Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
1986 Volume III: Topics in Western Civilization: Ideals of Community and the Development ofUrban Life, 1250-1700

The Illusion of the Renaissance

Curriculum Unit 86.03.08
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This unit is designed for eighth grade and high school art students. It is primarily a unit for a studio art course. The activities are designed to teach the rules of perspective in order to help the students develop drawing skills. Further, the activities, by focusing on obtaining illusionary effects, illustrate some curious applications of the rules of perspective. Alongwith learning the rules, the students are informed about how the rules can be manipulated and they will then have the opportunity to develop their imaginative and creative abilities.

In order to make these activities more meaningful, some background in historical perspective is useful. The unit paper starts with a brief sketch stating in broad strokes, the major differences between Medieval and Renaissance art. The paper continues with a scaled down history of the discovery of perspective and finally, the paper is completed with a brief explanation and exhibition of trompe l'oeil or illusionistic art work from the fifteenth to the seventeenth century.

(figure available in print from)
(figure available in print from)

DIFFERENCE BETWEEN MEDIEVAL AND RENAISSANCE PAINTING

Medieval and Renaissance art differ in several respects: in the depiction of spatial depth, in the scale of human figures, in the relationships of figures to one another and to the environments in which they are placed, and in the drawing of three-dimensional objects.

These compositional differences are directly related to the dissimilarities in the world view of the two cultures. The distinction between Medieval and Renaissance painting is not one of competency in perspective drawing; these world views were not alike and hence called for unique forms of visual representation.

Medieval art was hierarchic. Figures were often ranked in size on a scale of ascending importance. The figure's importance was fixed by religious tradition. In such a scheme it was necessary that the most significant figure in the painting be the largest and that all other figures, according to their rank, be of diminishing size regardless of their placement in the painting, whether in front of, alongside, or behind the central figure.

In Medieval painting, moreover, a religious event could be depicted in serial fashion so that all key episodes were presented within one frame because the painting was a visual representation of God's handiwork. Since God was not of time or in time, the picture did not have to represent life as experienced by human beings. The picture did not require natural surroundings or realistic panoramas. Information acquired through the five senses was suspect. Man was viewed as a puny and confused mortal. True knowledge could only be gained through faith. Life was illusory, hence the pictures were representations of religious experience, not of human experience. In order to avoid any analogy to human experience and to enhance the other worldliness of the scene, Medieval settings were deliberately shallow in depth. Further, the application of gold leaf to the background areas conveyed a combination of messages: its purity and preciousness served as a sign of religious faith, and its presence served to remind the viewer of the existence of the painted surface or picture plane.

How different, then, is the Renaissance understanding of the picture plane. Leonbattista Alberti in his treatise on painting entitled Della Pittura, says that the picture plane should be treated as though it were of transparent glass through which the visual rays pass. Later he refers to the picture plane as an open window.

With this new concept of the picture plane came a dramatic change in the face of art. When the painted surface became an 'open window', the illusion of depth—the placement of figures on a ground plane in naturalistic relationship to one another and to the environments in which they were portrayed—was possible. The new rules of perspective enabled artists to give buildings and interior scenes a threedimensional quality.

The investigation of ancient Greek and Roman cultures by Renaissance scholars led to the ". . . formation of a humanistic culture that radically renewed the very foundations of knowledge and of life through a new conception of the essential values of nature and history" (Argan, p.12). The new focus of interest in these two ancient cultures was responsible for the direction taken by artists, a direction that changed the look of painting.

