Animal Sculpture

Suggestions for Greater Realism in Modelling and in Pose

By

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Cross of the Grand Prix and Medal for Sculpture, Barcelona Exhibition, 1912; Gold Medal for Sculpture, 5th Olympiad, Stockholm, 1912; Grand Prix for Sculpture and Gold Medal, Milan International Exhibition, 1912; Grand Prix for Sculpture, Paris International Exhibition of Alimentation and Hygiene; 1st Prize for Horse Sculpture, International Art Horse Show, London, 1913

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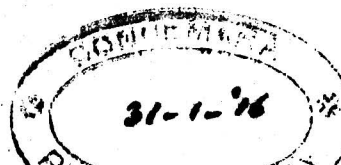

PREFACE

THIS volume is offered in the hope that it will be of a little assistance to those who have taken up animal sculpture.

It is not a manual devoted to the elementary technicalities of the art, but is intended to help those who, having advanced a certain distance, are compelled to grope their way, and are, in consequence, getting discouraged.

I think all animal sculptors have found, as have I, that they can get very little help from sculptors of other subjects. These latter know only the human figure.

Writers on sculpture tell us that the *Charles I.* in Leicester Square is "the finest equestrian statue in England" (Fig. 7). Go and examine it, and what do you see? Looked at from the front the horse has ridiculous human eyes. He lifts his off foreleg, and yet does not shift his weight to his near side, as horses have to do to keep their balance. The result is that he stands as a kitchen table would with one leg cut off; he would fall over

on his off side if his feet were not screwed to the base. Look at him from behind; his tail is stuck in half way down his quarters; like a child's cheap toy horse, his hind legs resemble bent matches stuck into an apple. An ordinary saddler's wood horse for the exhibiting of harness is better modelled.

Then you read that the Colonna equestrian statue in Rome is the finest in the world (Fig. 16). The general effect is dignified, but the horse! He is a cross between a shire and an elephant, not a particle of "quality," and his poor rider is nearly split in half trying to bestride him and reach his stirrups; and look at the shape of the legs, the hind ones especially!

The conclusion drawn from such examples is this, that to be "sculpturesque," one must not pay any attention to nature but "make horses out of one's own head," as the children say.

It is useless, therefore, for us animal sculptors to seek information from the sculptors of the human figure, for these men say that a real horse is not sculpturesque, "that he must be improved." We must go direct to nature.

Imagine the presumption of puny man in imagining that he can improve upon nature.

Copy nature as faithfully as you can, and in every detail in which you have succeeded in imitating nature (if ever so slightly), you will achieve the artistic and sculpturesque, but where you have altered or "improved" nature, the result will be ugliness, deformity, and incongruity.

The sculptor who is striving his hardest to copy the infinite beauties of nature is worshipping his Creator more truly than is any repeater of ready-made hymns and prayers.

W. W.

July, 1913.

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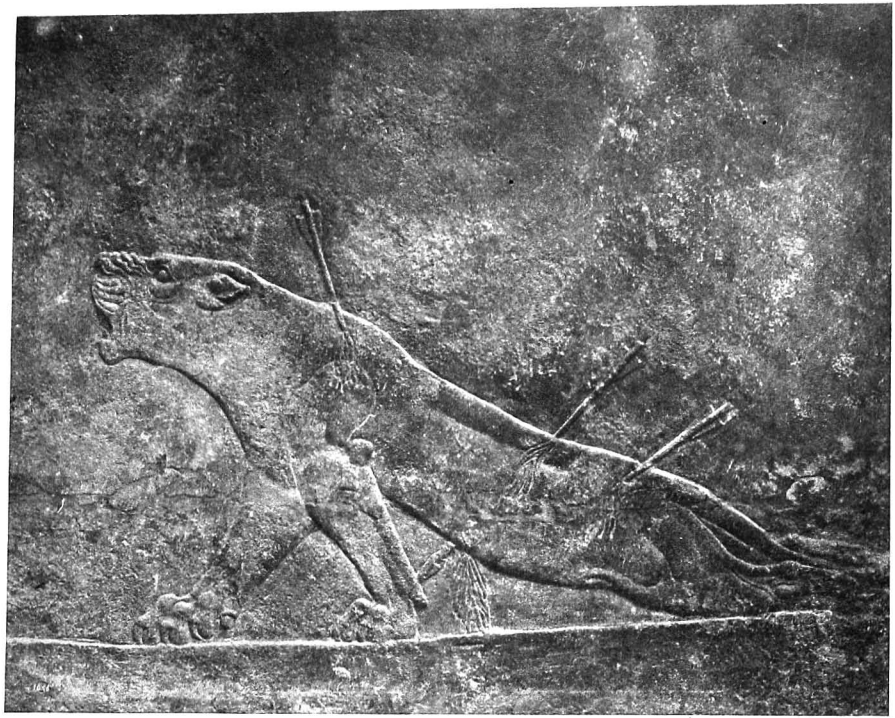

Fig. 12.—Wounded Lioness. Assyrian Sculpture

Photograph by the Author

This torturing of cats dates back some two thousand years. The reason is religious bigotry, and hatred of rival creeds.

Because the Egyptians worshipped the creative principle of nature in the form of a cat, therefore a rival religion said the devil must be incarnated in cats, and cats must be tortured.

In the Middle Ages, witches were accompanied by the devil in the form of cats, so cats must be burnt alive,—not quite logical this, as fire was considered to be the natural element of the devil.

Puss-in-Boots and Dick Whittington (tales wherein cats are kindly treated) are of Eastern not of Western origin.

As most people do not reason, but merely act as they see others do, this cat torturing st[illegible] goes on.

The dog, on the other hand, ha[illegible]uring that period, fortunately for himself, had his lot improved. The very same bigotry and intolerance which tortured the cat caused the dog to be raised above all animals and be called the friend of man (because the Jews called him "unclean").

If a man kicks a dog, he is a brute; if he kicks a cat—"How amusing, serves her right!"

On account of religious bigotry, world's masterpieces were destroyed, because the statue of a god to one creed is that of the devil to another. The Greeks considered the perfect human form fit to worship; another creed calls it indecent. How many great works of art were destroyed by those unable to appreciate them!

This is all the more lamentable, because if the names had been changed, and a little drapery had been added, the offending statues could have been adapted. *Hercules with the Lion's Skin* would become, by the addition of a few bees, "Samson with the bees' nest in the dead lion." *The Laocoön* would be recognised as "The serpents destroying the Israelites in the desert," etc.

The names artists give to their work are a very secondary matter to them. One generally finishes one's work before deciding what to call it, and then bores all one's friends by asking them to suggest a suitable title.

Names for certain subjects become stereotyped. A half-tone in a newspaper of a man on a horse is always "So-and-so on his favourite horse." If the horse is moving, he is "Showing his paces." A man with a horse blundered down and rolling

Fig. 1.—Deux Amis—Monkey and Dog, by L. Paillet

Photograph by the Author

on him is always "thrown from his horse." A horse rearing from too tight a curb is "skittish," a man walking his horse slowly and afraid to go any faster is "having a canter in the park," and so on.

I was asked to join a society pledged not to paint or model from the nude! I wonder if this society allows its members to model a horse without a rug on his back, bandages on his legs, or blinkers on his eyes. Surely such a society would insist on blinkers!

Why, by such reasoning, even flower painting is indecent, for flowers have sex.

How do these artists study anatomy?

I painted on a fan, a group of amorati amongst foliage (artists will understand what I mean), for a middle-aged lady Her husband asked me "to alter a little—what shall I say—anyhow my wife cannot possibly use it as it is!" I accordingly put bathing suits with long trousers on all the cupids and she was delighted with it.

What is so disheartening to us animal artists is that to others any dog is "*a dog*," and must stand or lie in the conventional dog position.

An Italian greyhound stretches himself with

his forelegs stiff and straight out in front, but his chest is *clear of the ground;* a retriever dog, on the other hand, when in the corresponding position, has his forelegs slightly bent and flaccid, and his chest and the lower part of the body resting on the ground, like Landseer's lions (Fig. 6).

The sculptor who is not an animal lover knows nothing of this. If you show him a study of an Italian greyhound (Fig. 3), he will say, "This is wrong!" and will push the body down till it touches the ground. Then he adds: "Look how stiff you have made the forelegs"; and bends them at the fetlocks till the figure takes the position of a cat when it poses itself.

A very little of this sort of instruction taught me that, if I wanted to be an animal artist, I must go to nature, not to men who model only by convention, and go about the world with their eyes shut to all but their preconceived ideas.

Such men never learn or improve; they just model from what has been done before, taking it for granted that the conventional ideas are correct. They are like fanatics in religion who think that their dogmas are the only true ones, and that it is sacrilegious to investigate or question.

Quality of eyesight plays a great part in animal painting and sculpture, especially in the depicting of wild animals,—of course working from caged animals leads to error.

A near-sighted man can paint landscapes—in fact, to produce certain effects (like Whistler's) it is an advantage to be near-sighted. A near-sighted man sees just a blur of green with a vague outline, where a long-sighted man sees innumerable leaves, each in perspective, and light and shade and local colour, a network of branches and twigs foreshortened, with sparks of high light and shadows, and despairs of having time to paint in a lifetime all that is before him.

The near-sighted man needs merely to fill a big brush with plenty of colour, give two or three dabs in various directions, and then he has copied all he has seen.

Compare a landscape by Millais with one by Whistler and you will appreciate how very differently a long-sighted man and a very near-sighted man look at nature.

Impressionism and near-sightedness are identical.

Not every long-sighted person, however, can "see" in the artists' and naturalists' sense.

One of the longest-sighted men in my acquaintance is absolutely blind, when called upon to apperceive things artistically. He cannot see even light and shade; he said to me one day, "Why do you make all those grey spots" (when I was shading a drawing from a plaster-cast of a horse); "the whole thing is pure white!"

A near-sighted man does not see a wild animal as we more fortunate long-sighted ones do. For instance, a herd of deer on the move appear to him as indistinct patches of colour flitting past; he has no conception that the hinds are moving with a rhythmical movement of head and neck, whilst the stags, owing to the weight of their horns, keep their heads steady, and the neck and body undulating behind.

