

# ART HUMANITIES: PRIMARY SOURCE READER

## Section 3: Raphael

### Art Humanities Primary Source Reading 9

#### *Leon Battista Alberti*

##### EXCERPTS FROM *ON PAINTING*, 1436

Leon Battista Alberti (1404-1472) was a poet, scholar and architect, painter, and mathematician. He arrived in Florence in the 1430s, at a time when the city was a veritable hotbed of learning, scientific study, and artistic production. For this text, the first systematic study of painting, his agenda was twofold: "On Painting" is at once a celebration of the art itself and a practical manual for working painters. In the best Renaissance tradition, Alberti sought to combine his own studies with his extensive classical learning, hence the frequent references to the art and artists of the ancient world. In the end, Alberti describes no single painting, but he imagines a new kind of artist. No longer a mere craftsman, the ideal artist is now an erudite individual possessing both manual and intellectual skills.

Alberti drew upon principles of geometry and balance to describe an artificial system of "perspective," a term whose etymology reveals its origins in Renaissance efforts to "see through" the picture plane. The intricacies of the outline, the reception of light, and the necessity for a varied, yet balanced, composition are given detailed treatment. Nothing if not thorough, Alberti even prescribes the most pleasing way to depict branches, leaves, hair and clothing when a gentle breeze is blowing.

Alberti's treatise was an immediate success, and the author quickly made a translation from his original Latin into Italian to reach a still larger audience of academics, patrons and artists. Even a cursory examination of Raphael's *Marriage of the Virgin* will reveal many of Alberti's principles at work.

## BOOK II

25. As the effort of learning may perhaps seem to the young too laborious, I think I should explain here how painting is worthy of all our attention and study. Painting possesses a truly divine power in that not only does it make the absent present (as they say of friendship), but it also represents the dead to the living many centuries later, so that they are recognized by spectators with pleasure and deep admiration for the artist. Plutarch tells us that Cassandrus, one of Alexander's commanders, trembled all over at the sight of a portrait of the deceased Alexander, in which he recognized the majesty of his king. He also tells us how Agesilaus the Lacedaemonian, realizing that he was very ugly, refused to allow his likeness to be known to posterity, and so would not be painted or modelled by anyone. Through painting, the faces of the dead go on living for a very long time. We should also consider it a very great gift to men that painting has represented the gods they worship, for painting has contributed considerably to the piety which binds us to the gods, and to filling our minds with sound religious beliefs. It is said that Phidias made a statue of Jove in Elis, whose beauty added not a little to the received religion. How much painting contributes to the honest pleasures of the mind, and to the beauty of things, may be seen in various ways but especially in the fact that you will find nothing so precious which association with painting does not render far more valuable and highly prized. Ivory, gems, and all other similar precious things are made more valuable by the hand of the painter. Gold too, when embellished by the art of painting, is equal in value to a far larger quantity of gold. Even lead, the basest of metals, if it were formed into some image by the hand of Phidias or Praxiteles, would probably be regarded as more precious than rough unworked silver. The painter Zeuxis began to give his works away, because, as he said, they could not be bought for money. He did not believe any price could be found to recompense the man who, in modelling or painting living things, behaved like a god among mortals.

26. The virtues of painting, therefore, are that its masters see their works admired and feel themselves to be almost like the Creator. Is it not true that painting is the mistress of all the arts or their principal ornament? If I am not mistaken, the architect took from the painter architraves, capitals, bases, columns and pediments, and all the other fine features of buildings. The stonemason, the sculptor and all the work-shops and crafts of artificers are guided by the rule and art of the painter. Indeed, hardly any art, except the very meanest, can be found that does not somehow pertain to painting. So I would venture to assert that whatever beauty there is in things has been derived from painting. *Painting was honoured by*

our ancestors with this special distinction that, whereas, all other artists were called craftsmen, the painter alone was not counted among their number. Consequently I used to tell my friends that the inventor of painting, according to the poets, was Narcissus, who was turned into a flower; for, as painting is the flower of all the arts, so the tale of Narcissus fits our purpose perfectly. What is painting but the act of embracing by means of art the surface of the pool? Quintilian believed that the earliest painters used to draw around shadows made by the sun, and the art eventually grew by a process of additions. So we say that an Egyptian Philocles and a certain Cicanthes were among the first inventors of this art. The Egyptians say painting was practised in their country six thousand years before it was brought over into Greece. Our writers say it came from Greece to Italy after the victories of Marcellus in Sicily. But it is of little concern to us to discover the first painters or the inventors of the art, since we are not writing a history of painting like Pliny, but treating of the art in an entirely new way. On this subject there exist today none of the writings of the ancients as far as I have seen, although they say that Euphranor the Isthmian wrote something about symmetry and colors, that Antigonus and Xenocrates set down some words about paintings, and that Apelles wrote on painting to Perseus. Diogenes Laertius tells us that the philosopher Demetrius also wrote about painting. Since all the other liberal arts were committed to writing by our ancestors, I believe that painting too was not neglected by our authors of Italy, for the ancient Etruscans were the most expert of all in Italy in the art of painting.