While the Middle Ages were concerned with the mysteries of God, Renaissance man now had a past history and a present place in the real or secular world. When depicting figures in a painting, it was important to show them standing on terra firma within and as part of a matural setting. The painted world was a stage set for significant human action that took place in a world that matched the natural environment of man. Thus the invention of perspective fit the humanistic standards of realism necessary to Renaissance art. The key words in Renaissance scholarship and rhetoric are: harmony, proportion and unity. In Renaissance art, human beings and the visual perceptions of the world they inhabit became the standard for evaluating paintings. The rules of perspective are based on the relationship between the viewer and the object viewed. Harmony, proportion, and unity, which in Medieval art had been tied to the divine, were now applied to human figures and to the compositions in which they were placed. These terms, with their humanistic emphasis, were achieved visually, by using a single point perspective. This perspective related all parts of the composition to the human viewer and the human world depicted. Thus, God looks at Medieval art, man looks at Renaissance art.

HISTORY OF PERSPECTIVE

The first treatise on the rules of perspective was written by Alberti in 143536. It is in part a handbook for artists on how to apply the perspective rules in their works as well as a manifesto of the values of modern art, Renaissance style. The sources of Alberti's treatise were: the work of the Florentine artists, Masacchio, 140128, a painter of frescos and Donatello, 13861466, a sculptor; and the experiments in perspective drawing by Filippo Brunelleschi, an architect, painter and sculptor who was primarily responsible for the introduction of linear perspective. The second printing of Alberti's treatise has a dedicatory preface to Brunelleschi.

Another early Renaissance artist and mathematician, Piero della Francesca, wrote several treatises after Alberti arguing that painting was synonymous with perspective. To him and to other artists following him, "the visible world could be reduced to mathematical order by the principles of perspective and solid geometry." (Leeman, p. 22).

The idea of linear perspective came from ancient sources, the most influential of which was the Geographica (Cosmographica), an atlas written by Ptolemy, an astronomer who lived in Alexandria in the second century A.D. The atlas was discovered and brought to Florence in 1400 and translated into Latin by the Greek scholar Emmanuel Chrysoloras. Contained within the atlas were three methods of transcribing a sphere—the earth—on to a flat surface with least distortion. The third method of transcription was most pertinent to artists.

Here Ptolemy speaks more directly of the eye as the discerning focal point, and of the sphere as the object to be transcribed, held so that the line markinq the point of the center of the then known world acts as a horizon line in direct line with the viewer's eye. He noted that if the sphere were transparent, the encircling rings above and below this ring would appear as ellipses, while the ring through the known part of the world in line with the viewer's eye would appear straight. Not until Brunelleschi's experiments was this principle of the horizon line and one point perspective put to artistic use.

Another use of Ptolemy's mapping procedure which became an important addition to Renaissance painting was his practice of using a grid system to transfer scale drawings. The grid, in the Renaissance, became an important element in the construction of art works which were meant to look natural and without distortion even though they were painted on curved ceilings of buildings. Later, in the sixteenth century, this grid system made both the illusion of extended architectural space and anamorphic paintings possible. The Florentine artist Masacchio was the first to transfer details from a drawing on to the Trinity fresco in the Santa Marie Novella using the grid technique.

Vasari, a Renaissance biographer of artists, when speaking of Masacchio said, ". . . the best painters follow nature as closely as possible (since painting is simply the imitation of all living things of nature, with their colours and design just as they are in life)." Once the message was made clear that the best paintings were those that matched up with the real world, the stage was set for the ultimate show of realism, the trompe l'oeil or illusionistic type of painting that attempted to trick viewers into thinking they were standing in front of a real open window or staring up into the inside of a real dome in a church.

ILLUSION

The art of illusion, or trompe l'oeil, as it is more commonly known, presents a scene in order to fool the viewer into mistaking it for reality. The artists of illusion shared the concern of the mainstream of Renaissance artists in presenting scenes as realistically as possible. Both used the rules of perspective and direct observation of nature to render figures and objects on a flat surface as threedimensionally as they could. However, the use that realism was put to marks the major difference between the two types of artists.

The Renaissance artists were primarily interested in creating compositions that, with the use of perspective, would visually illustrate harmony, proportion, and unity; while the illusionists were intent on creating deliberately deceptive glimpses of reality. In so doing, the illusionists undermined the humanistic ideals of the Renaissance. The realization on the part of the viewer that he or she had been fooled, was a disruption and an intrusion of the sense of harmony that was valued in Renaissance art.

