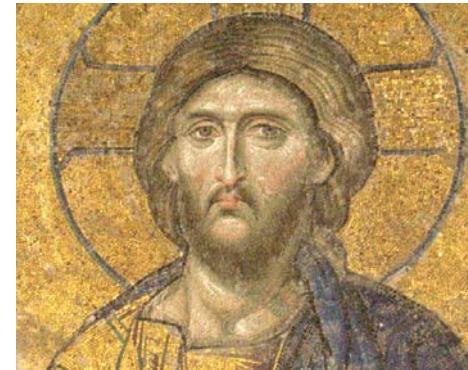
- On August 15th 553, January 14th 557 and May 7th 559, earthquakes destroyed the eastern side of the dome. The damage was repaired by



the nephew of the original architect, Isidorus. He increased the height of the dome by 2.65 metres and built buttresses in the form of towers to support the dome.

- On February 9th 869, during the reign of Emperor Basil I (867-886), an earthquake damaged the western side of the building. It was repaired in 870.
- On October 25th 986, a violent earthquake resulted in the collapse of the western apse and caused partial damage to the dome. The church had to be closed until the architect Tridat finished repairing it in 994.
- In 1204, the church was sacked by the Fourth Crusaders. Later in that century Emperor Michael VIII (1261-1282) had Hagia Sophia repaired by the architect Ruchas and the buttresses in the south-west were added at that time.
- In 1317, during the reign of Emperor Andronicus II, the north-eastern and south-western walls were reinforced on the exterior by pyramid-shaped buttresses.
- In 1348, the eastern half of the dome collapsed and was afterwards repaired.

In the first half of the 15th century, travelers described Hagia Sophia as being in a state of disrepair. When the Turks conquered Constantinople in 1453, the church was converted into a mosque as a place of Islamic worship. Initially the Turks preserved the frescoes and mosaic figures of Christian saints which decorated the walls. However, in the 16th century, these were completely covered by plaster since the Islamic code forbids the use of human figures in mosques. After it became a mosque, the following changes, necessitated by Islamic architectural standards, were made:



Sultan Mehmed II "the Conqueror" built an altar (mihrap) in the east, since the apse should be in the direction of Mecca and the brick minaret on the south-east corner of the edifice.

Sultan Bayezid (1484-1512) added a minaret on the north-east corner.

The Turkish architect Sinan, built the two minarets in front of the Church during the reign of Sultan Murad III (1574-1535). Murad III also had water urns of the Hellenistic period (300 BC) brought to the mosque from Bergama. The pulpit (minber) and preacher's pew (muezzin mahfili) were added to the interior during the reign of Murad IV.

In 1739, Sultan Mahmud I built a library and a primary school (mekteh-i sibyan) in the south.

In 1850, Sultan Abdulmecit added the present day Imperial Pew. During his reign (1833-1861), important repairs were entrusted to the Swiss architect Gaspare Fossati. He removed the plaster covering the mosaics and then replastered them. He decorated these newly plastered areas with frescoes. The building was completely renovated inside and out.

In 1926, the government of the new Republic of Turkey, appointed a technical commission to investigate the architectural and static state of the building thoroughly. According to the commission's report the foundation of the structure rested solidly on a bed of rock. Following Kemal Ataturk's orders Hagia Sophia was converted into a museum on February 1st 1935 in keeping with the secularization of Turkish society that was a hallmark of the new republic.

The Muslim World, Islam and Islamic art

The term “Muslim world” or the Ummah has several meanings. In a religious sense it refers to those who adhere to the teachings of Islam, referred to as Muslims. In a cultural sense it refers to Islamic civilization, including non-Muslims living in that civilization. In a modern geopolitical sense it refers to Muslim-majority countries or towns. As of 2009 about 23% (1.6 billion) of the world’s population are Muslims. Of these 62% live in Asia, 20% in the Middle East-North Africa, 5% in Sub-Saharan Africa, 3% in Europe and 0.3% in the Americas.¹ About 85% are Sunni Muslims while 15% are Shiite, concentrated mostly in Iran (Persia) and Iraq.

Islam was founded in AD 622 by revelations of the Prophet Mohammad. By AD 750 it had been spread to many areas of the southern Mediterranean. This map shows current political boundaries and countries but the dark shading shows the area of Muslim control in AD 750:



Islam holds five things roughly equivalent to the “sacraments” of the Roman Catholic faith. The first two of these are prevalent in much of the calligraphy decorating mosques.

1. The Shahadah

This basic creed of Islam must be recited under oath as the following statement: "I testify that there is none worthy of worship except God and I testify that Muhammad is the Messenger of God." This testament is the foundation for all other beliefs and practices in Islam. Muslims must repeat the shahadah in prayer. Non-Muslims converting to Islam must recite it; when they do in good faith, they become Muslim, which is held to be a one-way conversion from which a person cannot later revert or recant.

2. Salah

Ritual prayer that must be performed five times a day. Each salah is performed facing towards the Kaaba, an ancient sacred square building in Mecca, Saudi Arabia. Salah is intended to focus the mind on God and gives gratitude and worship. In many Muslim countries reminders called

¹ This is an extract developed from several Wikipedia sources, here en.wikipedia.org/wiki/Muslim_world

“Adhan” (call to prayer) are broadcast publicly from local mosques at the appropriate times or the call is given by a muezzin from a tower (minaret) on a mosque. The prayers are recited in Arabic and are verses from the Qur'an.

3. Zakat

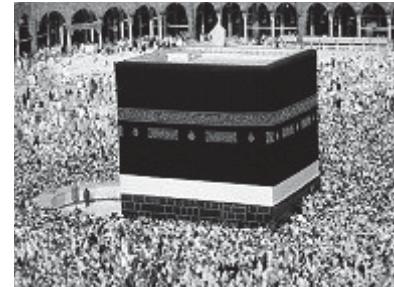
One of the most important principles of Islam is that all things belong to God and that wealth is therefore held by human beings in trust. Alms-giving is a practice of giving based on accumulated wealth. In general it is obligatory to give away 2.5% of one's savings and business revenue as well as 5-10% of one's harvest to the poor. The intended recipients include the destitute, the working poor, those who are unable to pay off their own debts, stranded travelers, and others who need assistance, under the principle that the rich should pay it to the poor. The Prophet Mohammad said “Charity is a necessity for every Muslim.” When asked: “What if a person has nothing?” He replied: “He should work with his own hands for his benefit and then give something out of such earnings in charity.”

4. Sawm

Fasting during the month of Ramadan. Muslims must not eat or drink from dawn to dusk during this month and must be mindful of other sins. The fast is to encourage a feeling of nearness to God. During it Muslims express their gratitude for and dependence on Him, atone for their past sins, and think of the needy. Sawm is not obligatory for people for whom it would constitute an undue burden. For others flexibility is allowed depending on circumstances, but missed fasts usually must be made up quickly.

5. The Hajj

Every able-bodied Muslim who can afford it must make a pilgrimage during the Islamic month of Dhu al-Hijjah to the Masjid al-Haram mosque in Mecca, Saudi Arabia at least once in their lifetime. Rituals of the Hajj include walking seven times around the Kaaba, touching the black stone that fell from heaven to show Adam and Eve where to build an altar, walking or running seven times between Mount Safa and Mount Marwah, and symbolically stoning the Devil in Mina. More than 1.6 million people journey to Mecca every year to make this pilgrimage. The mosque area can hold 300,000 people.



The Kaaba and pilgrims circling it

Islamic art²

No Islamic visual images or depictions of God are meant to exist because it is believed that such artistic depictions may lead to idolatry. Muslims believe that God is incorporeal, making any two- or three-dimensional depictions of God impossible. Instead, Muslims describe God by the names and attributes that, according to Islam, he revealed to his creation. All but one sura (verse) of the Qu'ran begins with the phrase "In the name of God, the Beneficent, the Merciful". Images of Mohammed's face are likewise prohibited.

Islamic art is difficult to define because it covers many lands and various peoples over some 1400 years; it is not art specifically of a religion, or of a time, or of a place, or of a single medium like painting. It includes the huge field of Islamic architecture as well as calligraphy, painting, glass, ceramics, and textiles. Islamic art is not restricted to religious art but includes all the art of the rich and varied cultures of Islamic societies. The calligraphy and decoration of

² This is an extract and heavy editing of en.wikipedia.org/wiki/Islamic_art

manuscript Qu'rans is an important aspect of Islamic art. Human representation for the purpose of worship is considered idolatry and is forbidden in Islamic law, known as Sharia law. Many examples exist of depictions of Muhammad in historical Islamic art but always with veiled face. Human figures, while never present in the decoration of the mosque, occur in secular works on



the walls of palaces or illuminated books of poetry—things seen only by the small wealthy elite. Small decorative figures of humans and animals, especially if they are hunting the animals, are found on secular pieces in many media from many periods, but actual human portraits were slow to develop.

Islamic art was influenced by Roman art, early Christian art, and Byzantine styles. The art of pre-Islamic Persia, Central Asian styles, and Chinese influences also had a formative effect on Islamic painting,

pottery, and textiles. Repeating elements exist in Islamic art such as the use of geometrical floral designs in a repetition known as the **arabesque**. The arabesque in Islamic art is often used to symbolize the transcendent, indivisible and infinite nature of God. Mistakes in repetitions may be intentionally introduced as a show of humility by artists who believe that only God can produce perfection. Calligraphy of many forms is very frequently used to form the Shahadah in decorations of gold leaf, tiles, or wood.



