

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.⁴⁹ 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.⁵⁰ 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.⁵¹ 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 centre 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,

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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.⁵² The movements of a youth should be lighter and agreeable, with some hint of strength of mind and body. In a man the movements 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 concerning 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.⁵³

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

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.

Book III

51. SEVERAL THINGS, which I do not think should be omitted from these books, still remain to complete the instruction of the painter, so that he may attain all the praiseworthy objects of which we have spoken. Let me now explain them very briefly.

52. The function of the painter is to draw with lines and paint in colours on a surface any given bodies in such a way that, at a fixed distance and with a certain, determined position of the centric ray, what you see represented appears to be in relief and just like those bodies. The aim of the painter is to, obtain praise, favour and good-will for his work much more than riches. The painter will achieve this if his painting holds and charms the eyes and minds of spectators. We explained how this may be done when talking above about composition and the reception of light. But in order that he may attain all these things, I would have the painter first of all be a good man, well versed in the liberal arts. Everyone knows how much more effective uprightness of character is in securing people's favour than any amount of admiration for someone's industry and art. And no one doubts that the favour of many people is very useful to the artist for acquiring reputation and wealth. It so happens that, as rich men are often moved by kindness more than by expert knowledge of art, they will give money to one man who is especially modest and good, and spurn another who is more skilled but perhaps intemperate. For this reason it behoves the artist to be particularly attentive to his morals, especially to good manners and amiability, whereby he

may obtain both the good-will of others, which is a firm protection against poverty, and money, which is an excellent aid to the perfection of his art.

53. I want the painter, as far as he is able, to be learned in all the liberal arts, but I wish him above all to have a good knowledge of geometry. I agree with the ancient and famous painter Pamphilus, from whom young nobles first learned painting; for he used to say that no one could be a good painter who did not know geometry.⁶¹ Our rudiments, from which the complete and perfect art of painting may be drawn, can easily be understood by a geometer, whereas I think that neither the rudiments nor any principles of painting can be understood by those who are ignorant of geometry. Therefore, I believe that painters should study the art of geometry. Next, it will be of advantage if they take pleasure in poets and orators, for these have many ornaments in common with the painter. Literary men, who are full of information about many subjects, will be of great assistance in preparing the composition of a 'historia', and the great virtue of this consists primarily in its invention. Indeed, invention is such that even by itself and without pictorial representation it can give pleasure. The description that Lucian gives of Calumny painted by Apelles, excites our admiration when we read it.⁶² I do not think it is inappropriate to tell it here, so that painters may be advised of the need to take particular care in creating inventions of this kind. In the painting there was a man with enormous ears sticking out, attended on each side by two women, Ignorance and Suspicion; from one side Calumny was approaching in the form of an attractive woman, but whose face seemed too well versed in cunning, and she was holding in her left hand a lighted torch, while with her right she was dragging by the hair a youth with his arms outstretched towards heaven. Leading her was another man, pale, ugly and fierce to look upon, whom you would rightly compare to those exhausted by long service in the field. They identified him correctly as Envy. There are two other women attendant on Calumny and busy arranging their mistress's dress; they are Treachery and Deceit. Behind them comes Repentance clad in mourning and

rending her hair, and in her train chaste and modest Truth. If this 'historia' seizes the imagination when described in words, how much beauty and pleasure do you think it presented in the actual painting of that excellent artist?

54. What shall we say too about those three young sisters, whom Hesiod called Egē, Euphronesis and Thalia?⁶³ The ancients represented them dressed in loose transparent robes, with smiling faces and hands intertwined; they thereby wished to signify liberality, for one of the sisters gives, another receives and the third returns the favour, all of which degrees should be present in every act of perfect liberality. You can appreciate how inventions of this kind bring great repute to the artist. I therefore advise the studious painter to make himself familiar with poets and orators and other men of letters, for he will not only obtain excellent ornaments from such learned minds, but he will also be assisted in those very inventions which in painting may gain him the greatest praise. The eminent painter Phidias used to say that he had learned from Homer how best to represent the majesty of Jupiter.⁶⁴ I believe that we too may be richer and better painters from reading our poets, provided we are more attentive to learning than to financial gain.

55. Very often, however, ignorance of the way to learn, more than the effort of learning itself, breaks the spirit of men who are both studious and anxious to do so. So let us explain how we should become learned in this art. The fundamental principle will be that all the steps of learning should be sought from Nature: the means of perfecting our art will be found in diligence, study and application. I would have those who begin to learn the art of painting do what I see practised by teachers of writing. They first teach all the signs of the alphabet separately, and then how to put syllables together, and then whole words. Our students should follow this method with painting.⁶⁵ First they should learn the outlines of surfaces, then the way in which surfaces are joined together, and after that the forms of all the members individually; and they should commit to memory all the differences that can exist in those members, for they are neither few nor insignificant.