If this near-sighted man painted a herd of deer, he would never dream of indicating the difference in the gallop;—a deer is a deer, just as the letter "A" is an A to him.

It is the near-sighted artists who stick so to convention, whilst long-sighted ones constantly add bit by bit to realism; and they alone appreciate a touch of nature in the work of their brother artists.

Fig. 2.—Cat Washing Herself, by Fremiet

Photograph by the Author

A very near-sighted sculptor was looking at a statuette in my possession of a roaring stag, the achievement of an exceptionally observant German artist-naturalist—Palsenberg (Fig 4). The near-sighted sculptor made this comment: "It is all wrong: look how the stag sticks his head and neck out; his belly is all tucked in and his cheeks are sunken."

These are the very characteristics of a roaring stag; but they were all a sealed book to the near-sighted man.

Thereupon I showed him a rabbit modelled by a clever Russian artist. The rabbit was represented crawling on his belly, ears pricked, hocks up to the level of his back, exactly as a rabbit moves when investigating something suspicious.

My friend roared with laughter. "Look," he said, "how wrongly placed those hocks are," and he drew on a piece of paper a rabbit in the position of that of a standing horse (as no rabbit ever stood) and said: "There now; that is the way he should have modelled the hind legs."

I said: "Let 's go into my park and look at some real rabbits, to see who is right."

It was getting late, and by moving carefully we

soon came upon a rabbit squatting near its burrow. At that moment the rabbit popped in. On looking to see what had frightened the rabbit I saw my friend with a big white handkerchief wiping his pince-nez. Of course he had not seen the rabbit.

We sat down and waited for the rabbit to reappear. I had told the man that we must keep quiet and avoid speaking, and he did not speak; but during the entire twenty minutes we waited, I do not think he was still for more than ten seconds at a time. He kept picking grass, pulling up his collar, digging his heels into the turf, etc. In spite of this the rabbit finally crept out and began moving along in the manner indicated in the statuette we had been looking at, then—suddenly backed into the hole again.

I looked round. My friend had his hat off, and was carefully arranging the long lock he combs over his bald patch. He said: "Ha! ha! I saw something white bob; very interesting; is it not time for afternoon tea?"

If you look at a piece of sculpture by a near-sighted man, the general effect may be pleasing as a work of art; but you will have to examine it closely to see whether a jagged projection is meant

for a piece of rock or the animal's hip; or to which of a group of animals a particular leg belongs.

To such a sculptor all nature looks blurred and uncertain. He represents nature as he sees it, and is called an impressionist.

Laziness is responsible for another form of impressionism, the artist abandoning the work when it is only half done.

CHAPTER II

THE ABSOLUTE ESSENTIALS

THERE are four things which it is vital to have absolutely right in sculpture. Unless these are observed, accurately, all labour is thrown away. They are:

Proportion, Planes, Balance, and Anatomy.

Proportion.—Without that, any work of art is hideous; in fact, it is not art, but deformity, like a docked horse.

Fortunately proportion is easy to secure; it consists merely in taking extreme care to measure and constantly verify, whenever any alteration is made or any detail is added.

There is no necessity to take the measurements from the living model. For the perfect horse there are tables of measurements as there are for the human figure, *i. e.*, the height at the withers is equal to the length from the point of the humerus to the tuberosity of the ischium, etc.

But for many animals there are no such tables

Fig. 3.—Italian Greyhounds, by P. F. Mène
Photograph by the Author

of proportions and one has to prepare tables for these oneself.

It is as well to put in small metal pegs at all the principal points (these pegs are removed or covered over in finishing), and to verify constantly one's measurements. Without such pegs the places to measure from get shifted or lost.

Each breed of dog varies in its proportions, and also varies according to age and sex (Figs. 1, 3, and 5).

Whatever animal you may be modelling, have by you a table of its proportions and its measurements, from the average of the best specimens of that animal.

It is very curious that the Greeks had no sense of proportion in modelling children, whom they represented as miniature men, placing upon their bodies heads that were disproportionately small.

I find it most convenient always to work according to a proportionate scale; for example, horses I usually model to the scale of an inch to the hand; that is to say, a sixteen-hand horse I model sixteen inches at the withers. This is about the smallest scale on which one can model a horse, without being finicky.

Half life height is a pleasant size to work in. I say half life *height*, which is very different to half life size, though people confuse the two.

If an illustrated paper wishes to demonstrate the fact that one country grows twice as much wheat as another, its artist draws a sack of wheat twice as high and wide as the sack representing the less favoured country. But such a sack really has a capacity eight times that of the smaller sack. The reason the artist draws it thus is because as a draughtsman he is used to only two dimensions; a sculptor, who uses three dimensions, would not make the mistake.

To estimate capacity you must multiply the height by the breadth, and the resultant by the depth. Therefore, on the assumption that the other dimensions are proportionate, a sack double the height of the smaller one would contain eight times the amount of corn, not merely twice the amount, as the artist intended to represent.

In the same way, a horse modelled an inch to the hand (a hand is four inches), has only one sixty-fourth of the cubic capacity of a real horse, and this is just the right size for a mantelpiece ornament.

Much more care is required in arriving at the proportions of a statue than at those of a picture.

In a picture there are only two dimensions, up and down, and from side to side; everything is represented on a flat surface; and you can measure out a horse's foreleg same length from the point of the radius to the top of the scapula easily enough (I mean, of course, ignoring foreshortening).

In sculpture one has three dimensions, up and down, right and left, and *thickness through.*

It is the dimension last instanced that in sculpture proves troublesome to the man used only to painting and drawing. Such a man is not accustomed to working or thinking "in the round." When modelling he gets a proper outline from the position from which he happens to be working, but the moment he shifts his position, he finds everything out of drawing.

We are now ready to consider the second absolute essential.

Correct Planes in Sculpture.—Every object should be roughed out in sculpture by flat planes and interplanal angles. The "cubists" are extremists, of course, but they have some show of reason. A box is represented in drawing by one

right angle square and two squares in perspective, but in sculpture by six square planes, being four sides, and a top and bottom, and each square at right angles to its neighbour; crystals by a greater and more complex system of planes, and human and animal forms by a very complex system of planes.

To illustrate this, ask some one to close his fist and place it, nails downwards, on the table.

His hand can be roughly represented by two planes forming a roof, of which the knuckles are the ridge, the back of the hand and fingers the slopes.

A triangular plane represents the edge of the hand on the little finger side, and so on.

In modelling, the whole secret consists, not in trying to get the outline, but in getting the planes at the proper interplanal angles. The outline takes care of itself, if the planes are right.

If you make the six sides of a cube each a square, each of equal size, and with angles of ninety degrees, the outline of the cube is, however foreshortened, from every point of view correct.

If you merely cut a square outline, as seen from one point of view, it appears, from any other

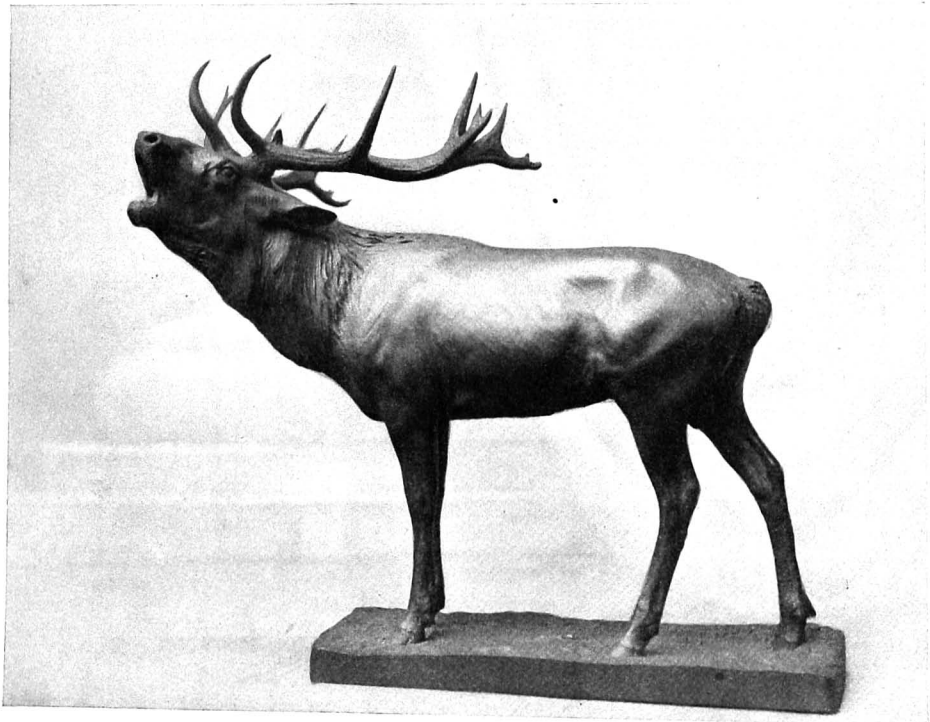

Fig. 4.—Roaring Wapiti Stag, by Palsenberg
Photograph by the Author

point of view, not a cube at all but merely a misshapen mass.

When you have got the big, main planes and interplanal angles right, add the minor ones.

Keep turning and raising and lowering the work all the time (looking at your planes foreshortened helps you to get them right) and you will gradually find the outlines coming right of themselves, and you will realise that they are more perfect than you would have made them had you applied any other method; the outlines change and vary from different views and under different lighting, instead of preserving a stiff, permanent outline as they do in a painting.

The third essential is *Balance;* and that requires a knowledge of physics, geometry, and mechanics. Use the plumb-line constantly from all sides so as to get the centre of gravity over the support. The centre of gravity of an object in motion falls slightly in front, that is in the direction in which the object is moving; if the object is turning, the centre of gravity falls far enough inwards of the turn to counteract the centrifugal force.

Many artists ignore this fact, and make a

circus horse upright in his gallops, instead of leaning in. This defect is conspicuous in the celebrated Roman Charioteer picture by an Italian artist.

The great charm of sculpture is that instead of one picture of your subject, you have thousands, according to the points of view from which it is looked at and when differently lighted.