Going further with Islamic art

The curiosity of students is often piqued by the brief exposure to Islamic art provided by *The Story of Art* and this workbook. I've included these suggestions for students who would like to learn more about Islamic art and the peoples who produced it:

Strange as it may seem, start with the excellent entry on Islamic art in Wikipedia from which I extracted elements of this short summary (see the earlier footnote reference). This article provides a good high level summary to begin with.

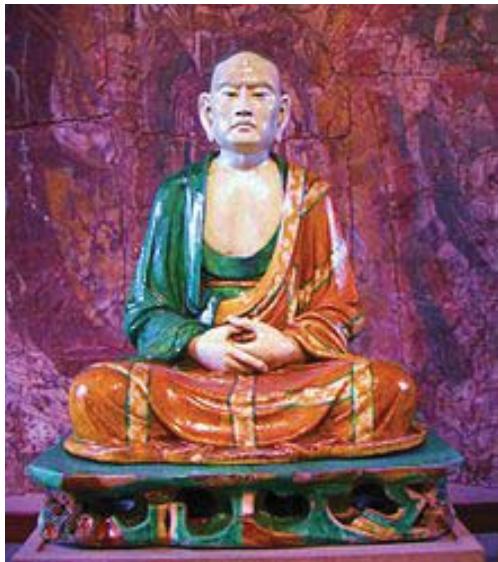
Then I'd suggest you look at *The Illustrated Encyclopedia of Islamic Art and Architecture: An Essential Introduction* by Moya Carey. This contains over 500 color pictures and costs less than \$30 online. It comes closest to what Ernst Gombrich did for art in general in *The Story of Art*.

The quintessential reference work on Islamic art is *The Grove Encyclopedia of Islamic Art & Architecture (3 volumes)*, Bloom and Blair editors. This is a classic, but huge and expensive at over \$400! This is massive overkill for a beginner but essential for a researcher or grad student for reference purposes. The following book, however, by the same scholars, is a great second book on the subject: *The Art and Architecture of Islam, 1250-1800* by Blair and Bloom. This covers later art from several areas of the Islamic world and it's a paperback typically costing less than \$30!

Since Islamic art is so intertwined with the religion of Islam, you might also find *The Illustrated Encyclopedia of Islam: A Comprehensive Guide* by Mohammed Seddon useful. This is well illustrated and priced under \$30. It focuses on the prophet Muhammad and aspects of the religion of Islam rather than its art per se, but it can help a student of Islamic art see the intimate connections between much of the art of Islamic peoples and their faith.

The Eighteen Arhats (Lohans)¹

Ten disciples of Gautama Buddha are identified in the earliest Buddhist literature where they are referred to as **Arhats**. When Buddhism reached China they were called **Luohans** or **Lohans**. Four of these Lohans, named Pindola, Kundadhana, Panthaka and Nakula, were believed to have been instructed to carry the message of Buddha to the world and to await the coming of Maitreya. Maitreya is foretold as a future Buddha of this world; he or she is to appear on Earth, achieve complete enlightenment, and teach the pure dharma. According to Buddhist scriptures, Maitreya will be a successor of the historic Buddha, "the enlightened one."



Chinese representations of the Lohans can be traced back to as early as the fourth century and mainly focused on Pindola who was popularized in art by the book *Method for Inviting Pindola*. A cult built around the Lohans as guardians of Buddhism arose among Chinese Buddhists at the end of the ninth century for they had just been through a period of great religious persecution under the reign of Taoist Emperor Tang Wuzong. The number of Lohans was increased in China to 16 and then to 18 to include patriarchs and other spiritual leaders. The last two additions to this roster, Taming Dragon and Taming Tiger, are directed against persecution by Taoists.

No historical records exist showing how the

Lohans looked. The first portraits of the Lohans were painted by the monk Guan Xiu in 891 AD. Legend has it that the 18 Lohans knew of Guan Xiu's expert calligraphy and painting skills and they appeared to the monk in a dream to make a request that he paint their portraits. The paintings depicted them as foreigners having bushy eyebrows, large eyes, hanging cheeks and high noses. They were seated in landscapes, leaning against pine trees and stones. In these paintings they were portrayed as unkempt and "eccentric" which emphasize that they were vagabonds and beggars who have left all worldly desires behind. When Guan Xiu was asked how he came up with the depictions, he answered: "It was in a dream that I saw these Gods and Buddhas. After I woke up, I painted what I saw in the dream." The paintings were donated by Guan Xiu to the Shengyin Temple in Qiantang where they were preserved with great care and ceremonious respect. The portraits by Guan Xiu have become the definitive images for the Lohans in Chinese Buddhist iconography, although in modern depiction they are given more typically Chinese facial features.



¹ Adapted from Wikipedia at http://en.wikipedia.org/wiki/Eighteen_Arhats

Insular Art of the Middle Ages¹

Insular art is the style of art produced in the Middle Ages in the British Isles. “Insular” comes from *insula*, the Latin term for “island”. Britain and Ireland shared a common style different from that of the rest of Europe. Although mostly thought of as a term describing ornate manuscripts, Insular art also includes metalwork and other objects. The Insular style is most famous for its highly dense, intricate and imaginative geometric decoration. There is no attempt to represent depth, all emphasis is on a brilliantly patterned surfaces.

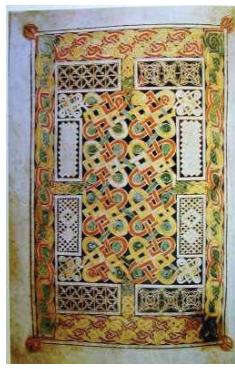
Most Insular art originates from the Irish monasticism of Celtic Christianity or metalwork for the secular elite. Across all the British Isles society was entirely rural, buildings were rudimentary, and architecture has no distinctive “Insular style.” Both religious and secular buyers of Insular art expected individual objects of dazzling virtuosity that were all the more brilliant

because of the lack of visual intensity in the world in which they lived (the same reason that stained glass windows of the later Gothic era were as fascinating to people then as they were). The Celtic and Anglo-Saxon elites had long traditions of metalwork of the finest quality used for their personal adornment.



The Insular period begins around 600 AD with the combining of “Celtic” styles and Anglo-Saxon (English) styles. The highpoint of the Insular period was brought to an end by the disruption of life of the Viking raids which began in the late 8th century. These raids may have interrupted work on the *Book of Kells*; no later Gospel books are as heavily or finely illuminated as the masterpieces of the 700’s. In England the style merged into Anglo-Saxon art around 900 AD, while in Ireland the style continued until the 1100’s when it merged into Romanesque art. Insular art influenced all subsequent European medieval art especially in the decorative elements of Romanesque and Gothic manuscripts.

Surviving examples of Insular art are mainly illuminated manuscripts, metalwork and carvings in stone, especially stone crosses. The best examples include the *Book of Kells*, *Lindisfarne Gospels*, *Book of Durrow*, brooches such as the *Tara Brooch* and the *Ruthwell Cross*.



Carpet pages are a characteristic feature of Insular manuscripts. These are pages of mainly geometrical ornamentation often placed at the beginning of each of the four Gospels in Gospel Books. These pages contain little or no text **but they are not the same as highly decorated historiated initials**. Carpet pages are wholly devoted to ornamentation with brilliant colors, active lines, and complex patterns of interlace such as the Celtic knot. Some art historians see their origin in Coptic decorative book pages, oriental carpets, or other textiles. Roman floor mosaics seen in post-Roman Britain are also cited as a possible source. There are notable carpet pages in the *Book of Kells*, *Lindisfarne Gospels*, and *Book of Durrow*. Pages such as these also exist in Islamic and Jewish illuminated manuscripts.

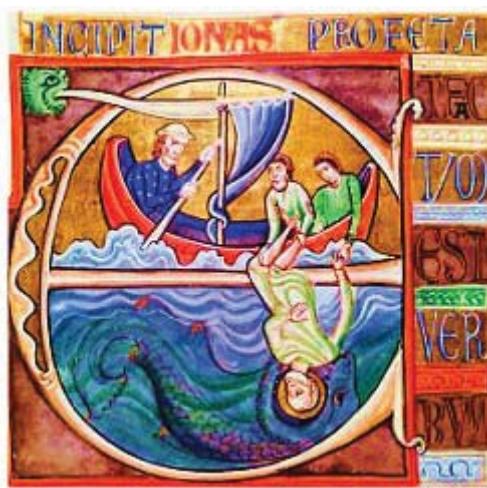
¹ Extracted from http://en.wikipedia.org/wiki/Insular_art and edited by Jim Janossy

Illuminated manuscript decorations¹

During the Middle Ages books were expensive and rare because each book was a hand-made creation. Every page had to be lettered manually usually by a monk in a monastery. The books most often considered worthwhile to be copied were the bible (in Latin), “books of hours” used to guide personal devotions, and missals used to guide worship services. It became a common practice to include decorations in such hand-copied text, which often used expensive vellum produced from animal skin, creating what are known as **illuminated manuscripts**.