The earliest examples of the art of illusion occur in the paintings of architectural elements that surround the frescos in Medieval churches. It was not until Masacchio painted the Trinity, 142728, that architectural illusions appeared within paintings. In Masacchio's work, the illusion of a barrel vault ceiling behind the figure of God complements the design of the interior of the space that houses the painting.

Illusions of columns and loggias and other architectural supports and details were painted on two-dimensional wall surfaces to enlarge existent interior space. Further, illusions of architectural structures served a practical purpose when lack of funds or expertise precluded placing an actual dome in the transcept of a Renaissance church or when plasterwork for a ceiling proved more expensive than a painted illusion of such decorative work. In one case, the architect Donato Bramante, 1444-1516, was faced with the impossibility of providing space behind the choir in the S. Maria presso S. Satiro, Milan, 148386. He had been commissioned to remodel the church along more modern Renaissance lines. He constructed an architectural illusion of space which appears to be three or four times deeper than it is in actuality, thus satisfying the demands of the style of the times by the use of illusion.

Along with having a practical function in the early Renaissance, illusions could also visually enhance the ideals of the humanists. In 1476, Federigo da Montefeltro, Duke of Urbino, commissioned Baccio Pontelli to create a vision of a humanist world in a small library in the ducal palace. The work, which covers all four walls, was done in decorative wood inlay or intarsia. The illusion of shelves and partly open cabinets filled with all the paraphernalia of the ideal man of the Renaissance; the mathematical and scientific instruments; the statues and armor of antiquity; and the references to art, music, and the drama all were considered to be a perfect vision of the humanist ideals. That the illusion was not entirely successful, as a trompe l'oeil work, was not overly important. The stagelike setting of the library, with its appearance of humanistic ideals, was of more importance than the illusionistic effects.

What is interesting about the intarsia work is its parallel to Castiglione's Book of the Courtier. Castiglione was a member of the court from 150408 when Guidobaldi, the son of Federigo da Montefeltro, was Duke of Urbino. Castiglione was so inspired by the wit, intelligence and charm of the duke and duchess and the other members of the court that he wrote, in the form of a series of dialogues between those members, the Book of the Courtier. The book was finished in 1516. It was in part a handbook on how to create for one's self a persona to fit the model of a perfect gentleman or lady, as well as a memoir of the ideal life at this court.

The courtier's purpose in life was to be of service to his Prince in war, diplomacy, letters, art and music. His

charm was revealed not in the struggle and mastery over difficulties, but in the apparent gracefulness and facility with which he accomplished the objectives of his prince. The expression 'sprezzatura' denotes this ability to male difficult things look easy. "That was the essence of the desired effect of sprezzatura, that double duplicity which transformed nature into art and art into the appearance of naturalness" (Partridge and Starn, p. 23).

Though forty years separate the intarsia work in the library at Urbino and the courtier's public entrance into the world, they both share the idea that the appearance of naturalism is more important than reality. Both the library and the courtier are in some sense theatrical. They touch upon real life, but transform it into a creation that has the appearance of reality, yet which is lifted to a higher, more dramatic and exquisite plane. The courtier is a man of letters, well versed in the arts and sciences and in classical antiquity. If he were to stand in the library of the ducal palace at Urbino, he would add to the intarsia scene a sense of completeness. He would add the human element that would not destroy nor disrupt the illusion but would instead enhance it and make it more believable.

One of the first painted illusions in which a trend away from either practical or aesthetic considerations can be noted, and in which an attempt is made to replace those considerations with artificiality for its own sake, is the ceiling fresco in the Camera degli Sposi, painted in 1473 in the Palazzo Ducale, Mantua by Andrea Mantegna. Here, because of the nature of the illusion, a comic scene of people staring down into the room from a window in the roof, the original purpose of trompe l'oeil effects to harmonize painting with architecture has begun to lose meaning.