The fourth essential, *Anatomy*, is really identical with the planes. You have to know anatomy, however, in order to put in the planes right.

A figure sculptor can get his model to pose in the attitude required; an animal sculptor, on the other hand, cannot get his model to keep still unless he works from a dead model as a great animal painter did, and then it lies or hangs all misshapen.

If he knows its anatomy, he can put in the muscles right for the particular pose he wants from memory.

If I am modelling a horse with his off hind leg stretched back, I have a horse harnessed to a jogging cart which gives a free view of his hind legs. I drive him and keep glancing at his off hind leg as it comes in the position I want. When

I have it well in my mind, I get to work at my modelling until I encounter difficulties; then I go and drive the horse again, and pay particular attention to the play of the muscles (the abductor parvus becomes a narrow, straight groove when the hind leg is extended and the foot on the ground, whereas it is a protuberance when the leg is flexed) till I have them properly fixed in my mind, and so on.

Watching a horse pulling a heavy load up a hill or a horse in racing condition, is a good way of studying the play of the muscles you want.

In animal sculpture you must work from memory; if you try posing a horse and getting a man to hold his fore leg, whilst you copy it to represent his galloping, you cannot do any good work.

We animal sculptors have the advantage over the figure sculptors in that we are continually seeing our models *naked* and thus get familiar with their muscular movements. Figure sculptors are hampered because most of the people they meet are clothed. As a result they get fewer opportunities to study movement in anat-

omy, and when they do have anatomy before them, it is only in stiff poses for them to copy, not in movement for them to store in their memory.

Because the corner of a horse's mouth is usually partly covered by the bit, that is the part I have most difficulty with in modelling.

In modelling muscles, model, as much as possible, from a foreshortened position; if you do them in profile, you merely draw or map them out, you do not make their planes right.

Bas-relief, which is merely a conventional modelling, a form of drawing, not sculpture, spoils your sense of planes, and is to be discouraged.

Working in bas-relief spoils a man for the round; he gets into the way of outlining and mapping out the muscles and ignores planes. A sculptor should always work in planes and interplanal angles, and put in his muscles as *planes*, not as lines scratched on the sides of his animals.

A muscle is a structure, not a pattern incised on the animal.

If the reader will look at the horses on most bas-reliefs, on monuments, he will see what I

Fig. 5.—Pointer, by P. F. Mène

Photograph by the Author

mean. It is very easy to attain this result, but it is not sculpture. It resembles the practice of the South Sea Islanders in tattooing their bodies.

CHAPTER III

ACTION

ONLY a very few of us artists were prepared for the truths instantaneous photography revealed to us. Most people were horrified, and said the photographs were ridiculous. "No horses gallop like that"; it "does not give the effect of motion," and so on.

From my earliest attempts at drawing I was always being told by my instructors that I was drawing the action of my horses all wrong. I had a chance given me when a boy to draw some illustrations for a magazine, and was naturally extremely proud.

The editor, however, would accept my drawings only on condition that I "corrected" the action of the horses.

I said my drawings were correct, and preferred not to have them published, to drawing positions I knew were wrong.

Now, when I look over my old sketch-books,

I see that though the drawing is atrocious, the action is correct.

I began a very elaborate work before the days of instantaneous photography, illustrated by myself, analysing the walk, trot, pace, canter, and gallop of the horse.

I divided each gait into its four most characteristic poses. The "walk," for instance: *First position*, parallel legs moving together, but the hind foot off the ground in the backward moving group, and the forefoot off the ground in the foreward moving group.

Second position, diagonal legs moving together, and in this case the two inside position legs have their feet off the ground.

The *Third and Fourth* positions are the converse of these.

For the canter and gallop there are eight principal positions, four for leading with the off leg, and four for leading with the near.

At this day, however, there would be no advantage in publishing such a book, as by looking over a batch of photographs you can choose the position desired instead of having to study out the correct action as I had to do.

The great advantage of using the real action is that you can have eight horses galloping in a cavalry charge and each horse in a different position, instead of dozens all in exactly the same position, as is the case in Herring's and Stubbs's pictures.

It is curious that Meissonier, one of the very few who (before instantaneous photography) portrayed the correct action of the horse, has two horses—the major's and the trumpeter's—in the same pose and foreshortening in his cavalry picture, called 1807.

The critics had amusing difficulty in understanding what his horses were supposed to be doing.

In the case of the conventional artists the interpretation is easy enough. Three feet down, and one foot up spelt "walk"; one fore and one hind foot up, "trot"; legs stretched out fore and aft, if the neck was also stretched out, "gallop"; if the neck was bent "canter."

But Meissonier upset all this. There is a very celebrated picture of his representing a solitary horseman riding against the wind. Not being able to analyse the action of the horse's legs, some called it "hurrying," some "battling the gale,"

Photo. by Valentine

Fig. 6.—Landseer's Lion on Nelson's Monument, London

some even said "galloping," not a single one called it what it is, "walking."

A man may be very learned in archæology and yet not understand that what he condemns in the drawings of so-called "savages" as "want of knowledge of perspective" may really be proof of quite a high knowledge of perspective and art.

In an article on the drawings of the Bushmen of Africa, which appeared in a scientific paper, I have just read that "when the Bushmen wished to represent two animals standing so close together as to overlap, they adopted the slow method of first depicting one animal and leaving it to dry and then painting the other upon it. The reason for this undoubtedly was that the pygmies possessed no sense of perspective."

Now by his very words this writer proves the contrary.

When he speaks of "two animals standing so *close together* as to overlap" he no doubt means standing *one behind the other*, and all artists invariably draw the whole of the animal behind before erasing those parts covered by the animal in front.

If they drew the way the Professor thinks they

do (that is if they drew the front animal first and then sketched in some ends of legs, head, etc., protruding from behind the front animal), they would never get the several parts in the right places or the right amount showing.

When I model a horse that is being ridden, I always finish the whole of the horse's back as carefully as if I did not intend to hide the middle of it by the figure; otherwise I would have the man fitting right into the horse's back as in a well-known monument near Hyde Park Corner.

Fig. 18 shows how the horse's back is fully modelled though half hidden by the rider.

CHAPTER IV

HOW TO AVOID SPOILING PREVIOUS WORK

IN modelling, as in painting, one often in trying to improve or finish spoils irremediably. It is especially in trying to "finish," that the mischief is done. You have just the effect and form desired, but it needs finishing. In attempting to give it the finishing touches, you suddenly discover you have spoilt it; you cannot find where the fault lies, and so you are unable to correct or restore what you had done—it is lost for ever. Or you may have the planes just right, but ragged; you try to smooth edges, and everything is suddenly out of place.

Again (a very common catastrophe), you have worked all day and are leaving off as it is getting dark. You take a final look round to see where you can improve the outline (the fatal outline, which ought to be left to make itself, as a result of the planes and proportions being correct). You alter this outline the merest trifle so that it may look

better from the point of view from which you are seeing it. Then you look from a different point of view to ascertain what impression it gives when beheld from that angle, and to your horror find that from this other view-point the outline is ruined. You try hurriedly, in the bad light, to correct this, make matters worse, lose your head, and ruin perhaps months of work irreparably.

I have found a principle for modelling which reduces the likelihood of such mishaps and which, if carried to its full possibilities, practically precludes the chance of losing and spoiling good modelling (already done) in the process of trying to improve it.

My system is as follows: I think out the whole work to the smallest details before beginning, often taking months or even years to do so, often putting the idea to one side for a time and taking it up again later.

When I have the whole in my head, down to the smallest details, I have the armature made in strong iron, or even steel, and very firmly fixed, immovable, with no "spring" or bend in it.

The reason for this is that having movable lead piping for limbs and neck is very apt to cause

Fig. 7.—Statue to Charles I., London

Photograph by the Author

one to lose the balance and the perpendiculars of the work.

If you model a horse, standing on all four of his legs, the plumb-line from his gullet drops between his forefeet, more or less, according as his head is inclined to one side or the other.

If now you decide to have his near forefoot pawing and there is lead piping in it, you are able to bend it in the required position, but if you leave the rest of the horse as it was, the horse is all out of balance, as is the horse of the *Charles I.* statue in Trafalgar Square (Fig. 7). If this animal were alive, it would fall over to the right.

A chair stands on its four legs with the plumb-line falling midway between its two front legs. If you shorten one of its front legs, so that it does not touch the ground, the chair immediately falls over to that side. The only way to keep it from falling is to bend the remaining foreleg inwards so that it touches the ground immediately under the centre of gravity of the front of the chair.

This is what a horse does when he lifts his off foreleg. He leans to the near side till his near foot is in plumb-line below the centre of gravity of the front part of his body.

That is why when a horse walks, you feel this double roll as the four legs move independently, whereas in the trot you feel only the up and down, transverse legs moving in pairs and so needing no side balance. A pacing horse rolls from side to side as he puts his pairs of side legs alternately on the ground.

I saw a foal that was born with only one foreleg. This leg he carried under the middle of his chest and he could canter and turn, balanced like a bicycle, and get up and down.

If, as in the *Charles I.* statue (Fig. 7) the head and neck of the horse are inclined to the off-side, he would have to lean still more to the near-side to counterbalance their weight.

This is why I am opposed to movable armatures in the legs and the neck and even in the tail, for they lead to mistakes in balance. One is apt to make a change in one limb and hesitate to alter other parts on which a great deal of labour has been spent, and which are good in themselves.

You must with plumb-line and calculations of weight work out exactly how the armatures are to be placed, and if they are made immovable, then you cannot be tempted to destroy the equilibrium

of your work for the sake of improved poses. The pose should be decided on before the work is begun.

Leaden piping sometimes also settles to one side through a superimposed weight of material. I have seen a very well modelled horse ruined through being pushed over to one side all out of the perpendicular, when in the clay, and being cast in that position, and (unfortunately for the sculptor) exhibited without his having been made aware of this accident to his model before it was cast.

When you have got the armature right, model the horse (I am taking the horse as an example) correctly as to proportions and planes and anatomy, in plasticine to the utmost you can.

I say plasticine, as I have tried most media and find this the best, because it works easily (wax gets hard), and the work can be taken up or left off at any moment.