27. The ancient writer Trismegistus believes that sculpture and painting originated together with religion. *He addresses Asclepius with these words: 'Man, mindful of his nature and origin, represented the gods in his own likeness.'* Yet who will deny that painting has assumed the most honored part in all things both public and private, profane and religious, to such an extent that no art, I find, has been so highly valued universally among men? Almost incredible prices are quoted for painted panels. The Theban Aristides sold one painting alone for a hundred talents. They say that Rhodes was not burned down by King Demetrius lest a painting by Protogenes be destroyed. So we can say that Rhodes was redeemed from the enemy by a single picture. Many other similar tales were collected by writers, from which you can clearly see that good painters always and everywhere were held in the highest esteem and honor, so that even the most noble and distinguished citizens and philosophers and kings took great pleasure not only in seeing and possessing paintings, but also in painting themselves. L. Manilius, a Roman citizen, and the nobleman Fabius were painters. Turpilius, a Roman knight, painted at Verona. Sitedius, praetor and proconsul, acquired fame in painting. Pacuvius, the tragedian, nephew of the poet Ennius, painted Hercules in the forum. The philosophers Socrates, Plato, Metrodorus and Pyrrho achieved distinction in painting. The emperors Nero, Valentinianus and Alexander Severus were very devoted to painting. It would be a long story to tell how many princes or kings have devoted themselves to this most noble art. Besides, it is not appropriate to review all the multitude of ancient painters. Its size may be understood from the fact that for Demetrius of Phalerum, son of Phanostatus, three hundred and sixty statues were completed within four hundred days, some on horseback and some in chariots. In a city in which there was so large a number of sculptors, shall we not believe there were also many painters? Painting and sculpture are cognate arts, nurtured by the same genius. But I shall always prefer the genius of the painter, as it attempts by far the most difficult task. Let us return to what we were saying.

28. The number of painters and sculptors was enormous in those days, when princes and people, and learned and unlearned alike delighted in painting, and statues and pictures were displayed in the theatres among the chief spoils brought from the provinces. Eventually Paulus Aemilius and many other Roman citizens taught their sons painting among the liberal arts in the pursuit of the good and happy life. The excellent custom was especially observed among the Greeks that free-born and liberally educated young people were also taught the art of painting together with letters, geometry and music. Indeed the skill of painting was a mark of honor also in women. Martia, Varro's daughter, is celebrated by writers for her painting. The art was held in such high esteem and honor that it was forbidden by law among the Greeks for slaves to learn to paint; and quite rightly so, for the art of painting is indeed worthy of free minds and noble intellects. I have always regarded it as a mark of an excellent and superior mind in any person whom I saw take great delight in painting. Although, this art alone is equally pleasing to both learned and unlearned; and it rarely happens in any other art that what pleases the knowledgeable also attracts the ignorant. You will not easily find anyone who does not earnestly desire to be accomplished in painting. Indeed it is evident that Nature herself delights in painting, for we observe she often fashions in marble hippocentaurs and bearded faces of kings. It is also said that in a gem owned by Pyrrhus the nine Muses were clearly depicted by Nature, complete with their insignia. Furthermore, there is no other art in whose study and practice all ages of learned and unlearned alike may engage with such pleasure. Let me speak of my own experience. Whenever I devote myself to painting for pleasure, which I very often do when I have leisure from other affairs, I persevere with such pleasure in finishing my work that I can hardly believe later on that three or even four hours have gone by.

29. This art, then brings pleasure while you practise it, and praise, riches and endless fame when you have cultivated it well. Therefore, as painting is the finest and most ancient ornament of things, worthy of free men and pleasing to learned and unlearned alike, I earnestly beseech young students to devote themselves to painting as much as they can. Next, I would advise those who are devoted to painting to go on to master with every effort and care this perfect art of painting. You who strive to excel in painting, should cultivate above all the fame and reputation which you see the ancients attained, and in so doing it will be a good thing to remember that avarice was always the enemy of renown and virtue. A mind intent on gain will rarely obtain the reward of fame with posterity. I have seen many in the very flower, as it were, of learning, descend to gain and thereafter obtain neither riches nor distinction, who if they had improved their talent with application, would easily have risen to fame and there received both wealth and the satisfaction of renown. But we have

said enough on these matters. Let us return to our purpose. We divide painting into three parts, and this division we learn from Nature herself. As painting aims to represent things seen, let us note how in fact things are seen. In the first place, when we look at a thing, we see it as an object which occupies a space. The painter will draw around this space, and he will call this process of setting down the outline, appropriately, circumscription. Then, as we look, we discern how the several surfaces of the object seen are fitted together; the artist, when drawing these combinations of surfaces in their correct relationship, will properly call this composition. Finally, in looking we observe more clearly the colours of surfaces; the representation in painting of this aspect, since it receives all its variations from light, will aptly here be termed the reception of light.

Therefore, circumscription, composition and reception of light make up painting; and with these we must now deal as briefly as possible. First circumscription. Circumscription is the process of delineating the external outlines on the painting. They say that Parrhasius the painter, with whom Socrates speaks in Xenophon, was very expert in this and studied these lines very closely I believe one should take care that circumscription is done with the finest possible, almost invisible lines, like those they say the painter Apelles used to practise and vie with Protogenes at drawing. Circumscription is simply the recording of the outlines, and if it is done with a very visible line, they will look in the painting, not like the margins of surfaces, but like cracks. I want only the external outlines to be set down in circumscription; and this should be practised assiduously. No composition and no reception of light will be praised without the presence of circumscription. But circumscription by itself is very often most pleasing. So attention should be devoted to circumscription; and to do this well, I believe nothing more convenient can be found than the veil, which among my friends I call the intersection, and whose usage I was the first to discover. It is like this: a veil loosely woven of fine thread, dyed whatever colour you please, divided up by thicker threads into as many parallel square sections as you like, and stretched on a frame. I set this up between the eye and the object to be represented, so that the visual pyramid passes through the loose weave of the Veil (Fig. 12). This intersection or the veil has many advantages, first of all because it always represents the same surfaces unchanged, for once you have fixed the position of the outlines, you can immediately find the apex of the pyramid you started with, which is extremely difficult to do without the intersection. You know how impossible it is to paint something which does not continually present the same aspect. This is why people can copy paintings more easily than sculptures, as they always look the same. You also know that if the distance and the position of the centric ray are changed,