Some people will have a crook-backed nose; others will have flat, turned-back, open nostrils; some are full around the mouth, while others are graced with slender lips, and so on: every part has something particular which considerably alters the whole member when it is present in greater or lesser degree. Indeed we see that those same members which in our boyhood were rounded, and, one might say, well turned and smoothed, are become rough and angular with the advance of age. All these things, therefore, the student of painting will take from Nature, and assiduously meditate upon the appearance of each part; and he will persist continually in such inquiry with both eye and mind. In a seated figure he will observe the lap, and how the legs hang gently down. In a standing person he will note the whole appearance and posture, and there will be no part whose function and symmetry, as the Greeks call it, he will not know.⁶⁶ But, considering all these parts, he should be attentive not only to the likeness of things but also and especially to beauty, for in painting beauty is as pleasing as it is necessary. The early painter Demetrius failed to obtain the highest praise because he was more devoted to representing the likeness of things than to beauty.⁶⁷ Therefore, excellent parts should all be selected from the most beautiful bodies, and every effort should be made to perceive, understand and express beauty. Although this is the most difficult thing of all, because the merits of beauty are not all to be found in one place, but are dispersed here and there in many, every endeavour should none the less be made to investigate and understand it thoroughly. The man who has learned to grasp and handle more serious matters, will in my view easily manage the less troublesome, and there is nothing so difficult that cannot be overcome by application and persistent effort.

56. Yet, in order that our effort shall not be vain and futile, we must avoid the habit of those who strive for distinction in painting by the light of their own intelligence without having before their eyes or in their mind any form of beauty taken from Nature to follow. They do not learn to paint properly, but simply make habits of their mistakes. The idea of beauty, which the most

expert have difficulty in discerning, eludes the ignorant. Zeuxis, the most eminent, learned and skilled painter of all, when about to paint a panel to be publicly dedicated in the temple of Lucina at Croton, did not set about his work trusting rashly in his own talent like all painters do now; but, because he believed that all the things he desired to achieve beauty not only could not be found by his own intuition, but were not to be discovered even in Nature in one body alone, he chose from all the youth of the city five outstandingly beautiful girls, so that he might represent in his painting whatever feature of feminine beauty was most praiseworthy in each of them.⁶⁸ He acted wisely, for to painters with no model before them to follow, who strive by the light of their own talent alone to capture the qualities of beauty, it easily happens that they do not by their efforts achieve the beauty they seek or ought to create; they simply fall into bad habits of painting, which they have great difficulty in relinquishing even if they wish. But the painter who has accustomed himself to taking everything from Nature, will so train his hand that anything he attempts will echo Nature. We can see how desirable this is in painting when the figure of some well-known person is present in a 'historia', for although others executed with greater skill may be conspicuous in the picture, the face that is known draws the eyes of all spectators, so great is the power and attraction of something taken from Nature. So, let us always take from Nature whatever we are about to paint, and let us always choose those things that are most beautiful and worthy.

57. We must beware, however, not to paint on very small panels, as many do. I would have you get used to making large pictures, which are as near as possible in size to the actual object you wish to represent. In small pictures the greatest mistakes are most easily concealed; in a large one even the smallest errors are obvious. Galen wrote that he had seen carved on a ring Phaethon driving four horses, with their reins and feet and breasts clearly visible.⁶⁹ But painters should leave this distinction to the sculptors of precious stones, and occupy themselves instead in larger fields of fame. The man who has learned to make or paint large figures

would at once do small things of this kind easily and well; whereas the man who has accustomed his hand and talent to these tiny jewels, will easily go wrong in larger works.

58. There are some who imitate the work of other painters and thereby aspire to fame. They say that the sculptor Calamis did this: he engraved two cups in which he so closely copied Zenodorus that no difference could be recognized between their works.⁷⁰ But painters are gravely mistaken if they do not understand that those who painted in the past endeavoured to represent a likeness such as we see depicted by Nature on our veil. If it is a help to imitate the works of others, because they have greater stability of appearance than living things, I prefer you to take as your model a mediocre sculpture rather than an excellent painting, for from painted objects we train our hand only to make a likeness, whereas from sculptures we learn to represent both likeness and correct incidence of light. In studying such light it is very useful to dim your vision by half closing your eyelashes, so that the light appears less strong and almost as if depicted on an intersection. It will probably help also to practise at sculpting rather than painting, for sculpture is easier and surer than painting. No one will ever be able to paint a thing correctly if he does not know its every relief, and relief is more easily found by sculpture than by painting. No mean proof of this lies in the observation that in almost all ages you will find there were some mediocre sculptors, but scarcely any painters who were not ridiculous and completely incompetent.