Later in the seventeenth century, illusionistic art moved further from the ideals of humanism and became a vehicle in which to show off the perspective skills of the men who painted this type of art. Itinerant artists called quadraturists travelled through northern Italy and Austria, decorating the churches and palaces with spectacular trompe l'oeil visions of earthly and heavenly splendor.

It was not until the Counter Reformation that the Jesuit order in Rome was powerful and wealthy enough to commission and select the artists to decorate their churches. Previously they had to rely on the patronage of the wealthy, who commissioned and paid for work completed in the church. When the Jesuits had the opportunity to exercise their own choice in the selection of artists and art work, they chose a quadraturist artist, Andrea Pozzo and others like him, to decorate their churches. In doing so, they added a new twist to the use of trompe l'oeil.

"Go and set the world aflame." Thus spoke S. Igantius the founder of the Jesuit order to his disciples. This pronouncement sounds a discordant note—for what has it to do with the Renaissance understanding of religion? "For the Christian mystic, Christ is the mediator, and only by feeding on Him can one taste of God. In these Renaissance writers the Christian note is muted, though never definitely denied, and the door is thereby opened to pass from Christianity, not to irreligion but rather to universal religion" (Bainton, p.87).

In choosing subjects for paintings in their churches, the Jesuits emphasized Christ's suffering. They preferred scenes of the martyrdom of saints, scenes which focused on all the gory detail. The constant theme of Jesuit decoration was the impact on this world of the forces of the next world. This theme was in contrast to the Renaissance theme that man could make an impact on the world, turn it into a symphony of geometry as Piero della Francesca had, or turn himself into Castiglione's perfect courtier.

Andrea Pozzo, a lay brother of the order, was commissioned to paint illusionistic scenes in the transept and on the vaulted ceiling of the S. Ignatius church in Rome in 1680. The most striking display of perspective skill and

the oddest is the painted corridor that leads to the rooms that S. Ignatius occupied in his life time. Trompe l'oeil depends more than realistic art on the viewer's being stationed in a specific spot to experience the illusion to its full effect. Other viewing stations create radical distortions. Yet this illusion in the corridor which Pozzo created for the Jesuits is located in a space that is meant to be walked through. The dizzying experience of negotiating such a corridor must in itself be spectacular. It is possible that the Jesuits found the trompe l'oeil art work an excellent illustration of the idea that the senses can't be trusted to reveal true knowledge and thus added the new twist to the use that illusionistic art could be put.

CONCLUSION

The Medieval framework of religion bound together all the phenomena of the world like a giant puzzle: all the pieces fit together to create a coherent picture. That framework became worm-eaten due to the waves of plague in the fourteenth and fifteenth century, and the consequent feeling that God's mercy had been withdrawn from humanity; the avarice and worldliness of the Church and the rise of the merchant class in competition with the Church's power and authority added to the general malaise. When a new framework was formulated by the Humanists in the Renaissance, nature and history became the new pieces of the puzzle that could be assembled to create once again a harmonious and unified world picture.

Perspective in the Renaissance was the framework in which to visually present nature and history. Each picture was a proof that the formula of lines converging to a centric point gave a true picture of the optical experience of nature. Thus paintings became an affirmation of the truth of human experience and perception.

But what happens in perceiving a trompe l'oeil painting? In the moment of recognition, when we see what we took for reality is in fact an illusion, the fabric of the presentation is torn open and once again we are looking "as through a glass darkly." It is as though the Middle Ages has suddenly reared up and we are given proof that life is an illusion and that we can't trust our senses to gain true knowledge. These trompe l'oeil magic tricks of illusion act as mirrors we hold to laugh at ourselves for being fooled, and they reveal a certain amount of disquietude on the part of those who paint them and those who in the Renaissance commissioned their construction.