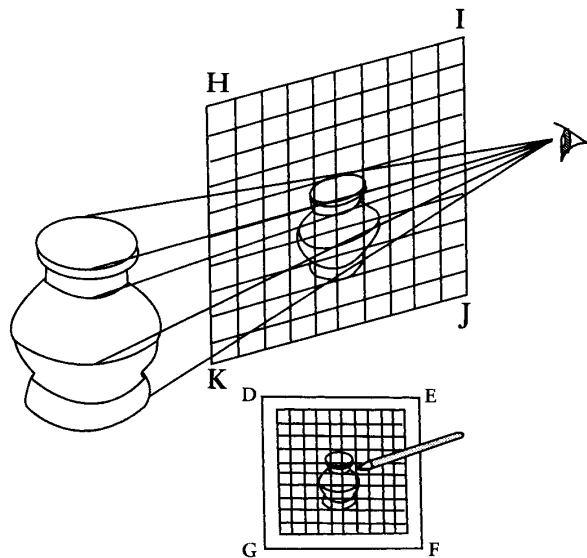


Figure 12: The 'intersection' or 'veil'

HIJK: veil divided into squares by thicker threads. DEFG: drawing surface divided into the same number of squares as in the veil. The points at which the image of the object intersects the squared grid are noted, and equivalent points are transcribed on to the squared drawing surface.

the centric ray are changed, the thing seen appears to be altered. So the veil will give you the not inconsiderable advantage I have indicated, namely that the object seen will always keep the same appearance. A further advantage is that the position of the outlines and the boundaries of the surfaces can easily be established accurately on the painting panel; for just as you see the forehead in one parallel, the nose in the next, the cheeks in another, the chin in one below, and everything else in its particular place, so you can situate precisely all the features on the panel or wall which you have similarly divided into appropriate parallels. Lastly, this veil affords the greatest assistance in executing your picture, since you can see any object that is round and in relief, represented on the flat surface of the veil. From all of which we may appreciate by reflection and experience how useful the veil is for painting easily and correctly.

32. I will not listen to those who say it is no good for a painter to get into the habit of using these things, because, though they offer him the greatest help in painting, they make the artist unable to do anything by himself without them. If I am not mistaken, we do not ask for infinite labour from the painter, but we do expect a painting that appears markedly in relief and similar to the objects presented. I do not understand how anyone could ever even moderately achieve this without the help of the veil. So those who are anxious to advance in the art of painting, should use this intersection or veil, as I have explained. Should they wish to try their talents without the veil, they should imitate this system of parallels with the eye, so that they always imagine a horizontal line cut by another perpendicular at the point where they establish in the picture the edge of the object they observe. But as for many inexpert painters the outlines of surfaces are vague and uncertain, as for example in faces, because they cannot determine at what point more particularly the temples are distinguished from the forehead, they must be taught how they may acquire this knowledge. Nature demonstrates this very clearly. Just as we see flat surfaces distinguished by their own lights and shades, so we may see spherical and concave surfaces divided up, as it were, in squares into several surfaces by different patches of light and shade, are therefore to be treated as single surfaces. If the surface seen proceeds from a dark colour gradually lightening to bright, then you should mark with a line the mid-point between the two parts, so that the way in which you should colour the whole area is made less uncertain.

33. It remains for us to say something further about circumscription, which also pertains in no small measure to composition. For this purpose one should know what composition is in painting. Composition is that procedure in painting whereby the parts are composed together in a picture. The great work of the painter is the 'historia'; parts of the 'historia' are the bodies, part of the body is the member, and part of the member is a surface. As circumscription is the procedure in painting whereby the outlines of the surfaces are drawn, and as some surfaces are small, as in living creatures, while others are very large, as in buildings and giant statues, the precepts we have given so far may suffice for drawing the small surfaces, for we have shown that they can be measured with the veil. For the larger surfaces a new method must be found. In this connection one should remember all we said above in our rudiments about surfaces, rays, pyramid and intersection. You will also recall what I wrote about the parallels of the pavement, and the centric point and line. On the pavement that is divided up into parallels, you have to construct the sides of walls and other similar surfaces which we have described as perpendicular. I will explain briefly how I proceed in this construction. I begin first from the foundations. I draw the breadth and length of the walls on the pavement, and in doing this I observe from Nature that more than two connected standing surfaces of any square right-angled body cannot be seen at one glance. So in drawing the foundations of the walls I take care that I outline only those sides that are visible, and I always begin from the nearer surfaces, and particularly from those that are equidistant from the intersection. I draw these before the rest, and I determine what I wish their length and breadth to be by the parallels traced on the pavement, for I take up as many parallels as I want them to be 'braccia.' I find the middle of the parallels from the intersection of the two diagonals, as the intersection of one diagonal by another marks the middle point of a quadrangle (Fig. 13). So, from the scale of the parallels I easily draw the width and length of walls that rise from the ground. Then I go on from there without any difficulty to do the heights of the surfaces, since a quantity will maintain the same proportion for its whole height as that which exists between the centric line and the position on the pavement from which that quantity of the building rises. So, if you want this quantity from the ground to the top to be four times the height of a man in the picture, and the centric line has been placed at the height of a man, then it will be three 'braccia' from the foot of the quantity to the centric line; but, as you wish this quantity increased to twelve 'braccia,' you must continue it upwards three times again the distance from the centric line to the foot of the quantity. Thus, by the methods I have described, we can correctly draw all surfaces containing angles.