59. Whether you practise painting or sculpture, you should always have before you some fine and remarkable model which you observe and copy; and in copying it I believe that diligence should be combined with speed of execution, but in such a way that the painter will never apply his brush or style to his work before he has clearly decided in his own mind what he is going to do and how he will do it. It is safer to remove errors with the mind than to erase them from one's work. Besides, when we have acquired the habit of doing everything in orderly fashion, we shall become faster workers by far than Asclepiodorus, who they say was the

fastest painter of all.⁷¹ Talent roused and stimulated by practice turns easily and readily to work, and the hand swiftly follows when guided by a sure and ordered judgement. If there are slow artists, they are so because they try slowly and lingeringly to do something which they have not first thought out clearly in their own minds; as they wander, fearful and virtually sightless, in the darkness of their error, like the blind man with his stick they with their brush test and investigate unknown paths and exits. Therefore he should never put his hand to work without the guidance of well-informed judgement.

60. As the most important part of the painter's work is the 'historia', in which there should be every abundance and beauty of things, we should take care to learn to paint well, as far as our talent allows, not only the human figure but also the horse, the dog and other living creatures, and every other object worthy to be seen. In this way, variety and abundance, without which no 'historia' merits praise, will not be lacking in our works. It is a tremendous gift, and one not granted to any of the ancients, for a man to be, I will not say outstanding, but even moderately learned in everything. Yet I think every effort should be made to see that we do not lack through our own negligence those things which bring high praise if they are achieved, and blame if they are neglected. The Athenian painter Nicias painted women very well; but they say that Zeuxis far excelled all others in painting the female body. Heraclides was famous for painting ships. Serapion was incapable of painting men, but he did all other things splendidly. Dionysius could not do anything but men. The Alexander who painted the portico of Pompeius, was excellent at doing all the quadrupeds and especially dogs. Because he was always in love, Aurelius delighted only in painting goddesses and giving their portraits the faces of his mistresses. Phidias endeavoured to represent the majesty of the gods rather than the beauty of men. The representation of the dignity of illustrious men most pleased Euphranor, and in this he excelled all others.⁷² And so each one had a different ability. Nature gave to each mind its own gifts; but we should not be so content with these that we leave unattempted

whatever we can do beyond them. The gifts of Nature should be cultivated and increased by industry, study and practice, and nothing which pertains to glory ought to be overlooked and neglected by us.

61. When we are about to paint a 'historia', we will always ponder at some length on the order and the means by which the composition might best be done. We will work out the whole 'historia' and each of its parts by making preparatory studies on paper, and take advice on it with all our friends. We will endeavour to have everything so well worked out beforehand that there will be nothing in the picture whose exact collocation we do not know perfectly. In order that we may know this with greater certainty, it will help to divide our preparatory studies into parallels, so that everything can then be transferred, as it were, from our private papers and put in its correct position in the work for public exhibition.⁷³ In carrying out our work we will employ the necessary diligence combined with speed, so that tedium does not prevent us from going on, nor eagerness to complete make us rush the job. From time to time we should interrupt our work and refresh our minds, and not do what many do, and take on several works at once, starting on one and setting another on one side unfinished. Whatever works you begin should be completed in every respect. When someone showed him a picture, saying: 'I painted this just now', Apelles replied: 'That is obvious without your saying so; I am only surprised you did not manage several more like it.'⁷⁴ I have seen some painters and sculptors, and rhetoricians and poets as well (if in our day and age there are any worth calling rhetoricians or poets), begin some work with great enthusiasm, and then when the ardour of their thoughts cooled, abandon it in a rough and unfinished state, and under impulse to do something different, devote themselves to fresh enterprises. I certainly disapprove of such people. All who wish their works to be pleasing and acceptable to posterity, should first think well about what they are going to do, and then carry it out with great diligence. Indeed diligence is no less welcome than native ability in many things. But one should avoid the excessive scruple of

those who, out of desire for their work to be completely free from all defect and highly polished, have it worn out by age before it is finished. The ancient painters used to criticize Protogenes because he could not take his hand off his painting.⁷⁵ And rightly so, for we should certainly strive to employ every care needed in our work, as far as our talents permit, but wanting to achieve in every particular more than is possible or suitable is characteristic of a stubborn, not of a diligent man.