The act of creating is selfconscious. Renaissance man was creating the world according to his understanding of the experience of life. In the Renaissance, the metaphor of the 'play' is frequently used in this new venture. "All the worlds' a stage and all the men and women merely players" (Shakespeare, As You Like It). Erasmus in the Praise of Folly says ". . .to destroy illusion is to ruin the whole play—what else is the whole of life but a sort of play?" Today such ideas express cynicism, but when they were written they denoted a mixture of expressions: the loss of the old framework that governed life, the unease and selfconsciousness that is part of any, new venture, and the excitement of the new world opening out to them, dressed not as it was in the Middle Ages but in whole new cloth.

(figure available in print form)
St. Francis and Scenes from his Life. 2nd half of the XIII century. S. Francesco, Pisa.

The Holy Trinity: Mesaccio, 1427 Santa Maria Novella, Florence.

(figure available in print form)

Piero della Francesca. Flagellation of Christ c. 1460, Palazzo Ducal, Urbino.

(figure available in print form)

Baccio Pontelli

Intersia paneling

Federigo de Montefeltro, 1476, Palazzo Ducel, Urbino

(figure available in print form)
(figure available in print form)

Andrea Mantegna

Ceiling Fresco 1473,

Camera degli Sposi,

Palazzo Ducal, Mantua

Donato Bramante

False Choir, 1483-86

S. Maria presso S. Satiro,

Milan

(figure available in print form)

Andrea Pozzo

Corridor leading to apartments

of S. Ignatius begun 1682.

Case Professa, Il, Gesu, Rome

(figure available in print form)

UNIT ACTIVITIES

Durer's Mechanical Device for Drawing in Perspective.

1. Construct a device like Durer's mechanical aid in perspective drawing, reproduced below.
2. Draw the outlines of the object or figure on the glass and transfer that drawing to tracing paper.
3. Transfer tracing paper copy to paper and either finish the work as a drawing or a painting.

If possible, allow the students to construct the mechanical aid so that they can acquire some skill in transforming plans into three-dimensional constructions.

Albrecht Durer, Treatise on Perspective, Nuremberg, 1525.

(figure available in print form)
Anamorphic Art

1. Place a grid over either an original drawing or a reproduction or magazine photo.
2. Transfer to an enlongated grid at least three times longer than original drawing.

The earliest example of anamorphic art appears in the Notebooks of Leonardo Da Vinci.

Anamorphic art pictures have to be viewed on edge. See example below. Anonymous, (edited by V. Decugis). Perspective anamorphoses: A Violinist; A Cellist. 1868.

(figure available in print form)
Leonbattista Alberti's Method for Obtaining a True Perspective.
(figure available in print form)
To Obtain Orthogonals:

1. Draw a figure.
2. Divide figure into thirds.
3. Draw a rectangle, here after called X. Mark off segments along base line. Label segments A - G. The length of each segment is determined by the measurement of one third of figure. (In this example the figure is divided into half inch segments so the distance between A - B, B - C, etc. is a half inch).
4. Determine the vanishing point. The vanishing point can be located anywhere in X. The only restriction is that its distance from the base line must be proportional to the divisions of the figure. (In this example, three half inch segments or one and a half inches above base line of X). Vanishing point called V.
5. Draw lines from V to A - B - C, etc. Orthogonals are now established.

To Obtain Transversals:

1. On a separate sheet of paper, draw a line. Mark off segments A' - G'.
2. Draw another line (HT) above and parallel to this line that is equal to the distance from V to

base of X.

3. Draw line A' Z.

4. On HT at Z mark point DI that equals height of figure.

5. Draw lines from DI to A' - G' to obtain points a - b on A' Z.

6. Bring A' Z to edge of X and mark off points a - g on bith sides of X.

7. Draw transversals on X that match a to a, b to b, etc.

(figure available in print form)

Now the angles established on X have created an imaginary space of three-dimensional quality, like an empty stage, that can be filled with all kinds of buildings, people, and objects. Moreover, the finished drawing will look like it is very deep in depth, something I feel very much out of in trying to write down Alberti's method.

Leonbattista Alberti, On Painting, 1435.

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