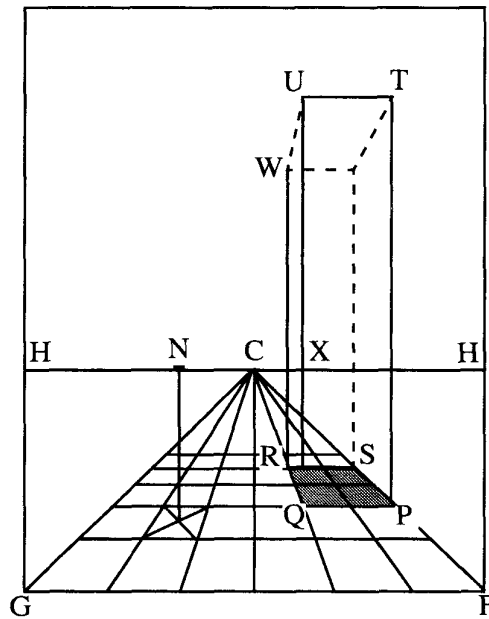


Figure 13 Examples of the construction of scaled forms on the 'pavement' O: A distance of  $1\frac{1}{2}$  braccia into the picture, determined by the diagonals of a square in the second row.  $ON=3$  Braccia. PQRS: Plan of rectangular object on a base 2 braccia square.  $QX=3$  braccia.  $QU=9$  braccia (note: Alberti's example is a further 3 braccia high). TUV: top of the visible faces of the object (all other labels as in Fig. 11).

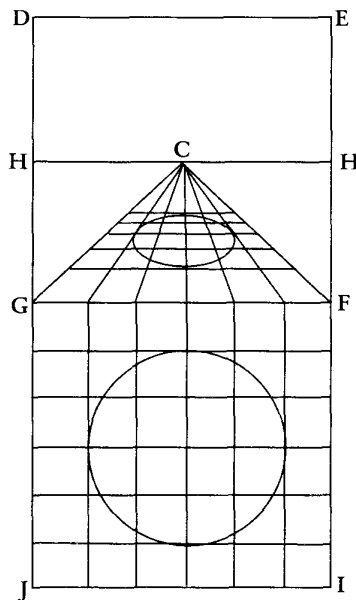


Fig. 14 Construction of a circle in perspective

A circle is drawn on the squared surface GFIJ, and the points of intersection between the grid and the circle are noted. The squared surface is drawn in perspective. Points of intersection equivalent to those on the original squared surface are recorded on the perspectival grid, and are joined to produce the circle in perspective (all other labels as in Fig. 11).

34. It remains for us to explain how one draws the outlines of circular surfaces. These can be derived from angular surfaces. I do this as follows. I draw a rectangle on a drawing board, and divide its sides into parts like those of the base line of the rectangle of the picture (Fig. 14). Then, by drawing lines from each point of these divisions to the one opposite, I fill the area with small rectangles. On this I inscribe a circle the size I want, so that the circle and the parallels intersect each other. I note all the points of intersection accurately, and then mark these positions in their respective parallels of the

pavement in the picture. But as it would be an immense labour to cut the whole circle at many places with an almost infinite number of small parallels until the outline of the circle were continuously marked with a numerous succession of points, when I have noted eight or some other suitable number of intersections, I use my judgement to set down the circumference of the circle in the painting in accordance with these indications. Perhaps a quicker way would be to draw this outline from a shadow cast by a light, provided the object making the shadow were interposed correctly at the proper place. We have now explained how the larger angular and circular surfaces are drawn with the aid of the parallels. Having completed circumscription, we must now speak of composition. To this end, we must repeat what composition is.

35. Composition is the procedure in painting whereby the parts are composed together in the picture. The great work of the painter is not a colossus but a 'historia,' for there is far more merit in a 'historia' than in a colossus. Parts of the 'historia' are the bodies, part of the body is the member, and part of the member is the surface. The principal parts of the work are the surfaces, because from these come the members, from the members the bodies, from the bodies the 'historia,' and finally the finished work of the painter. From the composition of surfaces arises that elegant harmony and grace in bodies, which they call beauty. The face which has some surfaces large and other small, some very prominent and other excessively receding and hollow, such as we see in the faces of old women, will be ugly to look at. But the face in which the surfaces are so joined together that pleasing lights pass gradually into agreeable shadows and there are no very sharp angles, we may rightly call a handsome and beautiful face. So in the composition of surfaces grace and beauty must above all be sought. In order to achieve this there seems to me no surer way than to look at Nature and observe long and carefully how she, the wonderful maker of things, has composed the surfaces in beautiful members. We should apply ourselves with all our thought and attention to imitating her, and take delight in using the veil I spoke of. And when we are about to put into our work the surfaces taken from beautiful bodies, we will always first determine their exact limits, so that we may direct our lines to their correct place.

36. So far we have spoken of the composition of surfaces. Now we must give some account of the composition of members. In the composition of members care should be taken above all that all the members accord well with one another. They are said to accord well with one another when in size, function, kind, colour and other similar respects they correspond to grace and beauty. For, if in a picture the head is enormous, the chest puny, the hand very large, the foot swollen and the body distended, this composition will certainly be ugly to look at. So one must observe a certain conformity in regard to the size of members, and in this it will help, when painting living creatures, first to sketch in the bones, for, as they bend very little indeed, they always occupy a certain determined position. Then add the sinews and muscles, and finally clothe the bones and muscles with flesh and skin. But at this point, I see, there will perhaps be some who will raise as an objection something I said above, namely, that the painter is not concerned with things that are not visible. They would be right to do so, except that, just as for a clothed figure we first have to draw the naked body beneath and then cover it with clothes, so in painting a nude the bones and muscles must be arranged first, and then covered with appropriate flesh and skin in such a way that it is not difficult to perceive the positions of the muscles. As Nature clearly and openly reveals all these proportions, so the zealous painter will find great profit from investigating them in Nature for himself. Therefore, studious painters should apply themselves to this task, and understand that the more care and labour they put into studying the proportions of members, the more it helps them to fix in their minds the things they have learned. I would advise one thing, however, that in assessing the proportions of a living creature we should take one member of it by which the rest are measured. The architect Vitruvius reckons the height of a man in feet. I think it more suitable if the rest of the limbs are related to the size of the head, although I have observed it to be well-nigh a common fact in men that the length of the foot is the same as the distance from the chin to the top of the head.