The first letter of each paragraph or page is commonly given special treatment in illuminated manuscripts. This decoration takes the form of a historiated initial or, less commonly in copies of sacred text, an inhabited initial. A **historiated initial** is an enlarged letter at the beginning of a paragraph or other section of text which contains a picture that is in some way related to the text on the page and illustrates it. An **inhabited initial** contains figures (human or animal) that are decorative only, without forming a subject related to the text. In modern typography the kind of letter you see at the start of this paragraph resembles a historiated initial but it’s called a “dropped capital” and is supported by some word processors!

Both historiated and inhabited initials became common and elaborate in illuminated manuscripts during the Middle Ages. These initials were first seen in the Insular art of the early 700’s. The



earliest known example is in the Saint Petersburg Bede, an Insular manuscript of AD 731-46. Red and blue were the colors most frequently used, with small amounts of green, brown or black, and sometimes gold or gold leaf. Letters that began a new section of a text or a particularly noteworthy section might receive more flourishes and space. In luxury manuscripts an entire page might be devoted to a historiated initial. Both the size and elaboration of such initials reflect the status of the manuscript and its owner. Manuscripts meant for everyday use or use by friars or university students often possessed hardly any elaborate historiated initials or flourishes. By contrast, manuscripts commissioned by wealthy patrons or for a wealthy monastery often

possessed gold or silver illuminations. This may be seen in the simplicity of the materials used to create the manuscript; those colored mainly in red, black, and blue ink were intended for everyday purpose. Those decorated with gold and more rare colors, such as gold, lapis lazuli blue or purple, often ended up in the hands of wealthy collectors or nobles.

The Hill Museum and Manuscript Library, which you can reach at www.hmmil.org, provides online access to thousands of examples of historiated initials.



¹ This material was gathered from, among other places, http://en.wikipedia.org/wiki/Historiated_initial

The Crusades: 1095-1272 AD

(adapted by Jim Janossy from various sources in Wikipedia)

Overview

The Crusades were a series of religiously-sanctioned military campaigns waged by much of Christian Western Europe. These campaigns, to restore Christian control of the Holy Land, were fought over a period of nearly 200 years between 1095 and 1291:

- First Crusade 1095-1099
- Second Crusade 1147-1149
- Third Crusade 1187-1192
- Fourth Crusade 1202-1204
- Children's Crusade
- Fifth Crusade 1217-1221
- Sixth Crusade 1228-1229
- Seventh Crusade 1248-1254
- Eighth Crusade 1270
- Ninth Crusade 1271-1272



The Crusades were fought mainly by Roman Catholic forces against Muslims who had occupied the near east since 638 AD. Orthodox Christians also took part in fighting against Islamic forces in some crusades. Crusaders took vows and were granted penance for past sins, often called an indulgence. The crusades originally had the goal of recapturing Jerusalem and the

Holy Land from Muslim rule and were launched in response to a call from the Christian Byzantine Empire for help against the expansion of the Muslim Seljuk Turks into Anatolia (Turkey).

The crusades had far-reaching political, economic, and social impacts, some of which have lasted into contemporary times. Because of internal conflicts among Christian kingdoms and political powers, some of the crusade expeditions were diverted from their original aim, such as the Fourth Crusade, which resulted in the sack of Christian Constantinople and the partition of the Byzantine Empire between Venice and the crusaders. The Sixth Crusade was the first crusade to set sail without the official blessing of the Pope, The Seventh, Eighth and Ninth Crusades resulted in Muslim victories which marked the end of the crusades.

The crusades were never referred to as such by their participants. The original crusaders were known by various terms, including *fideles Sancti Petri* (the faithful of Saint Peter) or *milites Christi* (knights of Christ). They saw themselves as undertaking an "iter," a journey, or a *peregrinatio*, a pilgrimage (although pilgrims were usually forbidden to carry arms, which the crusaders did indeed carry).

Like pilgrims, each crusader swore a vow to be fulfilled on successfully reaching Jerusalem, and they were granted a cloth cross (crux) to be sewn into their clothes. This "taking of the cross," the crux, eventually became associated with the entire journey; the word "crusade" coming into English from the Medieval French *croisade* and Spanish *cruzada*.

The Holy Land

The Holy Land, on the eastern shore of the Mediterranean Sea—also known as The Levant—is significant in Christianity as the place of nativity, ministry, crucifixion and resurrection of Jesus of Nazareth, whom Christians regard as the Savior, the Messiah. By the end of the 4th century, following the Roman Emperor Constantine's conversion to Christianity in AD 313 and later the founding of the Byzantine Empire after the partition of the Roman Empire, the Holy Land had become a predominantly Christian region. The Muslim presence in the Holy Land began with their conquest of Syria in the 7th century. The Muslim armies' successes put increasing pressure on the Eastern Orthodox Byzantine Empire which had originally claimed the region, part of the Eastern Roman Empire.

Churches commemorating various events in the life of Jesus had been erected at key sites in Jerusalem when the Christians held the territory before the coming of the Muslims. Jerusalem also holds historical and religious importance for Jews as the site of the Second Temple (Herod's Temple) and the First Temple (Solomon's Temple). Jews consider Israel as their ancestral homeland and had been visiting the city since its capture and destruction by the Romans in AD 66-73. After 632, Jerusalem began to hold significance in Islam as the site of the ascension into heaven of the prophet Muhammad whom Muslims believe to be the foremost prophet of God; Jerusalem is regarded as the third most sacred site in Islam. Christians and Jews continued to have a presence in the Holy Land and coexisted with the Muslims as "people of the book" (the bible).

In AD 1009 the ruling Caliph of Jerusalem al-Hakim bi-Amr Allah ordered the destruction of the Church of the Holy Sepulchre, built on the supposed site of the

crucifixion. In 1039 his successor, after requiring large sums be paid for the right, permitted the Byzantine Empire to rebuild it. Pilgrimages were allowed to the Holy Lands before and after the church was rebuilt but for a time pilgrims were captured and some of the clergy were killed. The Muslims eventually realized that much of the wealth of Jerusalem came from the pilgrims; for this reason and others, the persecution of pilgrims eventually stopped. However, the damage was already done and the violence of the Seljuk Turks became part of the concern that spread support for the crusades across the Christian world.

Factors Leading to the Crusades

The origins of the crusades also lay in other developments. The breakdown of the Carolingian Empire in the late 9th century, combined with the relative stabilization of local European borders after the Christianization of the Vikings, Slavs, and Magyars, had produced a large class of armed warriors whose energies were misplaced fighting one another and terrorizing the local populace. The Church tried to stem this violence with the Peace and Truce of God movements, which was somewhat successful, but trained warriors always sought an outlet for their skills. Opportunities for territorial expansion were becoming less attractive for large segments of the nobility.

The crusades were an outlet for an intense religious piety which rose up in the late 11th century among the lay public. A crusader would, after pronouncing a solemn vow, receive a cross from the hands of the pope or his legates, and was thenceforth considered a "soldier of the Church". This fervor was further strengthened by religious propaganda that advocated "just war" to retake the Holy Land from the Muslims. The remission of sin was a driving factor and provided any God-fearing man who had committed sins with an appealing way to avoid eternal damnation in Hell. It was a hotly debated issue throughout the Crusades as what exactly "remission of sin" meant. Most believed that by retaking Jerusalem they would go straight to heaven after death. All of these factors were manifested in the overwhelming popular support for the First Crusade and the religious vitality of the 12th century.

First Crusade

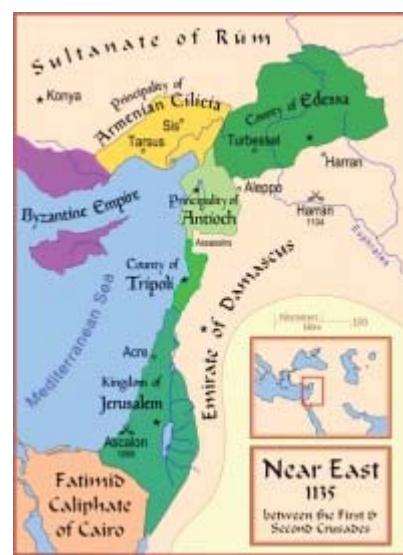
In 1063 Pope Alexander II had given his blessing to Iberian Christians in their wars against the Muslims, granting both a papal standard (the *vexillum sancti Petri*) and an indulgence to those who were killed in battle. Pleas from the Byzantine Emperors, now threatened by the Seljuks, thus fell on ready ears. These pleas were made in 1074, from Emperor Michael VII to Pope Gregory VII and in 1095, from Emperor Alexios I Komnenos to Pope Urban II. Later that year, at the Council of Clermont, the pope called upon all Christians to join a war against the Turks, promising those who died

in the endeavor would receive immediate remission of their sins.