62. Therefore, a moderate diligence should be employed. Friends should be consulted, and while the work is in progress, any chance spectators should be welcomed and their opinion heard. The painter's work is intended to please the public. So he will not despise the public's criticism and judgement when he is still in a position to meet their opinion. They say that Apelles used to hide behind his painting, so that the viewers could speak more freely, and he could more decently listen to them enumerating the defects of his work.⁷⁶ So I want our painters openly and often to ask and listen to everybody's opinion, since it helps the painter, among other things, to acquire favour. There is no one who does not think it an honour to express his opinion on someone else's work. Nor is there any need to fear that the judgement of censorious and envious critics can in any way detract from the merit of the painter. His fame is open and known to all, and his own good painting is eloquent witness to it. So he should listen to everyone, and first reflect on the matter for himself, making any necessary amendments; then, when he has heard everybody, he should follow the advice of the more expert.

63. This is all I had to say about painting in these books. If it is such as to be of some use and convenience to painters, I would especially ask them as a reward for my labours to paint my portrait in their 'historiae', and thereby proclaim to posterity that I was a student of this art and that they are mindful of and grateful for this favour. If, however, I have not fulfilled their expectations, they should not censure me for having dared to attempt such an important subject. For, if my ability was unequal to completing what was praiseworthy to attempt, they should remember that in

matters of great importance the very desire to achieve what was most difficult is usually regarded as worthy of praise. There will probably be some who will correct my mistakes and who will be of far greater assistance to painters than me in this excellent and honourable art. I implore them, should they in future exist, to take up this task eagerly and readily, to exercise their talents on it, and perfect this most noble art. I consider it a great satisfaction to have taken the palm in this subject, as I was the first to write about this most subtle art. If I have not succeeded in accomplishing this undoubtedly difficult task to the satisfaction of the reader, Nature is more to blame than me, as she imposed the law that no art exists that did not begin from faulty origins. Nothing, they say, was born perfect.⁷⁷ If they are superior to me in ability and application, my successors will probably make the art of painting complete and perfect.

Explanatory Notes

1. Filippo di Ser Brunellesco, known as Brunelleschi (1377–1446), goldsmith, sculptor, architect, engineer and inventor; Donato di Niccolò di Betto Bardi, known as Donatello (c. 1386–1466), sculptor; Lorenzo (Nencio) di Cione Ghiberti (1378–1455), sculptor and architect; Luca di Simone della Robbia (c. 1400–82), sculptor; Tommaso di Giovanni di Simone Guidi, known as Masaccio (1401–28), painter.
2. The Dome of Florence Cathedral was constructed between 1420 and 1436. See H. Saalman, *Filippo Brunelleschi. The Dome of Santa Maria del Fiore*, London, 1980.
3. The Italian text – ‘mi piacerà rivegga questa mia opera de *pittura* quale a tuo nome feci in lingue toscana’ – might imply that Brunelleschi was already acquainted with the Latin text.
4. Giovan Francesco Gonzaga, Marquis of Mantua (1407–44), whose son, Lodovico, was to become a major patron of Alberti’s architecture, including the churches of S. Sebastiano and S. Andrea.
5. For Alberti’s Ciceronian expression, ‘Minerva’, see the Introduction, p. 12.
6. The Latin reads: ‘Una quidem quae per extremum illum ambitum quo superficies clauditur noscat, quem quidem ambitum nonnulli horizonem nuncupant; nos si liceat, latin vocabulo similitudine quadam appellamus oram aut, dum ita libeat, fimbriam.’ Alberti uses a number of terms to indicate ‘boundary’, ‘borderline’, ‘contour’, ‘edge’, ‘outline’, etc.: *ambitum, discrimen, extremitas, horizonem, fimbria, ora, rimula, terminus*.
7. The Italian text at this point informs us that ‘more could be said about these reflections, which relate to those miracles of painting which many of my friends have seen made by me previously in Rome’. This suggests that his ‘miracles of painting’ involved mirrors in some kind of peep show. See below, Note 15. For the sources of the optics in the preceding passages on reflections, the visual pyramid, colours, etc., see the Introduction, pp. 10–13, and M. Kemp, *The Science of Art. Optical Themes in Western Art from Brunelleschi to Seurat*, New Haven and London, 1990, pp. 20–26 and 264–6.