37. Having selected this one member, the rest should be accommodated to it, so that there is no member of the whole body that does not correspond with the others in length and breadth. Then we must ensure that all members fulfil their proper function according to the action being performed. It is appropriate for a running man to throw his hands about as well as his feet. But I prefer a philosopher, when speaking to show modesty in every limb rather than the attitudes of a wrestler. The painter Daemon represented an armed man in a race so that you would have said he was sweating, and another taking off his arms, so life like that he seemed clearly to be gasping for breath. And someone painted Ulysses in such a way that you could tell he was not really mad but only pretending. They praise a 'historia' in Rome in which the dead Meleager is being carried away, because those who are bearing the burden appear to be distressed and to strain with every limb, while in the dead man there is no member that does not seem completely lifeless; they all hang loose; hands, fingers, neck, all droop inertly down, all combine together to represent death. This is the most difficult thing of all to do, for to represent the limbs of a body entirely at rest is as much the sign of an excellent artist as to render them all alive and in action. So in every painting the principle should be observed that all the members should fulfil their function according to the action performed, in such a way that not even the smallest limb fails to play its appropriate part, that the members of the dead appear dead down to the smallest detail, and those of the living completely alive. A body is said to be alive when it performs some movement of its own free will. Death, they say, is present when the limbs can no longer carry out the duties of life, that is, movement and feeling. So the painter who wishes his representations of bodies to appear alive, should see to it that all their members perform their appropriate movements. But in every movement beauty and grace should be sought after. Those movements are especially lively and pleasing that are directed upwards into the air. We have also said that regard should be had to similarity of kind in the composition of members, for it would be ridiculous if the hands of Helen or

Iphigenia looked old and rustic, or if Nestor had a youthful breast and soft neck, or Ganymede a wrinkled brow and the legs of a prize-fighter, or if we gave Milo, the strongest man of all, light and slender flanks. It would also be unseemly to put emaciated arms and hands on a figure in which the face were firm and plump. Conversely, whoever painted Achaemenides discovered on an island by Aeneas with the face Virgil says he had, and the rest of the body did not accord with the face, would certainly be a ridiculous and inept painter. Therefore, every part should agree in kind. And I would also ask that they correspond in colour too; for to those who have pink, white and agreeable faces, dark forbidding breasts and other parts are completely unsuitable.

38. So, in the composition of members, what we have said about size, function, kind and colour should be observed. Everything should also conform to a certain dignity. It is not suitable for Venus or Minerva to be dressed in military cloaks; and it would be improper for you to dress Jupiter or Mars in women's clothes. The early painters took care when representing Castor and Pollux that, though they looked like twins, you could tell one was a fighter and the other very agile. They also made Vulcan's limp show beneath his clothing, so great was their attention to representing what was necessary according to function, kind and dignity.

39. Now follows the composition of bodies, in which all the skill and merit of the painter lies. Some of the things we said about the composition of members pertain also to this, for all the bodies in the 'historia' must conform in function and size. If you painted centaurs in an uproar at dinner, it would be absurd amid this violent commotion for one of them to be lying there asleep from drinking wine. It would also be a fault if at the same distance some men were a great deal bigger than others, or dogs the same size as horses in your picture. Another thing I often see deserves to be censured, and that is men painted in a building as if they were shut up in a box in which they can hardly fit sitting down and rolled up in a ball. So all the bodies should conform in size and function to the subject of the action.

40. A 'historia' you can justifiably praise and admire will be one that reveals itself to be so charming and attractive as to hold the eye of the learned and unlearned spectator for a long while with a certain sense of pleasure and emotion. The first thing that gives pleasure in a 'historia' is a plentiful variety. Just as with food and music, novel and extraordinary things delight us for various reasons but especially because they are different from the old ones we are used to, so with everything the mind takes great pleasure in variety and abundance. So, in painting, variety of bodies and colours is pleasing. I would say a picture was richly varied if it contained a properly arranged mixture of old men, youths, boys, matrons, maidens, children, domestic animals, dogs, birds, horses, sheep, buildings and provinces; and I would praise any great variety, provided it is appropriate to what is going on in the picture. When the spectators dwell on observing all the details, then the painter's richness will acquire favour. But I would have this abundance not only furnished with variety, but restrained and full of dignity and modesty. I disapprove of those painters who, in their desire to appear rich or to leave no space empty, follow no system of composition, but scatter everything about in random confusion with the result that their 'historia' does not appear to be doing anything but merely to be in a turmoil. Perhaps the artist who seeks dignity above all in his 'historia,' ought to represent very few figures; for as paucity of words imparts majesty to a prince, provided his thoughts and orders are understood, so the presence of only the strictly necessary numbers of bodies confers dignity on a picture. I do not like a picture to be virtually empty, but I do not approve of an abundance that lacks dignity. In a 'historia' I strongly approve of the practice I see observed by the tragic and comic poets, of telling their story with as few characters as possible. In my opinion there will be no 'historia' so rich in variety of things that nine or ten men cannot worthily perform it. I think Varro's dictum is relevant here: he allowed no more than nine guests at dinner, to avoid disorder. Though variety is pleasing in any 'historia,' a picture in which the attitudes and movements of the bodies differ very much among themselves, is most pleasing of all. So let there be some visible full-face, with their hands turned upwards and fingers raised, and resting on one foot; others should have their faces turned away, their arms by their sides, and feet together, and each one of them should have his own particular flexions and movements. Others should be seated, or resting on bended knee, or almost lying down. If suitable, let some be naked, and let others stand around who are half-way between the two, part clothed and part naked. But let us always observe decency and modesty. The obscene parts of the body and all those that are not very pleasing to look at, should be covered with clothing or leaves or the hand. Apelles painted the portrait of Antigonus only from the side of his face away from his bad eye. They say Pericles had a rather long, misshapen head, and so he used to have his portrait done by painters and sculptors, not like other people with head bare, by wearing his helmet. Plutarch tells how the ancient painters, when painting kings who had some physical defect, did not wish this to appear to have been overlooked, but they corrected it as far as possible while still maintaining the likeness. Therefore, I would have decency and modesty observed in every 'historia,' in such a way that ugly things are either omitted or emended. Lastly, as I said, I think one should take care that the same gesture or attitude does not appear in any of the figures.