For figure sculptors clay may be better; but an animal sculptor has to seize his opportunities. A cat (Fig. 2) may be just in the pose he wants. He must, without a moment's loss of time, get to work. The cat gets up as soon as she notices that she is being stared at, walks off, and the sculptor

is not for days afforded another opportunity to get the same pose.

If the figure be of plasticine, it will keep till the next favourable occasion; but if of clay, it will need constant attention, renewed wet rags during the days of inactivity; otherwise, the clay will spoil.

When you have your horse as perfect in proportion, planes, interplanal angles, and anatomy as you can make it, the muscles all showing as they would on a horse in very "fit" condition, have two casts in plaster made from it.

Let it be as perfect as possible, but I do not mean highly finished; I mean as perfect as you can make it *without risk of losing what you have already accomplished.*

Now you have two plaster casts of it, put one away carefully so that if anything happens to the other cast you have not lost your model; then with plasticine (white for preference, as dark is apt to confuse you on the white plaster) correct and finish and model the skin, letting the bones and ribs swell through and be distinct in places and be hidden by fat and skin in others, as in the real horse.

Rasps of various sorts and sandpaper are used to

Fig. 8.—Physical Energy, by Watts in Kensington Gardens

Photograph by the Author

make corrections on the plaster; but be very chary of altering the plaster, unless you are quite sure of a resulting improvement, as you may destroy what is already perfected.

The plasticine can, on the other hand, be used as freely and boldly as you like, and you can get wonderful effects (often accidental), by being so free and unafraid of doing damage. Any artist, if frank, will confess that some of his best passages are the result of pure accident.

If you find you have made a mistake with the plasticine, all you have to do is to take it off from the model at that spot, till you get down to the plaster, and then begin afresh. In this work, as in fact always, use tools as little as possible; with the thumb you can better feel when you are right.

By this system of modelling you can try different effects, in plasticine on the plaster, till you get the desired one.

If you have filed or sandpapered the plaster by mistake, thus loosing something that cannot be regained, you still have your second plaster cast to fall back on.

As soon as you have done the best of which you are capable, again have two *new* plaster casts made

of this latest plaster and plasticine model. Put one of the new casts aside and work on the other with plasticine. By working thus a second time or even a third time, you gradually attain the best work of which you are capable, with these further advantages: First, you do not lose any good work already done, because the moment you are in doubt as to your being able to make any improving touches, you can have what you have already done cast in plaster. Thus your work can never be spoiled, while there is always the alluring prospect that it may be improved by further experiment.

Second, knowing that it is in plaster, and that your additional work on it in plasticine cannot spoil what you have already got in plaster, you are filled with confidence, and you can try all sorts of fancies which you would not in the ordinary way dare to attempt, for fear of spoiling for ever what you have been—perhaps years—at work upon.

Even after my works are cast in bronze, I keep plaster casts of them by me, so that when I see where I can make an improvement or correction, I shall not be denied the opportunity of doing so.

After the improvement has been made, a new cast in bronze is prepared.

It is, in fact, working as nature herself does, by evolution, constantly improving and never finishing.

CHAPTER V

TOOLS, TENDONS, VEINS, AND WORKING IN PLASTER

MOST sculptors use wooden modelling tools, but I prefer, for animals, especially when modelling on a small scale, steel tools, such as one uses for working in plaster.

An animal, a furry one especially, has lots of little hollows and depressions of the coat, and between tendons, which are difficult to get at with the coarser, thicker wooden tool.

A wooden tool has to be of a certain thickness, in order not to break under pressure; whereas you can have little metal spoons with sharp edges and curved blades.

Only one advantage is possessed by wooden tools, they can be broken to any length at a moment's notice, when the opposite end of the full tool hampers the sculptor; to take an instance, when he wants to work on a fetlock and the other end of the tool keeps spoiling the underpart of the

Fig. 9.—Haute École, by Walter Winans. Awarded Grand Prix, Milan Exhibition, 1912

Photograph by the Author

body of the horse, by scratching against it. A metal tool under such circumstances must be filed in half. But this can be obviated by having some tools that are not fashioned in the usual way with a working end at each extreme, but that are half the usual length or even shorter, and with only one working end.

There is a prejudice against employing metal tools, as they are said to make the modelling hard and not so supple as when wooden tools are used. I think this is merely a confusion of ideas; that wood is softer than steel, therefore does softer work. I find with wooden tools one cannot get clear detail.

It must not be thought for a moment that I advocate niggling with small tools. Most of this must be done with the hands, especially with the thumbs, and both hands must be used, often simultaneously on opposite sides of the work. In fact, you must feel quite as much as see, what you are doing.

The tools are only for clearing up details, which are too small to be done by the fingers.

Veins look either very well, if properly and judiciously put in, or else they spoil the work, giving the appearance of a lot of worms.

A well-bred horse shows veins everywhere; it does not look well to overdo this, but the principal external veins, like those under the belly as well as that from the gullet upwards along the cheek and branch to the eye and nostril, must be put in; and the principal of the minor ones, on the neck, shoulder, across the arm, etc., can be added.

The veins should never be too long without a break, they show most in the depression between two muscles.

Roll a vein in plasticine and then apply it over a depression, losing the vein each side as it gets to the swell of the muscle; putting the vein in an angular, wavy manner, a shorter branch at a rather sharp angle bridging another depression, and so on.

A few veins similarly crossing a tendon are an improvement.

As to tendons: The tendons below the knee and hocks of a horse, flexor brevis digitorum and its suspensory ligaments, when modelled on a small scale, are apt to get pushed to one side and distorted. You can see that effect in most of the small statuettes sold in shops.

This comes about as follows: You make the

depression between the bone and the tendon down one side of the leg, in the plasticine, wax, or clay. When you make it down the other side, the thickness of material between the two incisions is only $\frac{1}{16}$ of an inch or less. The tendon is, therefore, practically detached from the leg and its armature, and as a result easily gets distorted and pushed out of place, and usually bends in an arch away from the side at which you last worked.

You push the tendon straight and that flattens it, and seen from the side, gives you a bowed tendon.

Even when you get it right, the founder will most likely get it pushed crooked again.

I have a cast of a race horse before me, the back tendons of which are very badly sprung, a defect entirely unintentional on the part of the artist.

The way to avoid this is not to model the tendons. Leave the legs like "filled" legs of a real horse, till you have your model cast in plaster.

On the plaster you can easily cut the tendons, because plaster does not give; in the same way other small parts are best left till the plaster stage.

A skilful sculptor can add to as well as take off when the figure is produced in plaster, but it

requires great skill and practice to make the added wet plaster adhere to the original, and even if it does, the new and the old are not of the same consistency to work on, the new feeling crumbly.

As I have mentioned elsewhere, it is preferable by far to make the additions in plasticine, for then you do not lose the work you have already done; in case of a mistake, you need only remove the plasticine and begin again.

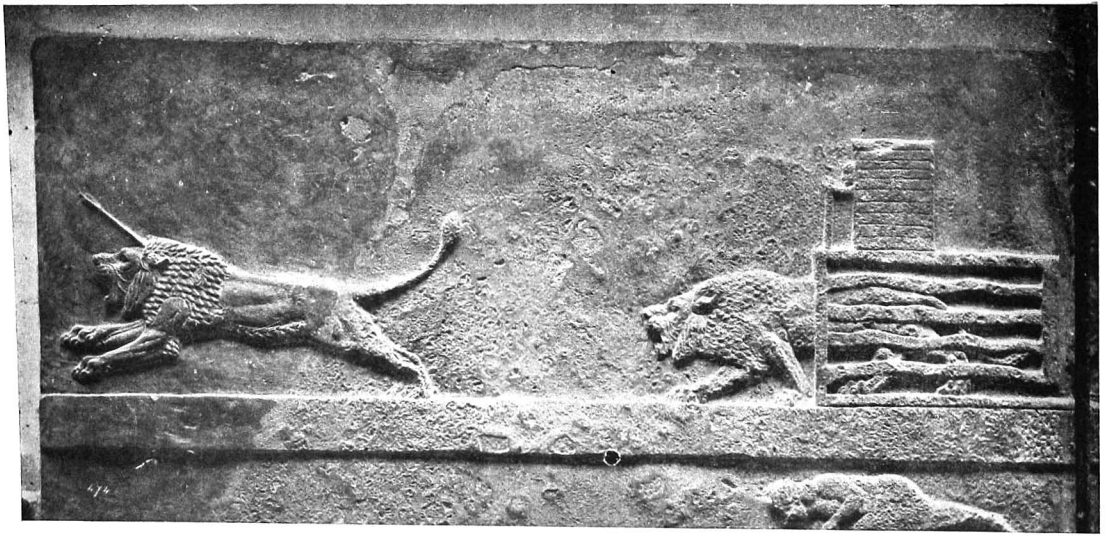

Fig. 10.—Lions Released from Trap and Shot by Assyrian King. Assyrian Sculpture

Photograph by the Author

CHAPTER VI

SYMMETRY AND CHARIOTS

WHERE sculpture is used in connection with architecture it is often advisable, both to save cost and for the sake of symmetry, to repeat details.

For instance, a figure or a horse is cast several times and placed in various parts of the building; or the movement of the legs of a horse is reversed, while the other parts of the animal remain the same.

A great saving of cost is thus effected and in certain cases, where the sculpture is merely an architectural feature and symmetry is desired, the uniformity is an improvement on variety.

Another form of symmetry is in a chariot horse to reverse the position. This is as effective as a Russian troika where the off gallop leads with the near leg, and the near gallop with the off.

The top of a triumphal arch generally terminates in a four- or a six-horse chariot. It is more digni-

fied and more in keeping with the idea of the procession of a conqueror, if the horse be at a slow trot.

True positions of the walk are not decorative enough, though logically the walk is the correct gait in a procession. The ancients overcame this difficulty by adopting the *conventional* walk, which is really the "trot without advancing" of the *haute école.*

To model the horses of a chariot as though they were galloping, whilst the occupants stand upright without leaning forward to counteract the supposed forward movement, is unnatural. The chariots at full gallop in the Grand Palais at Paris are an exception, as the driver and horses are all moving together with a swing. But I mean the persons in the chariot should not be balancing themselves like the barebacked rider in a circus, whilst the horses are fighting and jerking the chariot every which way.