The official crusader armies set off from France and Italy on the papally-ordained date of 15 August 1096. The armies journeyed eastward by land toward Constantinople, where they received a wary welcome from the Byzantine Emperor. Pledging to restore lost territories to the empire, the Crusaders were supplied and transported to Anatolia where they laid siege to Seljuk-occupied Nicaea. The city fell on 19 June 1097. The Crusader armies fought further battles against the Turks, facing grave deprivation of both food and water in their summer crossing of Anatolia. The lengthy Siege of Antioch began in October 1097 and endured until June of 1098. The ruler of Antioch was not sure how the Christians living within his city would react, so he forced them to live outside the citadel. The siege only ended when one of the gates to the city was betrayed by an Armenian dissident. Once inside the city the crusaders massacred the Muslim inhabitants, destroyed mosques and pillaged the city. A large Muslim relief army immediately besieged the victorious crusaders within Antioch, but this was defeated on June 28, 1098. The starving crusader army marched south, moving from town to town along the coast, finally reaching the walls of Jerusalem on June 7, 1099 with only a fraction of their original forces.

The Jews and Muslims of Jerusalem fought together to defend Jerusalem against the invading crusaders. They were unsuccessful and on July 15, 1099 the crusaders entered the city. They proceeded to massacre the remaining Jewish and Muslim civilians and pillaged or destroyed mosques and the city itself. One historian has

written that the "isolation, alienation and fear" felt by the crusaders so far from home helps to explain the atrocities they committed; perhaps that is so but the atrocities bear no rationalization as acts of true Christians. As a result of the First Crusade, four small Crusader states were



created: the Kingdom of Jerusalem, the County of Edessa, the Principality of Antioch, and the County of Tripoli. In the Kingdom of Jerusalem at most 120,000 crusaders (predominantly French-speaking Western Christians)

ruled over 350,000 Muslims, Jews, and native Eastern Christians who had remained in the area since the Arab occupation had begun in 638 AD. The crusaders also tried to gain control of the city of Tyre but were defeated by the Muslims.

Second Crusade 1147–1149

After a period of relative peace in which Christians and Muslims co-existed in the Holy Land, Muslims recaptured the town of Edessa in 1044. A new crusade was called for by various preachers, most notably by Bernard of Clairvaux. French and South German armies marched to Jerusalem in 1147 but failed to win any major victories. By 1150 both the kings of France and Germany had returned to their countries without any success in regaining cities that had been recaptured by Muslims in the Holy Land. St. Bernard of Clairvaux, who had encouraged the Second Crusade, was upset with the amount of misdirected violence and slaughter of the Jewish population of the Rhineland that took place as the crusaders journeyed east through Europe toward the Holy Land. On the western side of the Mediterranean the Second Crusade met with success as a group of Northern European crusaders stopped in Portugal, allied with the Portuguese King, Alfonso I of Portugal, and retook Lisbon from the Muslims in 1147. A detachment from this group of crusaders helped Count Raymond Berenguer IV of Barcelona conquer the city of Tortosa the following year.

Third Crusade 1187–1192

In 1187, Saladin, Sultan of Egypt, recaptured Jerusalem after 89 years under Christian rule. After the Christians surrendered the city Saladin for the most part left churches and shrines untouched and spared the civilians to be able to collect ransom money for them, but several thousand apparently were not redeemed and were sold into slavery. The reports of Saladin's victories shocked Europe. Pope Gregory VIII called for another crusade, which is sometimes referred to as the Kings' Crusade. It was led by several of Europe's most important leaders: Philip II of France, Richard I of England ("Richard the Lionheart"), and Frederick I, Holy Roman Emperor. Before his arrival in the Holy Land, Richard captured the island of Cyprus from the Byzantines in 1191. Cyprus would serve as a crusader base for centuries to come, and would remain in Western European hands until the Ottoman Empire took the island from Venice in 1571. After a long siege Richard recaptured the city of Acre and took the entire Muslim soldier garrison under captivity; it was executed after a series of failed negotiations. The crusader army headed south along the coast of the Mediterranean Sea. They defeated the Muslims near Arsuf, recaptured the port city of Jaffa, and were in sight of Jerusalem. However, Richard did not believe he would be able to hold Jerusalem once it was captured, as the majority of crusaders would then return to Europe, and the crusade ended without the taking of Jerusalem.

Richard left the following year after negotiating a treaty with Saladin. The treaty allowed unarmed Christian pilgrims to make pilgrimages to Jerusalem while it remained under Muslim control.

After the First Three Crusades...

On a popular level the first crusades unleashed a wave of impassioned, personally-felt pious Christian fury that was expressed in the massacres of Jews that accompanied the movement of the crusader mobs through Europe as well as the violent treatment of "schismatic" Orthodox Christians of the east. During many of the attacks on Jews, local Bishops and Christians made attempts to protect Jews from the mobs that were passing through. Jews were often offered sanctuary in churches and other Christian buildings.

Fourth Crusade 1202–1204

The Fourth Crusade was initiated in 1202 by Pope Innocent III with the intention of invading the Holy Land through Egypt. Because the crusaders lacked the funds to pay for the fleet and provisions that they had contracted from the Venetians, Doge Enrico Dandolo enlisted the crusaders to restore the Christian city of Zara (Zadar) to obedience. Because they subsequently lacked provisions and time on their vessel lease the leaders decided to go to Constantinople where they attempted to place a Byzantine exile on the throne. After a series of misunderstandings and outbreaks of violence, the crusaders sacked the city in 1204 and established the so-called Latin Empire and a series of other crusader states throughout the territories of the Greek Byzantine Empire. This is often seen as the final breaking point of the Great Schism between the Eastern Orthodox Church and (Western) Roman Catholic Church.

Children's Crusade

The Children's Crusade is a series of possibly fictitious or misinterpreted events of 1212. The story is that an outburst of popular enthusiasm led to a gathering of children in France and Germany, which Pope Innocent III interpreted as a reproof from heaven to their unworthy elders. The leader of the French army, Stephen, led 30,000 children. The leader of the German army, Nicholas, led 7,000 children. None of the children actually reached the Holy Land: those who did not return home or settle along the route to Jerusalem either died from shipwreck or hunger, or were sold into slavery in Egypt or North Africa.

Fifth Crusade 1217–1221

By processions, prayers, and preaching, the Church attempted to set another crusade afoot, and the Fourth Council of the Lateran (1215) formulated a plan for the recovery of the Holy Land. In the first phase, a crusading force from Austria and Hungary joined the forces of the deposed Christian king of Jerusalem and the Christian prince of Antioch to take back Jerusalem. In the second

phase, crusader forces achieved a remarkable feat in the capture of Damietta in Egypt in 1219, but under the urgent insistence of the papal legate, Pelagius, they then launched a foolhardy attack on Cairo in July of 1221. The crusaders were turned back after their dwindling supplies led to a forced retreat. A night-time attack by the ruler of Egypt resulted in a great number of crusader losses and eventually in the surrender of the army.

The Egyptian ruler, Sultan Al-Kamil had put a bounty of a Byzantine gold piece for every Christian head brought to him during the war. During 1219, St. Francis of Assisi crossed the battle lines at Damietta in order to speak with the Sultan. He and his companion Illuminatus were captured and beaten and brought before the Sultan. St. Bonaventure, in his *Major Life of St. Francis*, says that the Sultan was impressed by St. Francis and spent some time with him. St. Francis was given safe passage and although he was offered many gifts, all he accepted was a horn for calling the faithful to prayer. This act eventually led to the establishment of the Franciscan Custody of the Holy Land.

Sixth Crusade 1228–1229

Emperor Frederick II had repeatedly vowed a crusade but failed to live up to his words, for which he was excommunicated by Pope Gregory IX in 1228. He nonetheless set sail from Brindisi, landed in Saint-Jean d'Acre, and through diplomacy he achieved unexpected success: Jerusalem, Nazareth, and Bethlehem were delivered to the crusaders for a period of ten years.

Seventh Crusade 1248–1254

A Muslim force recaptured Jerusalem in 1248. The crusader army and its Bedouin mercenaries were completely defeated within forty-eight hours. This battle is considered by many historians to have been the death knell to the crusader states. Although this defeat provoked no widespread outrage in Europe as the fall of Jerusalem in 1187 had done, Louis IX of France organized a crusade against Egypt from 1248 to 1254, leaving from the newly constructed port of Aigues-Mortes in southern France. It was a failure and Louis spent much of the crusade living at the court of the crusader kingdom in Acre.

Eighth Crusade 1270

The eighth Crusade was organized by Louis IX in 1270 to come to the aid of the remnants of the crusader states in Syria. But the crusade was diverted to Tunis where Louis spent only two months before dying. For his efforts, Louis was later canonized. The crusade failed.

Ninth Crusade 1271–1272

The future Edward I of England undertook another crusading expedition in 1271, after having accompanied Louis IX on the Eighth Crusade. The Ninth Crusade was deemed a failure and ended the crusades in the Middle East. With the fall of Antioch (1268), Tripoli (1289), and Acre (1291), those Christians unable to leave the cities

were massacred or enslaved and the last traces of Christian rule in the Levant disappeared.