41. A 'historia' will move spectators when the men painted in the picture outwardly demonstrates their own feelings as clearly as possible. Nature provides-and there is nothing to be found more rapacious of her like than she -that we mourn with the mourners, laugh with those who laugh, and grieve with the grief-stricken. Yet these feelings are known from movements of the body. We see how the melancholy, preoccupied with cares and beset by grief, lack all vitality of feeling and action, and remain sluggish, their limbs unsteady and drained of colour. In those who mourn, the brow is weighed down, the neck bent, and every part of their body droops as though weary and past care. But in those who are angry, their passions aflame with ire, face and eyes become swollen and red, and the movements of all their limbs are violent and agitated according to the fury of their wrath. Yet when we are happy and gay, our movements are free and pleasing in their

inflections. They praise Euphranor because in his portrait of Alexander Paris he did the face and expression in such a way that you could recognize him simultaneously as the judge of the goddesses, the lover of Helen and the slayer of Achilles. The painter Daemon's remarkable merit is that you could easily see in his painting the wrathful, unjust and inconstant, as well as the exorable and clement, the merciful, the proud, the humble and the fierce. They say the Theban Aristides, the contemporary of Apelles, represented these emotions best of all; and we too will certainly do the same, provided we dedicate the necessary study and care to this matter.

42. The painter, therefore, must know all about the movements of the body, which I believe he must take from Nature with great skill. It is extremely difficult to vary the movements of the body in accordance with the almost infinite movements of the heart. Who, unless he has tried, would believe it was such a difficult thing, when you want to represent laughing faces, to avoid their appearing tearful rather than happy? And who, without the greatest labour, study and care, could represent faces in which the mouth and chin and eyes and cheeks and forehead and eyebrows all accord together in grief or hilarity? All these things, then, must be sought with the greatest diligence from Nature and always directly imitated, preferring those in painting which leave more for the mind to discover than is acutely apparent to the eye. Let me here, however, speak of some things concerning movements, partly made up from my own thoughts, and partly learned from Nature. First, I believe that all the bodies should move in relation to one another with a certain harmony in accordance with the actions. Then, I like there to be someone in the 'historia' who tells the spectators what is going on, and either beckons them with his hand to look, or with ferocious expression and forbidding glance challenges them not to come near, as if he wished their business to be secret, or points to some danger or remarkable thing in the picture, or by his gestures invites you to laugh or weep with them. Everything the people in the painting do among themselves, or, perform in relation to the spectators, must fit together to represent and explain the 'historia.' They praise Timanthes of Cyprus for the painting in which he surpassed Colotes, because, when he had made Calchas sad and Ulysses even sadder at the sacrifice of Iphigenia, and employed all his art and skill on the grief-stricken Menelaus, he could find no suitable way to represent the expression of her disconsolate father; so he covered his head with a veil, and thus left more for the onlooker to imagine about his grief than he could see with the eye. They also praise in Rome the boat in which our Tuscan painter Giotto represented the eleven disciples struck with fear and wonder at the sight of their colleague walking on the water, each showing such clear signs of his agitation in his face and entire body that their individual emotions are discernible in every one of them. We must, however, deal briefly with this whole matter of movements.

43. Some movements are of the mind, which the learned call dispositions, such as anger, grief, joy, fear, desire and so on. Others are of the body, for bodies are said to move in various ways, as when they grow or diminish, when they fall ill and recover from sickness, and when they change position, and so on. We painters, however, who wish to represent emotions through the movements of limbs, may leave other arguments aside and speak only of the movement that occurs when there is a change of position. Everything which changes position has seven directions of movement, either up or down or to right or left, or going away in the distance or coming towards us; and the seventh is going around in a circle. I want all these seven movements to be in a painting. There should be some bodies that face towards us, and others going away, to right and left. Of these some parts should be shown towards the spectators, and others should be turned away; some should be raised upwards and others directed downwards. Since, however, the bounds of reason are often exceeded in representing these movements, it will be of help here to say some things about the attitude and movements of limbs which I have gathered from Nature, and from which it will be clear what moderation should be used concerning them. I have observed how in every attitude a man positions his whole body beneath his head, which is the heaviest member of all. And if he rests his entire weight on one foot, this foot is always perpendicularly beneath his head like the base of a column, and the face of a person standing is usually turned in the direction in which his foot is pointing. But I have noticed that the movements of the head in any direction are hardly ever such that he does not always have some other parts of the body positioned beneath to sustain the enormous weight, or at least he extends some limb in the opposite direction like the other arm of a balance, to correspond to that weight. When someone holds a weight on his outstretched hand, we see how, with one foot fixed like the axis of a balance, the rest of the body is counterpoised to balance the weight. I have also seen that the head of a man when standing does not turn upwards further than the point at which the eye can see the center of the sky, nor sideways further than where the chin touches the shoulder; and at the waist we hardly ever turn so far that we get the shoulder directly above the navel. The movements of the legs and arms are freer, provided they do not interfere with the other respectable parts of the body. But in these movements I have observed from Nature that the hands are very rarely raised above the head, or the elbow above the shoulders, or the foot lifted higher than the knee, and that one foot is usually no further from the other than the length of a foot. I have also seen that, if we stretch our hand upwards as far as possible, all the other parts of that side follow that movement right down to the foot, so that with the movement of that arm even the heel of the foot is lifted from the ground.