The horses in chariots when represented at a slow trot sometimes have a soldier on foot leading each outside horse. With a chariot having six horses abreast this gives a very good, wide, effect.

I know of one such where the two soldiers are

exactly alike with the exception that their action is reversed, and the horses they are leading as well. In fact the six horses are all cast from the same horse only alternately the off, or the near foreleg, and the corresponding hind leg are raised. This gives a rhythmical appearance, preferable to having each horse moving differently, and is much more dignified.

The horses are generally placed not quite parallel but spread fan-shaped, like a Russian troika. If two casts from the same model are not stationed so as to be seen simultaneously from the same point of view, there is little chance that the public will know that they are alike.

A man was showing me a public building which has eight four-horse chariots on its roof at different angles, and four equestrian groups on its steps. He was much surprised, and would not believe me (till a sculptor confirmed my statement) that all eight chariot groups were identical, and that the equestrian groups consisted of only two groups several times repeated. He said he had been observing the building since he was a boy, and always thought that each of the groups was distinct.

I have actually had my attention called to two statues facing each other at only a few yards' distance by a man who did not know that the two statues were identical.

A sculptor has constantly to have in his mind the side opposite to that he is modelling on, so as to preserve the symmetry, balance, character, and type of the thing he is modelling. He, thus, strengthens, by exercise, his faculty of recognising an object, no matter from what side he views it.

Another man from never having to use this faculty, loses it. I have seen a man standing undecided as to which way hounds have gone on the actual spot where the mud at his feet showed the tracks of the deer and pack.

A not very high form of sculpture, but one that is very effective and cheap, is often used for decorating restaurants and hotels. It consists in having interchangeable torsos, limbs, and heads, which are fitted together in various combinations and groups. For instance, a sculptor models three torsos of cupids, in different positions. He also models five heads, all different, but all made to fit any and each of the torsos. In the same way legs and arms in all attitudes, as well as models of

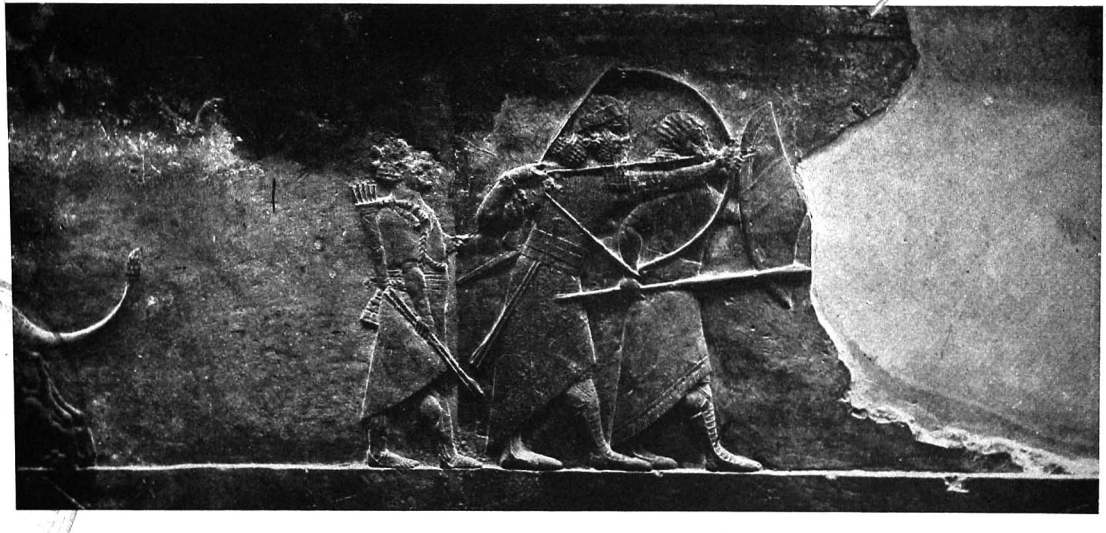

Fig. 11.—Assyrian King Lion-Shooting.
Assyrian Sculpture
Photograph by the Author

various musical instruments are made. These fragments of figures once produced, the rest is easy and cheap, and only sculptors' assistants need be employed.

Suppose a ball-room needs a cornice over each of four doors. A group of three cupids playing musical instruments can be put together, over each door, and by combinations and permutations of bodies, heads, limbs, and musical instruments, each group will look entirely different to the other three.

Such fitting together is just the work for amateurs who have the sculptor's instinct, but who have not the time to devote themselves seriously to sculpture.

A pack of hounds as a frieze for kennels can in the same way be very effectively and cheaply constructed. In modelling a pack of hounds a good deal of repetition can legitimately be introduced by having several squeezes in plasticine, as above described, of limbs, tails, heads, etc. I do not mean fitted together, in a literal, mechanical way, but these combinations will save a lot of measuring and modelling of identical parts. A squeeze in plasticine corresponds to a cast in

plaster. When the members of the pack are all made up, then each hound can be modelled carefully, this fitting together being only the groundwork.

CHAPTER VII

ALL ROUND VIEW

MUCH sculpture placed on a mantelpiece, or seen on the shelves of the Royal Academy, can only be viewed from one side, but even in such cases it is right to make your work look well from all sides.

There is a natural tendency, especially on the part of a painter-sculptor, to compose the animal from one point of view, and in working to devote himself to the side that is the more promising, and neglect the side that appears less perfect.

On the contrary, the imperfect side is the one you should try to raise to the excellence of the other.

The chief reason why one side becomes the better is because most people work on one side of a horse or other four-legged animal till it is well advanced before they start on the other side, and it is much more difficult to copy what you have

done on the other side than to model both sides simultaneously.

By perseverance you will, in time, find you have not only overtaken the better side but even often surpassed it.

In modelling the human figure one naturally works all round but in modelling an animal like a horse one is tempted to keep on working at one side till it is finished. Working with your work in front of a mirror enables you to see the opposite side for comparison.

It is curious how obtuse the average maid-servant is as to which *is* the better side of an ornament. A vase for instance, which has an elaborately painted figure subject on one side, and on the other a simple rosebud, or other insignificant ornament, is invariably put on the chimneypiece with the picture side to the wall.

It is important not to have any projections or fragile parts, like reins, in a statuette, as the maids in dusting are sure to break them off, in which case they will twist them round the neck of the horse and be under the impression that you will not notice the change.

I sent a statuette to an amateur show, with a

label bearing my name and address, in accordance with the rules. The label (a large one) I temporarily tied round the neck of the figure, so as to help the hanging committee in making out the catalogue. When I went to the exhibition a month later, there was my statuette with the label still round the figure's neck, and hanging down to its knees. The statuette was being used as a support for an embroidered doily.

It is best to confine one's efforts to the animal one can do best. A general animal sculptor never attains eminent skill in sculpturing any particular animal. Specialisation, on account of which we winners at the Olympic games are so abus , is, nevertheless, an essential for doing any really good work. Every animal has its special form and proportions.

A dog has its knees and hocks much lower down the legs than a horse has; its neck is shorter, its head larger (compare Fig. 5 with Fig. 9). A man used to horse sculpture is constantly having to fight against the tendency to make the dog too long in the metacarpal and metatarsal bones, and too horse-like.

It is much more commendable to have modelled

the best statuette, even of a frog, than to model a Venus no better than ten thousand other men have done.

To do good work takes time. It is all nonsense pretending the contrary. Proportions, planes, interplanal angles, anatomy, form, need endless work and correcting. Nobody can be right in his modelling at once. Correct modelling requires patience and time.

A sculptor showed me a life-sized statue of a man he had completed. He stood before it in admiration and said: "I did all that in four hours,—not a touch since." I believed him; it looked it!

When I read of a certain length of railroad line laid in "the quickest time on record," I think, "When will the accident occur?"

In spite of my dictum that nature is the only real sculptor, still, in the case of some fancy breeds of dogs, ear cropping is an improvement (I mean from the artistic not the humanitarian, point of view).

The practise arose in this way: The bull terrier was originally bred for dog fights. In order that his ears might not be seized or torn in fighting and

the blood get in his eyes and handicap him, his ears were cropped short.

When dog fights became illegal, the bull terrier was bred only for shows, and therefore "points." With his type of head he needs cropped ears to appear to advantage. This type of head was hardly more natural than his cropped ears, but the combination proved effective. Now that cropped ears are not allowed in this country, a bull terrier with floppy ears looks all out of drawing. His ears do not belong to his type. Imagine a prize fighter with a poet's hair and beard!

The same applies to the Griffon Bruxellois and the Great Dane. The Great Dane with cropped ears looks noble. He was bred specially to have a head that would suit cropped ears. With uncropped ears he looks a mongrel cross between a hound and a mastiff.

CHAPTER VIII

CLASSICAL SUBJECTS

IN producing a Greek or a Roman horse subject, it is very difficult to find details of harness, such as bits, etc., which shall be correct. The difficulty is much greater even than in the case of a prehistoric subject. In the latter case there are the cave paintings and carvings giving the most minute details. In Assyrian and Egyptian bas-reliefs also the most minute details are given.

In Assyrian bas-reliefs the whole scene can be accurately reconstructed. The lion (Fig. 10), for the king to shoot, was let out of a trap at twenty yards' rise, as in modern pigeon shooting (with this difference that the animal moved towards instead of away from the shooter). A man with shield and spear stood on each side of the king to protect him in case the lion charged (Fig. 11). A man behind a grating crouched on top of the cage and opened it at the word "pull" (Fig. 10).