Criticisms

Western and Eastern historiography present variously different views on the crusades, in large part because "crusade" invokes dramatically opposed sets of associations—"crusade" as a valiant struggle for a supreme cause, and "crusade" as a byword for barbarism and aggression. The First Crusade ignited a long tradition of organized violence against Jews in European culture. Elements of the crusades were criticized by some from the time of their inception in 1095. For example, Roger Bacon felt the crusades were not effective because, "those who survive, together with their children, are more and more embittered against the Christian faith." In spite of such criticism the movement was widely supported in Europe long after the fall of Acre in 1291. Later, 18th century Enlightenment thinkers judged the crusaders harshly. Likewise, some modern historians in the West express moral outrage at this series of bloody campaigns.

The Legacy of the Crusades

The crusades had an enormous influence on the European Middle Ages. At times much of the continent was united under a powerful Papacy. But by the 14th century the development of centralized bureaucracies (the foundation of the modern nation-state) was well on its way in France, England, Spain, Burgundy, and Portugal. This occurred partly in reaction to the dominance of the church at the beginning of the crusading era.

Although Europe had been exposed to Islamic culture for centuries through contacts in the Iberian Peninsula and Sicily, much knowledge in areas such as science, medicine, and architecture was transferred from the Islamic to the western world during the crusade era. The crusades are seen as having opened up European culture to the world, especially Asia:

The New Catholic Encyclopedia states that:

"The crusades brought about results of which the popes had never dreamed and which were perhaps the most important of all. They re-established traffic between the East and West, which, after having been suspended for several centuries, was then resumed with even greater energy; they were the means of introducing westerners into the most civilized Asiatic countries. A new world was thus revealed, and crusaders who returned to their native land carried back novel ideas..."

Along with trade, new scientific discoveries and inventions made their way east or west. Arab advances, including the development of algebra, optics, and refinement of engineering, made their way west and sped the course of advancement in European universities that led to the Renaissance.

The need to raise, transport and supply large armies led to a flourishing of trade throughout Europe. Roads largely unused since the days of Rome saw significant increases in traffic as local merchants began to expand their horizons. This was not only because the crusades prepared Europe for travel, but also because many wanted to travel after being reacquainted with the products of the Middle East. This also aided in the beginning of the Renaissance in Italy since various Italian city-states from the very beginning had important and profitable trading colonies in the crusader states, both in the Holy Land and later in captured Byzantine territory.

Increased trade brought many things to Europeans that were once unknown or extremely rare and costly. These goods included a variety of spices, ivory, jade, diamonds, improved glass-manufacturing techniques, early forms of gun powder, oranges, apples, and other Asian crops.

From a larger perspective, and certainly from that of noted naval/maritime historian Archibald Lewis, the crusades must be viewed as part of a massive macro historical event during which Western Europe, primarily by its ability in naval warfare, amphibious siege, and maritime trade, was able to advance in all spheres of its civilization. Recovering from the Dark Ages of AD 700-1000, throughout the 11th century Western Europe began to push the boundaries of its civilization. Prior to the First Crusade the Italian city-state of Venice, along with the Byzantine Empire, had cleared the Adriatic Sea of Islamic pirates and loosened the Islamic hold on the Mediterranean Sea. The Normans, with the assistance of the Italian city-states of Genoa and Pisa, had retaken Sicily from the Muslims from 1061-1091. These conflicts prior to the First Crusade had weakened the Islamic hold on the Mediterranean allowing for the rise of Western

European
Mediterranean
trading and naval
powers such as
the Sicilian
Normans and the
Italian city-states
of Venice, Genoa,
and Pisa.

The pre-First
Crusade actions,
along with the
crusades
themselves,
allowed Western
Europe to contest



and gain control of the trade of the Mediterranean Sea and Black Sea. This allowed the economy of Western Europe to advance to previously unknown degrees, most obviously as regards the Maritime Republics of Venice, Genoa, and Pisa. It is no coincidence that the Renaissance began in Italy, as the Maritime Republics, through their

control of the Eastern Mediterranean and Black Seas, were able to return to Italy the ancient knowledge of the Greeks and Romans as well as the products of the Orient. As a result Western Europe began to trade extensively with the Orient, allowing the products of Asia to be brought to such ports as Acre, Antioch, Kaffa and even, for a time, Constantinople itself. The Fifth Crusade of 1217-1221 and the Seventh Crusade of 1248-1254 were largely attempts to secure Western European control of the Red Sea trade region, as both of these crusades were directed against Egypt. It was only in the 1300s, as the stability of trade with Asia collapsed, the Middle Eastern crusader states were lost, and the rising Ottoman Empire impeded further Western European trade with Asia that Western Europeans sought alternate trade routes to Asia, ultimately leading to Columbus's voyage of 1492 and the Age of Discovery.

Silverpoint: a unique art medium¹

A silverpoint drawing is made by dragging a metal rod or wire across a surface often prepared with gesso or primer. The initial marks of silverpoint (when made using actual silver metal) appear gray but exposure to air tarnishes the lines to a warm brown tone. The oxidation becomes perceptible over a period of several months.

Silverpoint is one of several types of metalpoint used by craftsmen and artists since ancient times and by medieval scribes on manuscripts. Metalpoint styli were used for writing on soft surfaces (wax or bark), ruling and for underdrawing on parchment and drawing on prepared paper. The metals first used were lead and tin, and then in later times, silver. The softness of these metals made them effective drawing instruments.

Goldsmiths also used metalpoint drawings to prepare their detailed, meticulous designs. Albrecht Dürer's father was one such craftsman who later taught his young son to draw in metalpoint. Durer's 1484 self-portrait at age 13 is still considered a masterpiece. Old Master silverpoints are typically intimate in scale recalling roots in manuscript illumination.



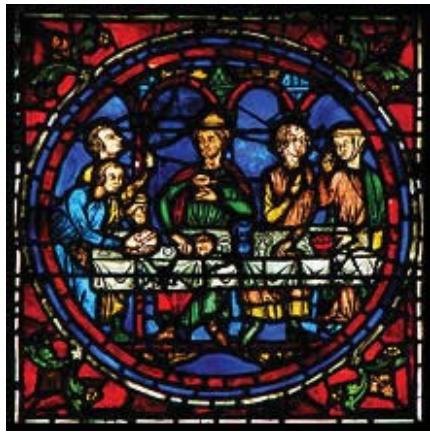
Metalpoint was used in the Middle Ages directly on parchment for the underdrawing of illuminated manuscripts or model books. On uncoated parchment and paper silverpoint is particularly light in appearance. Since the silverpoint of the 1300's was used more successfully on prepared supports. A traditional ground can be prepared with a rabbit skin glue solution pigmented with bone ash, chalk and/or lead white. Contemporary grounds include acrylic gesso, gouache and commercially prepared claycoat papers. The slight tooth of the ground preparation scrapes off a little of the silver from the tool as it is drawn across the surface, resulting in a darker line than is apparent on an unprepared surface.

In the late Gothic/early Renaissance era silverpoint using actual silver metal emerged as a fine line drawing technique. Not blunting as easily as lead or tin, and rendering precise detail, silver was especially favored in Florentine and Flemish workshops. Silverpoint drawings of this era include model books and preparatory sheets for paintings. Artists who worked in silverpoint include Jan van Eyck, Leonardo da Vinci, Albrecht Dürer and Raphael. Cennino Cennini's book *Il Libro dell'Arte* of the late 1300's provides a window on the practice of silver and leadpoint drawing, as well as preparing metalpoint grounds. Susan Dorothea White's recent book *Draw Like Da Vinci* (2006) describes the silverpoint technique of Leonardo da Vinci.

Drawing styles changed at the end of the 1500's resulting in a decline of metalpoint. The discovery of graphite in Cumbria, England in the early 1500s and its increasing availability to artists in a pure, soft and erasable form hastened silverpoint's eclipse. Artists sought more gestural qualities, for which graphite and red and black chalk were better suited. Ink and wash drawings are also prevalent in the period (a wash is a brushing of mostly solvent with a little paint and covers a broad area without apparent brush strokes). These other drawing techniques required less effort and were more forgiving than silver, which resists erasure and leaves a fainter line.

¹ Extracted from Wikipedia at <http://en.wikipedia.org/wiki/Silverpoint> and edited by Jim Janossy

Medieval stained glass¹



Stained glass windows of ever larger size became a widely used artistic medium in the late Middle Ages and into the Gothic Era as new architectural techniques made it possible for cathedral walls to be constructed thinner, and larger and larger areas used for window space. Images are formed in stained glass cut into pieces and fit together with a flexible lead strip having an "H" shaped cross section, called "lead came". Each of the channels is fit around the cut glass to hold it together and sections of the panels formed in this way are fitted into iron frames to form a large window.

Medieval colored glass is composed of silica, soda or potash, and lime. Glass factories were set up where there was a ready

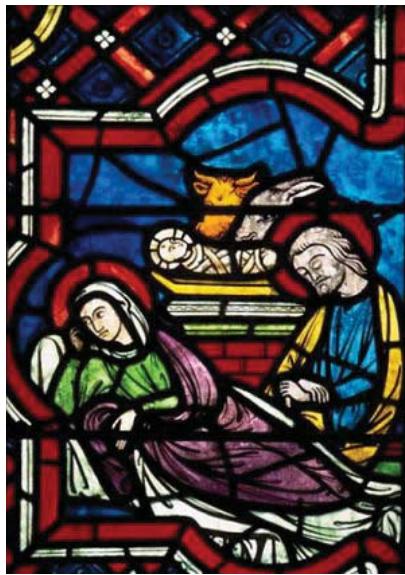
supply of silica sand, the essential material for glass manufacture. Silica requires very high heat to become molten, something furnaces of the Middle Ages were unable to achieve. So materials such as soda or potash were added to allow the silica to melt at a lower temperature, and then lime was added to make the glass more stable.