44. There are many other things of this kind which the diligent artist will notice, and perhaps those I have mentioned so far are so obvious as to seem superfluous. But I did not leave them out, because I have known many make serious mistakes in this respect. They represent movements that are too violent, and make visible simultaneously in one and the same figure both chest and buttocks, which is physically impossible and indecent to look at. But because they hear that those figures are most alive that throw their limbs about a great deal, they cast aside all dignity in painting and copy the movements of actors. In consequence their works are not only devoid of beauty and grace, but are expressions of an



extravagant artistic temperament. A painting should have pleasing and graceful movements that are suited to the subject of the action. In young maidens movements and deportment should be pleasing and adorned with a delightful simplicity, more indicative of gentleness and repose than of agitation, although Homer, whom Zeuxis followed, liked a robust appearance also in women. The movements of a youth should be more powerful, and his attitudes marked by a vigorous athletic quality. In old men all the movements should be slow and their postures weary, so that they not only hold themselves up on their two feet, but also cling to something with their hands. Finally, each person's bodily movements, in keeping with dignity, should be related to the emotions you wish to express. And the greatest emotions must be expressed by the most powerful physical indications. This rule concerned movements is common to all living creatures. It is not suitable for a plough-ox to have the same movements as Alexander's noble horse Bucephalus. But we might appropriately paint the famous daughter of Inachus, who was turned into a cow, running with head high, feet in the air, and twisted tail.

45. These brief comments must suffice regarding the movement of living creatures. Now I must speak of the way in which inanimate things move, since I believe all the movements I mentioned are necessary in painting also in relation to them. The movements of hair and manes and branches and leaves and clothing are very pleasing when represented in painting. I should like all the seven movements I spoke of to appear in hair. Let it twist around as if to tie itself in a knot, and wave upwards in the air like flames, let it weave beneath other hair and sometimes lift on one side and another. The bends and curves of branches should be partly arched upwards, partly directed downwards; some should stick out towards you, others recede, and some should be twisted like ropes. Similarly in the folds of garments care should be taken that, just as the branches of a tree emanate in all directions from the trunk, so folds should issue from a fold like branches. In these too all the movements should be done in such a way that in no garment is there any part in which similar movements are not to be found. But, as I frequently advise, let all the movements be restrained and gentle, and represent grace rather than remarkable effort. Since by nature clothes are heavy and do not make curves at all, as they tend always to fall straight down to the ground, it will be a good idea, when we wish clothing to have movement, to have in the corner of the picture the face of the West or South wind blowing between the clouds and moving all the clothing before it. The pleasing result will be that those sides of the bodies the wind strikes will appear under the covering of the clothes almost as if they were naked, since the clothes are made to adhere to the body by the force of the wind; on the other sides the clothing blown about by the wind will wave appropriately up in the air. But in this motion caused by the wind one should be careful that movements of clothing do not take place against the wind, and that they are neither too irregular nor excessive in their extent. So, all we have said about the movements of animate and inanimate things should be rigorously observed by the painter. He should also diligently follow all we have said about the composition of surfaces, members and bodies.

46. We have dealt with two parts of painting: circumscription and composition. It remains for us to speak of the reception of light. In the rudiments we said enough to show what power lights have to modify colours. We explained that, while the genera of colours remain the same, they become lighter or darker according to the incidence of lights and shades; that white and black are the colours with which we express lights and shades in painting; and that all the other colours are, as it were, matter to which variations of light and shade can be applied. Therefore, leaving other considerations aside, we must explain how the painter should use white and black. Some people express astonishment that the ancient painters Polygnotus and Timanthes used only four colours, while Aglaophon took pleasure in one alone, as if it were a mean thing for those fine painters to have chosen to use so few from among the large number of colours they thought existed, and as if these people believed it the duty of an excellent artist to employ the entire range of colours. Indeed, I agree that a wide range and variety of colours contribute greatly to the beauty and attraction of a painting. But I would prefer learned painters to believe that the greatest art and industry are concerned with the disposition of white and black, and that all skill and care should be used in correctly placing these two, just as the incidence of light and shade makes it apparent where surfaces become convex or concave, or how much any part slopes and turns this way or that, so the combination of white and black achieves what the Athenian painter Nicias was praised for, and what the artist must above all desire: that the things he paints should appear in maximum relief. They say that Zeuxis, the most eminent ancient painter, was like a prince among the rest in understanding this principle of light and shade. Such praise was not given to others at all. I would consider of little or no virtue the painter who did not properly understand the effect every kind of light and shade has on all surfaces. In painting I would praise-and learned and unlearned alike would agree with me-those faces which seem to stand out from the pictures as if they were sculpted, and I would condemn those in which no artistry is evident other than perhaps in the drawing. I would like a composition to be well drawn and excellently coloured. Therefore, to avoid condemnation and earn praise, painters should first of all study carefully the lights and shades, and observe that the colour is more pronounced and brilliant on the surface on which the rays of light strike, and that this same colour turns more dim where the force of the light gradually grows less. It should also be observed how shadows always correspond on the side away from the light, so that in no body is a surface illuminated without your finding surfaces on its other side covered in shade. But as regards the representation of light with white and of shadow with black, I advise you to devote particular study to those surfaces that are clothed in light or shade. You can very well learn from Nature and from objects themselves. When you have thoroughly understood them, you may change the colour with a little white applied as sparingly as possible in the appropriate place within the outlines of the surface, and likewise add some black in the place opposite to it. With such balancing, as one might say, of black and white a surface rising in relief becomes still more evident. Go on making similar sparing additions until you feel you have arrived at what is required. A mirror will be an excellent guide to knowing this. I do not know how it is that