I do not, however, quite understand how it was

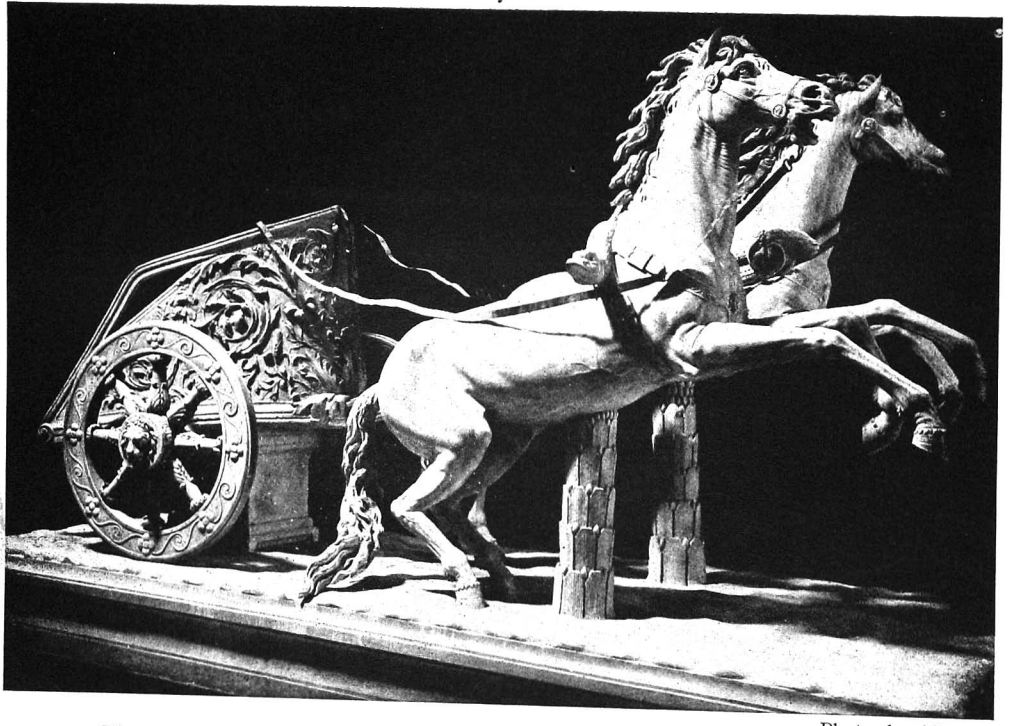

Photo. by Alinari

Fig. 13.—Roman Antique. Sculpture in Vatican Museum, Rome, Biga

that the "puller" on top of the cage did not get shot occasionally, if the lion was a "twister" and the king was "a little over" with his first barrel.

But, joking apart, it is curious that whilst these earlier artists gave all necessary details, the Greeks and Romans were so vague. The probable explanation is that the former were animal sculptors and knew their subjects, and that the latter were figure sculptors purely and only put in animals to "give variety" without understanding what they were portraying.

If you seek information regarding details of harnessing in books devoted to antiquities, you are no better off. The writers of such books were men who never had anything to do with horses, and talk vaguely of "gaudy trappings" or "goading the horses." You cannot find a word as to the sort of bits that were used, or in what way a four-horse chariot had the reins coupled, or if the horses were not coupled but driven like a Russian troika. In fact, such books fail to throw light on a single one of the thousand and one details one must know about if one undertakes depicting such subjects.

On one point, I feel sure, writers err. They say

the driver stood inside his reins and put his weight into them and had a knife to cut himself free if he upset.

That is always the idea of people who are not horsemen (inventors especially). They invent ways of getting rid of the horses the moment there is an accident. Pull a lever and let the horses go off and leave the carriage.

No horseman would dream of doing such a thing. He would not jump out and let the horses go off and kill people. A "horseman" sticks to his horses, till he dies, if necessary.

The Greeks and Romans would never have countenanced a driver who cut himself free and let his horses kill the other drivers. If he had done such a thing, he would have been thrown *ad Leones*, and it would have served him right.

My idea is that the drivers had the ends of the reins fastened to the chariot, so that they should not fall amongst the horses, and throw them down, if the driver was upset (this is the Russian custom), in contradistinction to the American trotting style, of sitting on the unbuckled ends of the reins, so that the latter are free and do not tangle up the driver or horse in case of an upset.

The knife, I take it, was to be used for cutting away the straps necessary to raise a horse in case of his falling (as they had no slip buckles in those days), and also for killing a horse if he was down and by his struggles endangered the life of a driver or other horses. An artillery horse has a wheel run over his neck in war time if he cannot be got up at once, as his struggles otherwise delay the unharnessing of him.

In case you are sculpturing Egyptian and Assyrian chariots and cannot find certain details of harnessing, it is my experience that the best plan is to put what a modern horseman would have, as human nature and ideas are very similar from the earliest ages. Curb bits, mouth keys, blinkers, all were invented in the early ages.

Through all the ages, Art is a universal language, and unlike Esperanto needs no learning; if two men know nature, they can talk to each other across 50,000 years, as distinctly as if they knew each other's language. The cave-dweller's picture supplied as much detailed information as a column of a newspaper, and expert knowledge at that without any literary embellishment.

I think that those who are studying the pre-

historic cave paintings and carvings make a mistake in thinking those early artists worked in the modern way with their model before them. One of these investigators accounts for the fact that a deer is drawn with the hoofs pointing downwards, on the ground that the painter copied a dead deer and therefore put his drawing of a live deer in that attitude.

Now I am sure the cave-dwellers did not work in that way. They drew, as children draw till taught differently by professional teachers. The child and all natural artists, in contradistinction to those taught, draw in the same way, that is from *memory* and never dream of posing a model, more especially never a dead animal, when it is a question of drawing a living animal. A child, if anything interests it, looks at it with "all its eyes" and concentrates its whole attention on it, and would push away a pencil if you tried to put the pencil in its hand. *Afterwards*, when the *object is no longer there*, a child artist will draw the object, *from memory*. Subject to correction, I believe this is the way the late Alma Tadema painted.

This is the natural way of drawing. A born artist is so intent in admiring and seeing and noting

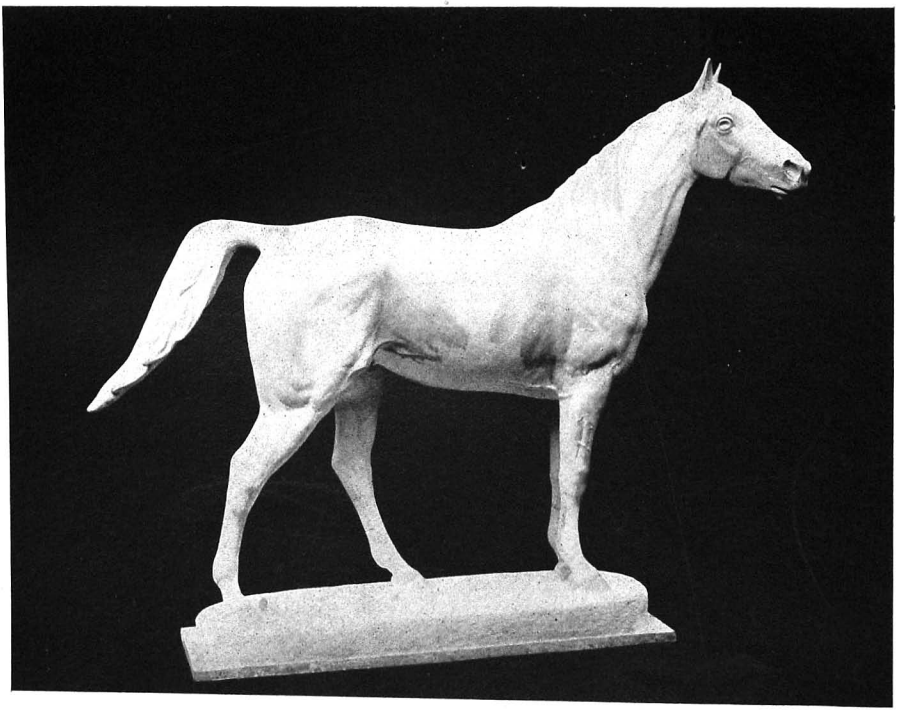

Fig. 14.—Study of a Horse, by Walter Winans. Awarded Gold Medal, Fifth Olympiad, Stockholm, 1912

Photograph by the Author

that he cannot spare a moment to look from the object to the paper on which he is to draw it. Afterwards the whole thing is so vivid in his mind that he can reproduce it to the most minute details.

Then, as I have said elsewhere, he can correct by comparing with nature, but to pose a dead animal in the position required to copy it would never enter the head of any but a school-taught artist.

The cave-dwellers paid such attention to accurate details that from one of their paintings I can tell that it was painted in early autumn, because the big stag is fat and blowing, and allows the small stag to be near the hinds; later, in the breeding season, the big stag would drive the smaller one away. It is not summer, for at that season the stags would be separate from the hinds, and be in the velvet. The country is marshy; otherwise the deer's feet would be worn shorter at the toes. The deer have been hunted and are just entering cover, a circumstance inferred from the fact that the big stag is blowing, is last, and is looking back. Dozens of such things one reads, as in a book, when studying these 50,000-year-old pictures.

A studio picture painted from models would tell me nothing. The painter should not have put a stag in summer coat and his horns "clean." The artist no doubt copied a stag in the summer at the Zoölogical Gardens, and as the stag had shed his horns, painted him a set from horns hanging in his studio. The artist should not have made the horn of a fighting stag bleed, as a stag never fights while his horns are tender. The artist should not have painted a herd of roe-deer, as roe do not go in herds. In fact, the studio animal painters give us as many errors as the cave-dwellers give us facts.

Compare a painter of wild animals like Wilhelm Kuhnert, copying from nature, with Landseer or Swan.

CHAPTER IX

ANATOMY

A KNOWLEDGE of the anatomy of the species of animal you are portraying is absolutely necessary. Without it you will get lost in your forms. With knowledge of anatomy you know the meanings of shapes you see in an animal, and you know, furthermore, what causes those shapes. Such knowledge prevents your putting limbs in positions which that particular species, for anatomical reasons, cannot assume, though one of another species can. I do not mean to imply that a thorough knowledge of anatomy such as a veterinary surgeon possesses, is absolutely necessary (although this would be best), but a knowledge of the positions and uses of all the superficial muscles, and those deeper-seated ones which influence the shape; also a knowledge of the bones of the skeleton and their shapes, and especially the attachments of the limbs.

One of the first things a sculptor in criticising

looks for, is to see if the attachments are correct (in another chapter I have shown how often the indication of the attachments is avoided and how often the attachments are hidden).

The importance of thoroughly understanding the skeleton is because the shape and articulation of the bones show in the attachments.