Sources of silica were often impure, with iron oxide being one of the most common impurities, producing a greenish or blue color without the addition of any other minerals. From ancient times craftsmen had learned that glass can intentionally be colored by adding metallic oxide powders or finely divided metals while it is in a molten state. In modern times these substances can be manufactured, but in medieval times it was more common to use Beech wood ash or other plant matter to supply iron and manganese oxides. Since the content of these minerals in plants varied with the soil conditions in which trees and plants grew it was difficult to predict what color of glass would be produced in a given batch. The way the glass was heated also affected its color, which could range from yellow to flesh colored to light purple or even reddish.

Some of the stronger reds, blues and greens that are a feature of medieval stained glass rely on the addition of copper oxides. The production of bright reds and blues in particular was straightforward. The addition of copper to the mix resulted in the reliable creation of the red, blue and green glasses widely used in Romanesque and Gothic stained glass windows. Depending on how it was handled and other impurities present in the glass, copper oxides could also produce green or bluish green. Adding cobalt mineral ores makes deep blue, and gold produces wine red and violet glass. The experimental manufacture of glass resulted in colors ranging from colorless to yellow, amber, brown, green, blue, pink and purple.



¹ Much of the information on this topic comes from Wikipedia pages on stained glass, with additional material on silver stain from entries on Islamic glass; see http://en.wikipedia.org/wiki/Stained_glass and http://en.wikipedia.org/wiki/Islamic_glass



An author named Theophilus² documented in the 1100's that Roman tesserae (mosaic glass cubes) were also melted into new glass batches to produce colored glass. He writes that "little square stones" from "ancient pagan buildings" could be used to produce glass; "they even melt the blue in their furnaces, adding a little of the clear white to it, and they make from it blue glass sheets which are costly and very useful in windows."

Some glasses were produced by "flashing", which means that a thin layer of colored glass was bonded to clear glass to form two or more layers. Flashing could be done by dipping a small sphere of molten glass into a molten uncolored glass and blowing this into a cylinder form (the cylinder

blown sheet process) which was then cut into sections and flattened in an annealing oven. Red copper-based glass was usually flashed with clear glass since the color is too dark in a layer thick enough to be self-supporting.

Producing a strong clear yellow could be difficult in early stained glass since it required more careful control of furnace conditions than was possible. In the 1300's silver stain was developed to produce yellows. It's quite possible that the technique was picked up from increased contact with Islamic civilizations during the Crusades, where staining glass with copper and silver pigments was known from around the AD 200's AD and is called "luster painting". Silver stain was a combination of silver nitrate or silver sulfide blended with clay and applied to clear glass, which is then heated to chemically cause the stain to bond with the glass. This technique enabled the use of more detail in stained glass windows than could be achieved with pieces of cut glass. Silver stain was sometimes applied over the surface of colored glass to create a wide range of glass hues, combining yellow with the underlying color of the glass.



Painton Cowen, in conjunction with the Centre For Medieval Studies at York University (England) has digitized more than 19,000 photographs of medieval and ancient stained glass panels at over 500 locations and made these accessible on the web. You will access this web site at the Unit 2 web page of the class web site as a part of Project 2. The stained glass examples here are from that site.

² Theophilus Presbyter (c. AD 1070-1125) is the pen name of an anonymous author, perhaps Benedictine monk Roger of Helmarshausen, who compiled a Latin text with detailed descriptions of various medieval applied arts between AD 1100 and 1120. The three parts of his writing cover painting techniques, paints and painting walls, ink for manuscript illumination of texts, stained glass and techniques of glass painting, and goldsmithing, metalwork and even introduction to organ building. Interestingly, his writing gives clear instructions for oil-based painting, but at that point it was probably used for painting sculptures, carvings and wood fittings, perhaps especially for outdoor use. Jan van Eyck is credited with demonstrating oil as a superior binder for art painting in about AD 1425-35.

Gothic “International” Style: The Wilton Diptych

(circa 1395-99 AD; egg tempera medium)



**English King Richard II presented to the Virgin and Child
by his Patron Saint John the Baptist and Saints Edward and Edmund (approx. 19" x 24")**

The “Wilton Diptych” was painted as a portable altarpiece for the private devotion of King Richard II, who ruled England from 1377 to 1399. The diptych is thought to have been made in the last five years of Richard's reign although its artist remains unknown. It is called The Wilton Diptych because it came from Wilton House in Wiltshire, the seat of the Earls of Pembroke.

A diptych is a painting, carving or piece of metalwork on two panels usually hinged like a book. The panels of the Wilton Diptych are made of north European oak but have been transformed by immaculate painting and gilding into a heavenly vision. King Richard II kneels at the feet of the



Virgin and Child and 11 angels. Behind him is Saint John the Baptist, Saint Edward the Confessor and Saint Edmund. The saints are recognizable by their attributes: the lamb of Saint John, the ring of Edward the Confessor and the arrow of Saint Edmund (Edward and Edmund are earlier English kings who came to be venerated as saints.) The outside surface of the diptych, illustrated on the next page, bears Richard's arms and his personal emblem of a white hart chained with a crown around its neck. The hart is a stag, an animal much like a reindeer and is shown as an emblem on the shoulder of each angel.



Outside surface of the diptych

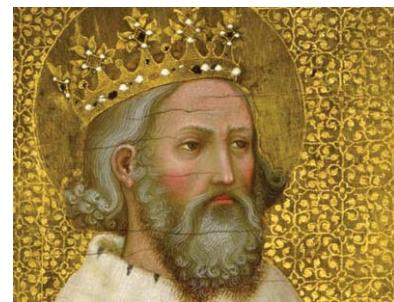
It is not known who painted the Wilton Diptych; artists from England, France, Italy and Bohemia have been suggested. Many of the earliest paintings of this type cannot be linked with a specific artist. The practice of signing a finished painting was not widespread before the late 1400's. It would probably not have occurred to the majority of earlier artists to put such a personal stamp on the object that they had created particularly if it was used in religious devotions.

The status of the person creating a work such as this was that of highly skilled craftsmen who usually worked collaboratively with others. All painters trained as part of a studio run by a master artist who was registered with the local trade guild. Master artists might also work with associates of similar status as an efficient way to pool different talents. Paintings were rarely therefore the result of one "hand" alone. Their makers did not see themselves as unique individuals in the way that artists have done in later years especially since the 19th century. Where one artist or studio seems to have been responsible for a group of pictures the maker is often referred to as 'Master', followed by either the subject or location of their most notable work, for example the Master of St Giles .



The Wilton Diptych is a work in the "international" style that developed at the end of the Gothic era—the end of the Middle Ages. It is an outstanding example of egg tempera painting in which pigments were mixed with

egg yolk or egg white as a binder. As this work shows skilled hands could depict extreme detail and subtle shading and coloration with this medium even though it can be difficult to work with since it dries very quickly.



This elaboration of the Wilton Diptych was drawn from several web resources including the web site of the National Gallery of England in Trafalgar Square, London, the entire collection of which is viewable online. Tempera painting is still actively pursued by the Society of Tempera Painters which also provides a web site exploring this medium. Explore these links:

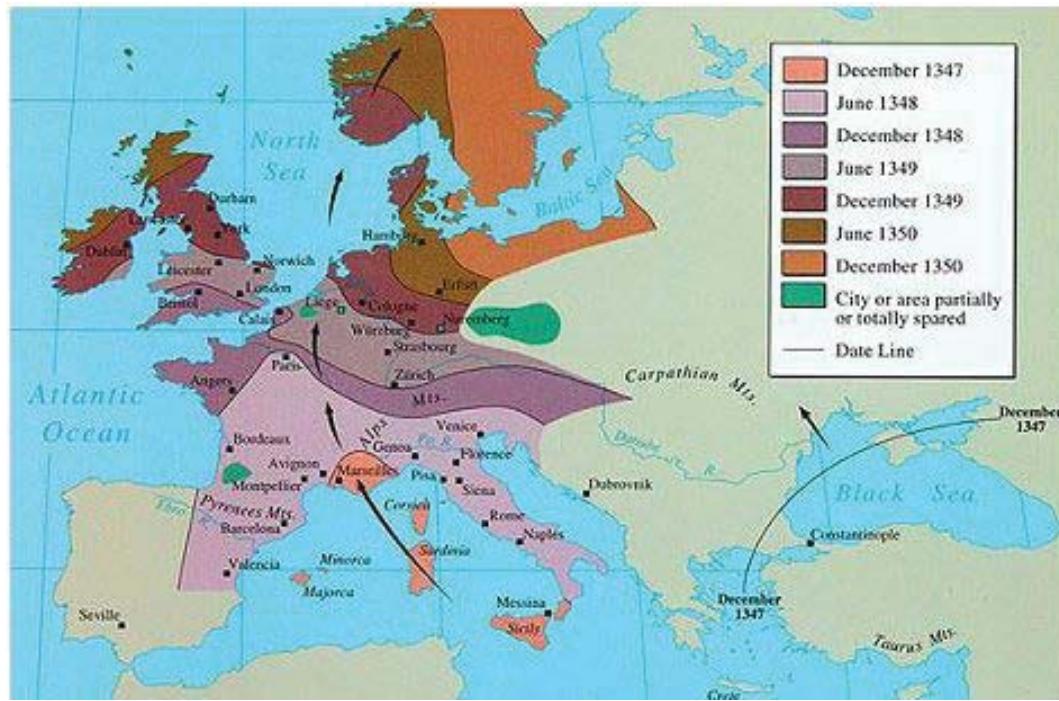
The European Black Plague of the 1300's

The Black Death was one of the worst natural disasters in all of history. In AD 1347 a great plague swept over Europe and ravaged cities causing widespread hysteria and death. One third of the population of Europe died, over 25 million people. The primary culprits in transmitting this disease were fleas carried on the back of black rats brought into the Italian ports of Europe on trade ships from the east. But people did not know that cause and assumed that somehow God was sending punishment—but why?