paintings that are without fault look beautiful in a mirror, and it is remarkable how every defect in a picture appears more unsightly in a mirror. So the things that are taken from Nature should be emended with the advice of the mirror.

47. Let me relate here some things I have learned from Nature. I observed that plane surfaces keep a uniform colour over their whole extent, while the colours of spherical and concave surfaces vary, and here it is lighter, there darker, and elsewhere a kind of in-between colour. This variation of colour in other than plane surfaces presents some difficulty to not very clever painters. But if, as I explained, the painter has drawn the outlines of the surfaces correctly and determined the border of the illuminated portions, the method of colouring will then be easy. He will first begin to modify the colour of the surface with white or black, as necessary, applying it like a gentle dew up to the borderline. Then he will go on adding another sprinkling, as it were, on this side of the line, and after this another on this side of it, and then another on this side of this one, so that not only is the part receiving more light tinged with a more distinct colour, but the colour also dissolves progressively like smoke into the areas next to each other. But you have to remember that no surface should be made so white that you cannot make it a great deal whiter still. Even in representing snow-white clothing you should stop well on this side of the brightest white. For the painter has no other means than white to express the brightest gleams of the most polished surfaces, and only black to represent the deepest shadows of the night. And so in painting white clothes we must take one of the four genera of colors which is bright and clear; and likewise in painting, for instance, a black cloak, we must take the other extreme which is not far from the deepest shadow, such as the color of the deep and darkening sea. This composition of white and black has such power that, when skillfully carried out, it can express in painting brilliant surfaces of gold and silver and glass. Consequently, those painters who use white immoderately and black carelessly, should be strongly condemned. I would like white to be purchased more dearly among painters than precious stones. It would be a good thing if white and black were made from those pearls Cleopatra dissolved in vinegar, so that painters would become as mean as possible with them, for their works would then be both more agreeable and nearer the truth. It is not easy to express how sparing and careful one should be in distributing white in a painting. On this point Zeuxis used to condemn painters because they had no idea what was too much. If some indulgence must be given to error, then those who use black extravagantly are less to be blamed than those who employ white somewhat intemperately; for by nature, with experience or painting, we learn as time goes by to hate work that is dark and horrid, and the more we learn, the more we attune our hand to grace and beauty. We all by nature love things that are distinct and clear. So we must the more firmly block the way in which it is easier to go wrong.

48. We have spoken so far about the use of white and black. But we must give some account also of the kinds of colours. So now we shall speak of them, not after the manner of the architect Vitruvius as to where excellent red ochre and the best colours are to be found, but how selected and well compounded colours should be arranged together in painting. They say that Euphranor, a painter of antiquity, wrote something about colours. This work does not exist now. However, whether, if it was once written about by others, we have rediscovered this art of painting and restored it to light from the dead, or whether, if it was never treated before, we have brought it down from the heavens, let us go on as we intended, using our own intelligence as we have done up to now. I should like, as far as possible, all the genera and species of colours to appear in painting with a certain grace and amenity. Such grace will be present when colours are placed next to others with particular care; for, if you are painting Diana leading her band, it is appropriate for this nymph to be given green clothes, the one next to her white, and the next red, and another yellow, and the rest should be dressed successively in a variety of colours, in such a way that light colours are always next to dark ones of a different genera. This combining of colours will enhance the attractiveness of the painting by its variety, and its beauty by its comparisons. There is a kind of sympathy among colours, whereby their grace and beauty is increased when they are placed side by side. If red stands between blue and green, it somehow enhances their beauty as well as its own. White lends gaiety, not only when placed between grey and yellow, but almost to any colour. But dark colours acquire a certain dignity when between light colours, and similarly light colours may be placed with good effect among dark. So the painter in his 'historia' will arrange this variety of colours I have spoken of.

49. There are some who make excessive use of gold, because they think it lends a certain majesty to painting. I would not praise them at all. Even if I wanted to paint Virgil's Dido with her quiver of gold, her hair tied up in gold, her gown fastened with golden clasp, driving her chariot with golden reins, and everything else resplendent with gold I would try to represent with colours rather than with gold this wealth of rays of gold that almost blinds the eyes of the spectator from all angles. Besides the fact that there is greater admiration and praise for the artist in the use of colours, it is also true that, when done in gold on a flat panel, many surfaces that should have been presented as light and gleaming, appear dark to the viewer, while others that should be darker, probably look brighter. Other ornaments done by artificers that are added to painting, such as sculpted columns, bases and pediments, I would not censure if they were in real silver and solid or pure gold, for a perfect and finished painting is worthy to be ornamented even with precious stones.

50. So far we have dealt briefly with the three parts of painting. We spoke of the circumscription of smaller and larger surfaces. We spoke of the composition of surfaces, members and bodies. With regard to colours we have explained what we considered applicable to the painter's use. We have, therefore, expounded the whole of painting, which we said earlier on consisted in three things: circumscription, composition and the reception of light.