This segment of the course will focus on the characteristics of handwritten manuscripts which deterred the use of images prior to the availability of printing. It will begin with a description of the materials used in the production of manuscripts and the methods used to make multiple copies of them. It will cover the inherent problems which led to the primacy of writing over illustration, especially within technical fields. In conclusion, it will show that these conditions prompted the two main writers of architectural theory, preceding the advent of print, to produce works that are almost exclusively text based.

The previous lecture described the conditions surrounding the work of Leon Battista Alberti. Alberti was a Renaissance humanist who composed his treatise, *De Re Aedificatoria*, around 1452, just prior to the adoption of the printing press in Italy. Although current publications of Alberti’s manuscript have been embellished with images, the original was devoid of diagrams and illustrations. This lecture will introduce the work of the earlier writer, Vitruvius, who wrote the first know treatise on architecture. His manuscript was the only link to the architectural knowledge of antiquity, which Renaissance scholars believed to be sacred. For many years it was widely believed that Vitruvius’s original manuscript contained illustrations. However, this lecture will suggest that Vitruvius may have also deliberately avoided the use of images.

**The Dominance of Text**

Parchment and papyrus were the two primary sheet materials used in the production of handwritten manuscripts. Parchment was made from animal skin; individual sheets of parchment were bound together to form a codex. Papyrus, as the name suggests, was produced out of the papyrus plant. Manuscripts written on this material took the form of a long scroll instead of a compilation of pages. Before the widespread use of printing, manuscripts were not expected to have a wide distribution. One could hope for 1,000 copies, at best. This was because copying texts manually was very labor intensive. When printed copies finally started to emerge the cost of a mechanical copy proved to be much cheaper than its manual equivalent. Manual copies were efficiently produced in scriptoria. In these workshops, manuscripts were often dictated to a large group of scribes simultaneously. This allowed many duplicates to be produced at once.

These conditions were primarily developed for the production of written documents and were extremely unfavorable for the distribution of images. Neither papyrus nor parchment had physical characteristics which aided in the accurate transfer of images. They were not sufficiently transparent to allow tracing and other methods for direct transfer proved harmful to the originals. The strategy of dictation used in scriptoria further inhibited the copying of images. Since complex illustrations could not be dictated, it was up to one worker to transfer illustrations from the original manuscript into each
new copy, one at a time. As a result, many copies remained unillustrated. Even when illustrators got around to producing copies, the results were usually unsatisfactory. Illustrators were often pulled from the ranks of normal scribes. Furthermore, the prevailing notion of illustration as a creative act gave illustrators license to make significant alterations. After all, before the invention of printing, each illustration was a unique work of art. As such, drawings were not frequently used in the communication of technical or scientific information (ex. construction documents for a building, geographical maps, instructions, or scientific diagrams). A work of art was meant to be creative and did not demand fidelity. Copies of illustrations were often altered by copyists in the interests of creative interpretation. As a result, there was no reliable way to duplicate and distribute illustrations for technical purposes.

Illuminated manuscripts have been extensively studied by scholars (see Conrad Weitzman, *Illustration in Rolls and Codex*). However, such artifacts were ill adapted to the transmission of scientific or technical information. These conditions resulted in a feedback loop which deterred the use of images altogether. Authors were aware that copies of their work would most likely be unillustrated or illustrated unfaithfully. As a result, they avoided producing texts that were reliant on accompanying images. One could only rely on the transmission of the simplest geometrical shapes (ex. circle, square, triangle). In a sense, the fidelity of a copy could be expected to be in reverse proportion to the complexity of the illustrations.

In Eastern cultures, the same separation between text and images did not exist. The alphabet was developed as a sound recorder in the west. With the use of this type of alphabet voices can be captured and transmitted safely in time and space. Images cannot be transmitted as easily. As a result, the word took precedence over the image. Images copied before printing were almost always unfaithful. Therefore scientific and technical pursuits were dependent on non-visual means for recording information.

**The Treatise of Vitruvius**

Vitruvius wrote *Ten Books on Architecture*, a general encyclopedia of the discipline, in approximately 30 B.C. In addition to architecture, it covers other topics such as fortification, engineering, clock making, sundials, and military equipment. Vitruvius wrote on all that was known to him about architecture and its allied fields although oftentimes from the point of view of an architect practicing before his own time. Vitruvius’s manuscript was ignored for centuries even though there were many copies in existence. It was popularized again in the 15th century when humanists of the Italian Renaissance were trying to revive the knowledge of antiquity.

Vitruvius acknowledges in his own manuscript that his writing is difficult to understand. He notes that, as an architect, he is not trained the art of writing. Perhaps to make up for this, he refers to 9 or 11 explanatory figures. However, with a few and not significant exceptions, the supplementary drawings have not been found in any copy of his manuscript. During the 16th century, scholars of Vitruvius’s work became deeply interested in the whereabouts of the missing drawings. Several theories started to circulate under the premise that the drawings provided some further key to unlocking the secrets of antiquity. Two of the most prominent theories were as follows. 1. Someone has
found the images and is keeping them because they contain secret knowledge. Vitruvius actually wrote two versions; one with images and one without because some people do not deserve to know the secrets of antiquity.

These theories were supported by a common 16th century belief that there are several layers of knowledge in the world. The roots of this idea can be traced both to Christian and to classical sources. A manuscript was thought to hold more than one message. At the time, it was not uncommon for writers to hide in books, things that could not be said publicly. Some believed that only the initiated (or the predestined) could derive the true meaning of a text.

An index of the images mentioned in Vitruvius’s treatise was constructed in the 16th century by Guillaume Philandrier. Ironically, this index suggests that there may have been no original drawings in the manuscript. This is because the drawings that Vitruvius refers to are all simple geometrical shapes and can be easily understood or constructed by the reader. It appears that there was no necessity for Vitruvius to demonstrate these figures himself. It seems that Vitruvius, like Alberti, might have found it necessary to avoid illustrating his treatise. After all, he must have been well aware of the problems involved in the circulation of information that was not exclusively text-based.