The “danse macabre” (the dance of death) became a common theme in Europe in illustrations like this example during the late 1300’s and onward for a century or more. Because the plague affected everyone it was a great equalizer. As images of these type show, the rich as well as the poor, royalty and high church officials as well as peasants, all were taken in agony by death, depicted here as skeletons dancing happily as they lead their suffering victims to the grave.

The plague was carried to Europe by rats and fleas on trading ships from Asia, entering in Sicily and Marseilles in 1347. It progressed between 1347 and 1350 to Northern Europe:



Here is what some writers of that era said:

Neither physicians nor medicines were effective. Whether because these illnesses were previously unknown or because physicians had not previously studied them, there seemed to be no cure. There was such a fear that no one seemed to know what to do. When it took hold in a house it often happened that no one remained who had not died. And it was not just that men and women died, but even sentient animals died. Dogs, cats, chickens, oxen, donkeys sheep showed the same symptoms of the same disease and died. And almost none, or very few, who showed these symptoms were cured.

-Marchione di Coppo Stefani

It struck me very deep this afternoon going with a hackney coach from my Lord Treasurer's down Holborne, the coachman I found to drive slower and slower, at last stood still, and came down hardly able to stand, and told me that he was suddenly stuck very sick, and almost blind, he could not see. So I left him and went into another coach with a sad heart for the poor man and trouble for myself lest he should have been struck with the plague, being at the end of town that I took him up; But god have mercy upon us all! It was dark before I could get home at Churchyard, where to my great trouble I met a dead corps of the plague in the narrow ally just down a little pair of stairs.

-S. Pepys

Realizing what a deadly disaster had come to them the people quickly drove the Italians from their city. However, the disease remained, and soon death was everywhere. Fathers abandoned their sick sons. Lawyers refused to come and make out wills for the dying. Friars and nuns were left to care for the sick, and monasteries and convents were soon deserted, as they were stricken, too. Bodies were left in empty houses, and there was no one to give them a Christian burial.

-Unknown

How many valiant men, how many fair ladies, breakfast with their kinfolk and the same night supped with their ancestors in the next world! The condition of the people was pitiable to behold. They sickened by the thousands daily, and died unattended and without help. Many died in the open street, others dying in their houses, making it known by the stench of their rotting bodies. Consecrated churchyards did not suffice for the burial of the vast multitude of bodies which were heaped by the hundreds in vast trenches like goods in a ships hold and covered with a little earth.

-Giovanni Boccaccio

People's attitudes towards music and art changed as they began to see the depressing situation surrounding them. The horrible nature of the Black Death was reflected in realistic depictions of human suffering and carnage and the symbolic use of the skeleton. During the Black Death music was played very grimly or never played at all. The change in art and music demonstrated the grim reality of the world.

(Much of the information here was extracted from a web site focused on the insect that carried the plague, <http://www.insecta-inspecta.com/fleas/bdeath/Black.html>. This web page now no longer exists, at least at the original web location.)

Project 2



A multi-part, hands-on project designed to make many of the highlights of art technology of the Middle Ages **REAL** to you!

This project has **three required parts**:

1. Exploring historiated initials
2. Designing and coloring a 12-petal rose window
3. Creating two Celtic knots

In addition, an optional extra credit item is available to you: creating a 32-petal rose window design.

I have carefully designed and documented the parts of this project so that each part should be easy to follow. Each of the parts is equipped with one or more web resources such as brief readings or tutorial videos. You can submit the different parts of this project separately; there's no need to hold onto the separate parts to submit them all at once. Contact me if you have any questions or problems! ☺ Jim

Project 2 Part 1: Exploring historiated initials



One of the primary tasks of many monasteries in the Middle Ages was the hand-writing of the bible to create additional copies and to replace copies as they deteriorated and became unusable. Since the movable-type printed press was not invented until centuries later, hand-copying was the only way to create these kinds of “manuscripts.” You see here a small part of a manuscript, decorated or “illuminated” with the first letter of the first word of a new paragraph.

The colors are vibrant even after several hundred years because, as Ernst Gombrich points out, they are protected from light and air simply because when a book is closed it naturally protects the pages. In addition, illuminated manuscripts were usually written on parchment or vellum, which is calf’s skin that has been soaked in lime, stretched, dried, scraped, then sanded smooth (vellum is an especially fine quality grade of parchment). These pages don’t deteriorate as would paper.



Start this project by visiting the web site pictured at the left, which is a part of the site of the St. John’s Bible Project. This is a major effort to create a modern hand-copied and illuminated bible. The link for this site is located on the Unit 2 web page, via <http://bit.ly/gph205-info>.

Tools & Materials

Ezekiel 23 Vol IV M1 PR	29	20ct	2 1/4 hrs
" 24 " M1 HV	49	30ct	4 1/2 hrs
" 25 " M2 PR	48	60ct os	4 3/4 hrs

LAYOUT & DESIGN
TOOLS & MATERIALS
REPRODUCTION

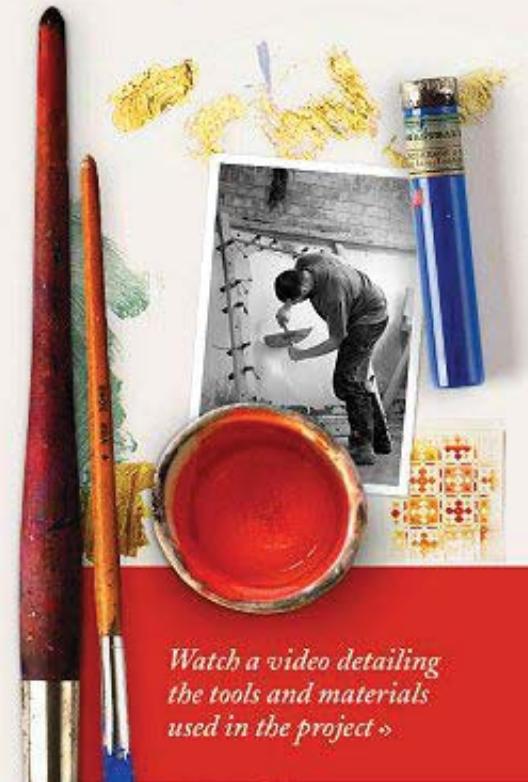
1 Vellum

The pages of *The Saint John's Bible* are made of calfskin vellum. The skins are soaked in lime, dried, scraped or “scratched,” and sanded smooth. The final product is nearly translucent, with a ‘hair side’ and ‘smooth side.’

2 Quills

All the script is written using quills hand-cut by the scribes. Only the largest flight feathers, called “primaries,” are used: goose quills for the main body of text, turkey and swan quills for heavier letterforms.

3 Ink



Watch a video detailing the tools and materials used in the project »

What to do for Project 2 Part 1

In this part of the assignment you'll visit an archive of tens of thousands of digital images of historiated initials of St. John's University and the College of St. Benedict, maintained by the Hill Manuscript Museum and Library. This online archive is accessible at www.hmml.org for which a QR code is located below. At this site you want to search for the "vivarium" (Latin, "place of life"; an area, usually enclosed, for observation). At the vivarium page, which appears as below, you click on the historiated initial near the center where I have pointed an arrow:

Welcome!

Vivarium is the home of digitized manuscripts, art, rare books, photographs, and other resources from two Benedictine monastic and educational communities in central Minnesota. It is a searchable database delivering a variety of digital objects. Vivarium was created and is maintained by the [Hill Museum & Manuscript Library](#).

Take a Tour

View samples from the collections in Vivarium. The tour is a collection of samples from the various Vivarium collections. A great way to start exploring.

[Vivarium Sample Tour](#)

Collections in Vivarium

Vivarium contains a number of collections from various sources. Each collection has its own custom home page with enhanced searching capabilities. Note: certain collections are restricted to on-campus access only.