There is no necessity to know the names of the various bones, ligaments, and muscles. A man may be able to repeat the names and uses of the neck muscles as glibly as he repeats his A B C and yet not be able to show their planes and directions in sculpture. If you can recognise a bone, and put it in its proper place, it does not matter what its name is.

As I also explained elsewhere, it is best to model the animal first, with every external muscle in place, as well as all the bones where these are near the surface, as in the knee, fetlock, hock, hip, shoulder, cheek, temple, etc.

After this model has been cast in plaster, the sculptor may begin to get the surface of fat and skin in plasticine, losing and refinding the anatomy underneath so that, when the work is finished, the

Daziaro, St. Petersburg

Fig. 15.—Statue to Peter the Great, St. Petersburg

animal does not reveal its anatomy except to an anatomist.

Most sculptors, if they know anatomy, exaggerate it, by making it too distinct, never losing it under fat or wrinkles of skin. A little girl begged not to be given gymnastic lessons, for fear she would "come out lumps all over like statues."

Those sculptors whose knowledge of anatomy is indefinite try to hide their shortcomings by making their animals like stuffed pillow-cases. Carefully modelled joints, attachments, and extremities give quality to a work.

If you have the proportions, planes, interplanal angles, shapes, and anatomy correct, each muscle will fit into its place, just as the pieces of a jig-saw puzzle do. On the other hand, if any of the above-mentioned essentials are wrong, the muscles do not fit in place, and when you have them, as you think, right on each side, and come to "join them together" you will find they overlap or do not meet, resembling in this respect a badly cut suit of clothes.

Do not try to overcome this defect by deforming some of the muscles or making them disproportionate.

If your muscles are right and they do not join, then your interplanal angles are wrong and must be corrected. If your angles are right, then your muscles must be wrong. The great thing is to diagnose what is wrong; otherwise in attempting to correct you work in the dark.

CHAPTER X

THE CAT TRIBE

EACH species of animal is not only differently proportioned and endowed with a different shape, but has different habits and ideas. What would be quite a correct subject and pose for a badger, would be quite wrong for a sheep.

The difficulties in modelling all animals are very great, but I think the members of the cat tribe are the most difficult of all. Knowledge of cat anatomy, and especially cat nature is, however, of great assistance in modelling a lion, who is only a big tomcat after all, and also in modelling tigers, panthers, and leopards.

The cat has such a loose skin that his anatomy is much more difficult to follow and model than that of a horse. In the case of a horse there is danger of modelling the anatomy too "tight," or what the French call *écorché*. But a horse's skin over his muscles is relatively tight. A cat, on the contrary, is sinuous and can bend herself into attitudes a

horse cannot approach, and her skin is loose; so the difficulty is greatly increased.

A horse can bend his body very little either vertically or horizontally; a cat can curl up like a caterpillar. A horse has very little lateral play of the elbows, whereas a cat can use her forelegs as a man used his arms.

Therefore, the anatomy of a cat allows of much more complexity of pose than in the case of a horse, and in modelling the cat tribe it is best to take advantage of poses no other animal can adopt, poses which are typically cat-like.

With animals, if there is a characteristic pose peculiar to that animal, that pose is generally the, best to use. The Italian greyhound's sitting pose with forelegs very straight and stretched out, is peculiar to it (Fig. 3). The cat's position in washing the root of its tail, with one hind leg in the air, modelled by Fremier, is peculiar to the cat tribe (Fig. 2).

A horse cannot creep on his belly, and a cat would look wrong rearing like a horse, but very characteristic if reaching up, sharpening her claws on a tree trunk. This choice of the correct pose

Fig. 16.—Colonna Statue in Rome

Photograph by the Author

for the species is on the secrets of good animal artists (Figs. 1, 5).

A cat is a very difficult "sitter." I knew a Persian cat who, if one was looking at him, used to put himself into all the most graceful and affected attitudes he could think of, pretending he did not notice he was being watched, but looking out of the corner of his eyes all the time to see whether I was admiring him.

Pierre Loti shows very intimate knowledge of cats in all his books. His saying "you must let a cat make all the advances" is very true. If a dog is lying on your knees, he does not mind your altering his position; but if you move a cat, or even alter the position of your feet, she gets off at once. Most cats, as soon as they see you examining them, or if you are too familiar with them, without proper preliminary politeness, at once get up and walk off. A friend of mine was painting an old cat belonging to my family. She was lying on the rug by the fire—blinking—and the artist was getting on very well, blocking her in. She was a tabby, and he wanted to examine more closely the markings round her eyes. He knelt down and put his face close to hers. She gave him a smack

in the face, stood up, yawned, shook her paw, and sauntered off.

One of the difficulties in modelling a cat is inability to render her markings in sculpture. The typical cat is a tabby, and in sculpture you cannot show the stripes. You are, therefore, handicapped insomuch, over the painter, or even the worker in black and white. These patterns of lines round the face and the whiskers and long eyebrow hairs have all to be omitted in sculpture, and with them three-quarters of the special cat characteristics.

I refer to these difficulties of modelling conspicuously marked animals in another chapter.

Any one conversant with the particular species of animal he models gets to understand its habits and ideas and does not make the mistake of attributing to it acts and movements proper to other species. The way is to pretend you are not watching, and to note what animals do when they think they are unnoticed.

CHAPTER XI

DOGS

AS I said earlier, dogs are of so many types and breeds that each breed must have a separate table, subdivided into male, female, and puppies.

Dogs are only in rare instances well modelled. It is generally considered sufficient if the animal can be recognised as a dog; and the animal is put in a conventionally sentimental attitude, against the legs of a sitting or standing figure "to balance the composition."

It is curious how the farther back one goes, back to the time when man first makes his appearance, the better are animals portrayed,—perhaps because man was nearer to the animals in those days, and could understand them better.

In the work of the early Egyptians, the animal was well and accurately portrayed, though the Egyptians had not yet learned to reproduce the

human figure, or perhaps were forbidden by their religion to employ any but conventional drawing.

The Assyrian carved bas-reliefs of animals, especially wounded lions, which have never been equalled as to action. Modern animal sculptors have borrowed the action of their wounded lions from them (Fig. 12).

On the other hand, at the greatest period of sculpture (the Greek), animals with the exception of the horse, were badly and conventionally modelled. A neolithic savage would have been scorned if guilty of such bad work (Fig 13). It seems as though man becomes ashamed of his poor relatives, the animals, as he gets on in the world, and thinks them unworthy of serious portrayal.

The dog gradually got conventionalised, especially in the pictures of the landscape painters, till it, and in fact all animals, became a sort of hieroglyphic (like Whistler's butterfly).

I found the most extreme case of this degeneration in a book of instructions in animal painting intended for landscape artists. The author pointed out an easy way to draw animals, which those might adopt who wanted "a touch of interest in a landscape." He instructed the artist to draw

Fig. 17.—One of the Four Horses, by Baron Klod on the Anitchkoff Bridge, St. Petersburg

Photograph by the Author

a pear-shaped figure placed horizontally. If the artist wanted to represent a dog or a horse, all that was necessary was to draw the head and neck at the big end of the pear, and put the tail at the other end. If, on the other hand, a cow, sheep, or deer was needed, the head must be put at the narrow end of the pear and the tail at the broad end. The representation of a pig was still easier. You were called upon to put only a mouth, eyes, and ears at the narrow end of the pear, and a curl for a tail at the broad end.

In spite of its absurdity, this really gives broadly the difference of proportions of the different species of animals. That is why deer are so badly drawn and modelled. The artist almost invariably puts the head and neck at the "big end of the pear," making the withers too high and the shoulders too deep. A deer is low in the withers and high in the rump. The reverse is true of the horse. It is the horns and neck which in the case of the deer give this deceptive appearance of height in front (Fig. 4).

A wild deer is deep through the belly from eating grass and foliage. The *domesticated* horse is comparatively tucked up in the flank.

The cave-dwellers' horses only fed on grass and foliage; hence the big bellies the primitive artists give them in their paintings.

A deer fed on oats and kept for hunting gets more horse-shaped in the belly and loses its characteristic deer shape.

CHAPTER XII

THE HORSE

THE horse, lion, and, in a minor degree, the dog, stag, and wild boar, are the only animals the figure sculptors admit as worth modelling, and then only as accessories. These sculptors think that if the animals are done conventionally, and resemble the species enough to be recognised, that nothing more is required.

See how the Greek *Diana, the Huntress* would be improved if the little stag on whose head she has her hand were not so badly modelled (by the way, from his size, I suppose he is meant to be a roe, but he has stag's horns). Then there is Canova's *Woman on Lioness*. What a ridiculous lioness is that on which the woman reclines! It is obviously modelled from a sofa *chaise longue!!*

The almost universal mistake artists who are not used to horses make, is this: When they want to model a horse, they go into a stable and have a groom *hold* a horse. The groom seizes the horse

by the bottom of the head-stall, taps him with his foot, on the back tendons of his forelegs, so as to stretch the horse out in an unnatural position, with his back all bent in and his quarters distorted, forces his head up, and holds him with his nose right into the artist's face.

These men always put the horse so close that it is impossible to see the animal as a whole, just as some people *will*, when talking to one, hold their faces so close to one that it makes one squint.

A groom also seems to think that an artist is a photographer and must have the horse absolutely still. This confusion of artist and photographer is not confined to grooms. A lady said to me, "Would you like to see my husband's latest photograph?" and showed me a painting of him by an R. A.!

Grooms also like to hold a horse with their hand hiding the lower jaw, in their laudable desire that the horse should not move. If you ask them to take away their hand, they let him put his head down and eat the straw. They also wet his mane, and brush it flat down, and if the horse has a nice yellow hoof, they blacken it.

Bulla, St. Petersburg

Fig. 18.—Monument to the Emperor Nicholas I., by Baron Klod at St. Petersburg

A horse sculptor should know a horse's shape so well that he could almost model it blindfolded.

Each horse has his individual, characteristic pose and movement in his paces, which must be noted if you are making a portrait. The greatest mistake that horse photographers make is in posing their horse with "all the feet clear" when that horse's natural way of standing is different (Fig. 14). That is why it is so difficult to recognise horses in photographs or paintings. They all stand exactly alike, giving an effect similar to that resulting when photographers pose their sitter instead of waiting till their sitter takes a characteristic pose of his own accord.