Hill Museum & Manuscript Library The Hill Museum & Manuscript Library has been preserving manuscripts photographically for over 40 years. Over the years, other collections of art, rare books, photographs, etc., have been added to HMML's holdings.	EMIP Ethiopian Manuscripts and Scrolls The EMIP Collection of Ethiopian Manuscript Images is the result of the work of the Ethiopian Manuscript Imaging Project (EMIP) to digitize manuscripts and magic scrolls held in private collections in North America.
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This will take you to a page where you can search for illuminated capital letters. Find five examples of illuminated initials for the first letter of your last name. Copy each to a separate page or PowerPoint slide, and also copy the title, description, and date (century). Include that

information on the page with the image of the historiated initial. Label these five pages (or slides) with your name and submit them for grading as a part of Project 2. Then make sure you go on to parts 2 and 3 of this project!

HMML Visual Resources Online

Search by Keywords:
 For a general search of HMML's holdings by keyword, simply type the word(s) in the box below. Do not add Boolean operators between words; the 'and' operator is automatically used by the search engine.

Search by Exact Phrase or Text String:
 To search HMML's holdings for a particular phrase or text string, enter the phrase in the box below.

Search for Illuminated Capital Letters:
 The HMML Color Microfilms collection contains thousands of color microfilm frames featuring illuminated capital letters from early manuscripts. Type the letter in the box below.

Project 2 Part 2: Design a 12-petal rose window

As cathedral building progressed in the Middle Ages, bulky, thick-walled Romanesque cathedrals with rounded arches and small windows gave way to Gothic designs. In the design of

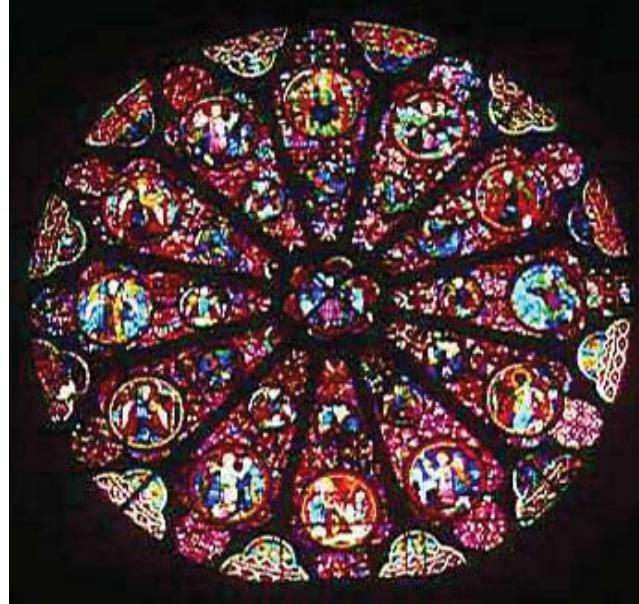
a Gothic cathedral, thinner walls became possible as architects learned how to support a structure with external “flying buttresses” to withstand the forces otherwise handled by the wall. This made it possible to open up more of the wall for windows to let in light, which led to the refinement of two technologies: stained glass and rose windows. Colored glasses had been made even as early as a thousand years before Christ by the Egyptians, who had

discovered that minerals added to molten glass could color it blue. By the Middle Ages craftsmen had learned to add minerals to molten glass to color it various shades of red, blue, green, yellow, amber, brown, blue, pink and purple. Images and designs were formed from pieces of colored glass held in place by lead channels and iron frame, to be fitted into wall openings.



Here you will create your own design for a **12-petal rose window** similar to this rose window from Lyon Cathedral in France, built in AD 1240-50. You’ll use just a compass and straightedge to lay this out. View my tutorial video showing you step-by-step how to create a rose window design at the Unit 2 web page:

1. Create a circle 6 inches in diameter
2. Using only geometric operations, divide it into 12 equal segments. Leave all your working lines and marks in place, don’t erase them!
3. Insert one or two concentric inner circles.
4. Insert “petals” or interior circles as I indicated in my video tutorial.
5. Use the link at the Unit 2 web page to view several actual stained glass rose windows in French cathedrals. After this exploration color your completed rose window in a way that emulates the coloration and color scheme of a typical rose window.
6. Submit a photo of you holding your finished rose window for grading.

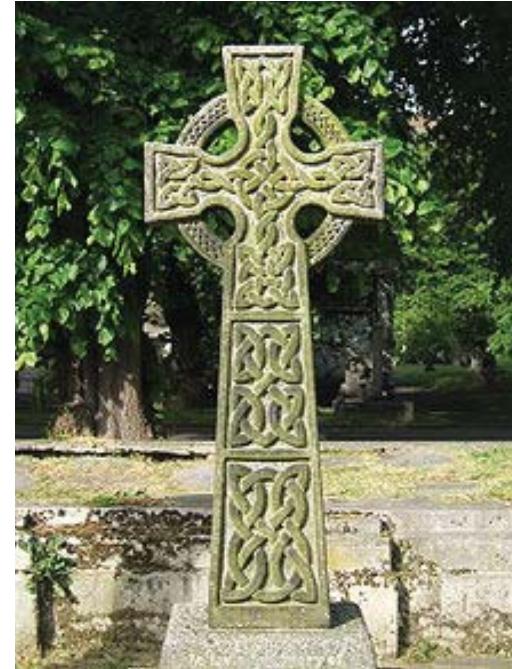


Project 2 Part 3: Creating Celtic knots

Celtic knots are a variety of stylized graphical representations of knots forming decoration, used extensively in the Celtic style of insular art. These knots are most known for their adaptation for use in the ornamentation of Christian monuments and manuscripts, such as the 8th-century *St. Teilo Gospels*, the *Book of Kells* and the *Lindisfarne Gospels*. The vertical part of this Celtic cross is decorated with Celtic Knots. Most Celtic knots are endless and many are varieties of basket weave knots.

In this part of Project 2 you'll explore the background of this decorative form and will create two hand-drawn Celtic knots of your own design. Follow these steps:

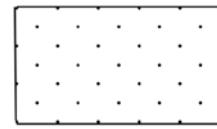
1. Access the short web site reading and three short videos at the web link for this page on the course web site Unit 2 page. The reading gives you background on Celtic knots and the first video is a tutorial on how to create a simple Celtic knot. The additional videos show you a more complex Celtic knot with internal “walls” some of the work of a Celtic knot “addict” including a time lapse (sped-up motion) video of the creation of a large knot and demonstrates how it really is continuous.
2. Download the worksheet from the link for this work at the Unit 2 course web page.
3. Using the first dot pattern on the worksheet create a simple Celtic knot with no internal “walls” (the term is defined in the first video mentioned in Step 1).
4. Color the band in your simple Celtic knot with a light color such as yellow or green or pale blue (not a vivid color such as the red in the video in the third video, which is such an intense color it obscures the knot pattern).
5. Using the second dot pattern on the downloaded worksheet create a second Celtic knot using your dot pattern with internal walls. When you have done that color it with a different color from your first Celtic knot.
6. Photograph both of your Celtic knots with your face visible in the picture and submit it to the dedicated course e-mail address for grading.



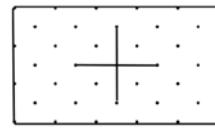
Here is a miniature illustration of the worksheet you download for this part of Project 2. Download the full sized worksheet from the link at the Unit 2 web page

Celtic knot worksheet – GPH-205 Project 2, Part 3

With no internal “barrier walls”:



With internal “barrier walls”:



Extra credit 2: A 32-segment rose window!

Dividing a circle into six equal segments using a compass is easy; you just draw the circle and then strike arcs with the compass (at the same setting) starting at any point on its circumference and continuing to strike arcs around the circle using each strike point for the center of the next arc. You then connect opposite points and you have six equal segments. You can repeat the process for any multiple of six segments.

Now examine this picture of a rose window at Strasbourg Cathedral in France. Notice that it contains 16 major segments. This is not a multiple of 6. Dividing a circle into 16 segments requires using more and different geometric manipulations.

To complete this extra credit, do this:

1. Use a compass to draw a circle about 6 inches in diameter on a sheet of paper.
2. Think through the geometric operations you can perform to divide this circle into exactly 16 perfectly equal pie-slice shaped sectors. Then use those operations to divide the circle into 16 segments **and leave all of your working lines visible.** Some of the same geometric operations you did in forming the Golden Rectangle in Unit 1 will be helpful to you but the Golden Rectangle itself has no relationship to a rose window.
3. Once you have completed the development of your circle divided into 16 equal segments, take a digital picture of it **with working lines visible. Keep this image because you'll do more with this rose window but I need to see the working lines at this stage!**
4. Write a set of step-by-step instructions that can be used by another person to do the same thing you did to divide the circle into 16 equal segments. This should be a simple list of actions entitled "How to divide a circle into 16 parts using geometry."
5. After taking a picture of your circle divided into 16 segments, continue working with it to divide it into 32 equal segments.
6. Insert three large inner circles centered on the center of the original circle as you see in the window illustrated on this page, proportioned in a similar way.
7. Insert a ring of 16 smaller circles between segments around the outer edge, as you see in the window pictured here.
8. Using colored pencil, crayons, or water colors recreate the coloring of your window in a similar way to the Strasbourg Cathedral window pictured here.
9. Take a digital picture of your completed 32-segment colored rose window.
10. Submit the digital image from step 3, your instructions from step 4, and the digital image from step 9 for grading.