The way to work, except in the case of portraiture, is to have the ideas of the movement, type of horse etc., in your mind, and only go to look at a horse from time to time to refresh your memory and to put in finishing touches, a turn of the coat for instance (Fig. 9).

A horse, however well modelled, does not, when cast in bronze, have the high lights corresponding to those of a real horse. The reason for this is that the lie of the hair in a horse's coat varies according to what part of the horse it is on, and its

"lie" catches the light, whereas it is only the angle of the planes in a sculptured horse which catches the light.

An instance of this is the diamonds a groom puts on a horse's hind quarters, by merely brushing the coat the reverse way.

The turn of the hair and, therefore, spark of light, can be given in sculpture, in the middle of the forehead, halfway down the crest, the places on the chest where the inside of the foreleg joins the body, behind the elbow, the curl on the hip, etc., by making slightly raised edges.

There is a line on the body shown by the edge of a muscle, as well as the turn of the hair, which is very effective, if well done. This is the high light running upwards in a concave curve, forward from the thin membrane at the stifle up to about the second rib. This is a real ridge when the horse is thin (the edge of the pectoral muscle).

There is another important high light almost impossible to reproduce, as it is only a turn of the hair, and not a ridge. This is the R-shaped light which begins at the stifle, runs up to the hip, and descends in the double curve of the R round the floating ribs of the belly.

As to marking a horse's eyes, simply smooth in the classical style or incise the pupils. I have never been able to make up my mind which is preferable. A horse has projecting eyes when seen from in front; therefore, incising the pupils takes away from their characteristic effect. On the other hand, failure to incise, gives a blind look. Cattle and antelopes, pug and Pekinese dogs have such "pop eyes" that plain, not incised, eyes are "indicated," as the doctors say.

CHAPTER XIII

STRAINS AND PERMANENCE

A SCULPTOR has always to bear in mind what strains his work will have to bear. This varies with the size of his work. The amount of support a limb will give, and can bear safely, in a small work, would break it down in a greater.

Materials always have the same strength per square inch, whereas the larger the work, the more it weighs. The steel girders which are amply sufficient for a short, light bridge, will break if used for a heavier bridge of longer span.

For a small mantelpiece statuette which is not moved, a fragile support and balance may be employed, which support and balance would be utterly unsuitable for a work which is apt to be moved about, even though such work be no larger than the one first instanced. One of my early statuettes has to be mended each time it arrives at or returns from an exhibition, and this has taught me to avoid such poises.

Fig. 19.—Gorilla, by E. Fremiet
Photograph by the Author

For a colossal, or even life-size, equestrian statue of a horse, supported only on his hind legs, great care has to be taken that the hind legs will stand the strain. The parts not vertically over the hind legs are cast as thin and light as possible, or merely even hammered out of bronze sheets. The hind legs have the strongest possible steel rods (bedded solidly in the base) inside them.

In the *Peter the Great* monument in St. Petersburg the rearing horse is kept firm by a serpent (Fig. 15). The casual observer sees that the horse has a hind foot trampling on a serpent and thinks, "What a subtle emblem of evil conquered!" On the contrary, it is a proof of the mechanical genius of the sculptor. In order to balance the horse who is not rearing high, but therefore putting a greater strain on his hind legs in a forward pull, the sculptor has anchored them, by connecting the horse's tail to the serpent which coils far behind on the base. The tail is also weighted, on the cantilever principle. The whole statue is therefore very solid and stable.

As an example of how not to do it, I will instance another equestrian statue of equal size in another country. In this case the horse is rearing higher,

which does not put so great a forward strain, but almost all the weight is downwards on one of the hind legs. The result is that although the statue has not been up nearly as long as the *Peter the Great*, the weight of this one fetlock and the force of the wind rocking the statue have bent the fetlock all out of shape.

Sometimes these defects are not the fault of the sculptor at all, but mistakes in the founding, or by the workmen erecting the statue.

In the case of a well-known statue, by no fault of the sculptor (but through the carelessness of the maker of the armature, or of the man soldering the limbs to the body), it was found on erection that the horse was not firm on his legs, one leg being too short. The workman employed the same means to correct this that a waiter at a hotel resorts to when the table is unsteady—he put a strip of iron under one foot.

When the sculptor saw this at the ceremony of unveiling the statue, he committed suicide.

There is a statue which does not stand upright. It has been re-erected on its present site after removal from a former one. The removal was made subsequent to the sculptor's death and it is most

probable that this out-of-trueness is not the sculptor's fault, but that of the workmen who re-erected it.

All sculptors know what it is to have a workman "mend" their work if it gets broken. I saw a beautiful signboard being painted for an inn by a celebrated artist. I saw it again a few years later, and was horrified. The landlord just then came up delighted at my noticing it. He said, "Is it not improved? A customer offered me a big price for it, but although it was getting a bit weather-beaten, I said 'No.' I valued it too much; so as the house was being done up, I got the house painter to do up the picture as well."

CHAPTER XIV

BEAUTY AND TRAINING

BEAUTY in sculpture consists in the proportions and planes being very correct; if either is wrong, the result is ugliness.

For this reason it is so difficult to secure beauty. Those sculptors who seem to delight in ugliness, and say they are portraying Nature as she really is, are either deceiving themselves, or trying to make the public think that their lack of skill or indolence is good sculpture.

It is extremely difficult to even approach perfection in proportion and planes, but very easy to be *approximately* right.

It is extremely easy to just indicate, instead of defining. It is also extremely easy, provided one has the assurance and an audience that believes in one's word, to say that one has a contempt for beauty and that disproportion and wrong planes hurriedly roughed out into an "Aunt Sally" are the highest and latest form of art, but such a

statement is a case of "sour grapes" on the part of such a sculptor.

Examine the face of any bust and ascertain why it is not the type of perfect beauty. You will find that its deficiency in beauty is ascribable to the fact that the nose is a shade too long or too short, in proportion to the rest of the face, the eyes too close, the forehead too narrow, etc.—all matters of proportion; or the chin is too receding, the forehead too prominent, etc.—all faults of plane.

Therefore, to model an ugly statue is infinitely easier than to model a beautiful one. When I condemned the classical type of horse for sculpture, I meant the conventional. The horse for an equestrian statue must not be a short-necked, upright-shouldered, cart-rumped "classical horse" (Figs. 7 and Fig. 16), nor must it be la mare or a gelding. A mare, though presenting a beautiful contrast of grace and feminality to a stallion, is not robust and virile enough for a statue of an emperor or a warrior; a gelding is too nondescript. A stallion is the only appropriate horse, and I do not know of a single equestrian statue in the world where this has not been recognised.

The type of horse for a charger in sculpture is a sixteen-hand thoroughbred horse, up to at least thirteen and a half stones for a light man, and up to as much additional weight as may be attained without coarseness for a heavy man (Figs. 17 and Fig. 18).

This absence of coarseness can, in sculpture, be carried farther than in horse breeding. A sixteen stone hunter in real life is bound to show some lack of quality, but a sculptor, who is also a horseman, can model him as full of quality as a racing weed.

Quality in a horse is something only a horseman can understand, and, consequently, a sculptor who is not a horseman has unfortunately no conception of it. Look at all the cart horses on monuments. They have not a trace of quality. The head must be that of an Arab stallion head, and the line of the back and carriage of the tail also of the Arab type (Fig. 18).

If you observe all the above requirements, the highest praise you can get is that your stud groom bestows when he says, "What a good sort! what a pity it is so difficult to breed such horses, and so easy to carve them!"

Now comes one of the principal points regarding which even a good horseman may go wrong: In England and America, unfortunately, the high school of equitation is practically unknown, but for an equestrian statue to be good, the sculptor must not only be a good sculptor, and have great knowledge of horses, but understand the high school.

The reason the foreign officers win the jumping competitions at Olympia is because the men and horses are trained in the high school (*haute école*) (Fig. 9).

The horses instantly understand and obey the least wish of their riders. It is not necessary to half saw off their heads in order to force them to slacken their speed.

A foreign officer said to me, "When I buy a horse in England, I have to train him just as if he was an unbroken colt. It is even more difficult, as I have to cure him of faults."

A horse untrained in the *haute école* reminds me of the chauffeur's description of his attempt at riding. He said, "It makes no difference what lever I pull, I never know if he is going to accelerate or back fire."

In an equestrian statue it is absolutely essential that the horse and his rider should appear *as one*, and the horse absolutely under the control of the rider. This is only possible if the man, horse, and the sculptor have all been trained in the *haute école* (Fig. 17).

One sees statues in which the horse moves forward with the head on one side, yawing at the bit, throwing his head. Such representations are the result of the sculptor's ignorance; a trained charger never does such things (Figs. 8 and 16).

Look at Baron Klod's statue of the Emperor Alexander I., in St. Petersburg (Fig. 18); the rider and his horse are in the perfect balance of the canter, the horse just feeling the bit and bending to it, and the rider just feeling him with his legs, and putting him into his bridle.

Compare that representation with the way some riders on monuments lean back all out of balance (Fig. 8).

Fig. 20.—Broncho Buster, by Walter Winans. Awarded Silver Medal, Paris Exhibition, 1900

Photograph by the Author

CHAPTER XV

SUBJECT

THE matter of "subject" is one on which artists and the public can never agree. The artist, and especially the sculptor, takes a pose, preferably one caused by some emotion, such as fear (Fig. 19), suspicion (Fig. 5), curiosity, cold, contentment (Fig. 1), etc., and tries to express *that* in the best way he can.

The public wants a story, no matter how out of drawing the work is, or how faulty its anatomy. As long as it illustrates a story, a popular story, one that every one knows, the public is delighted.

The critics are aware of this, and have to comply with the popular taste. They cannot give a technical appreciation of the work, describe the accuracy of the planes, and point out how learnedly the anatomy has been studied, etc. The public will not give attention to such information.

The critics have, in consequence, to write a long story to the effect that "the man has just come in

and starts annoyed at—— etc." In fact, the critics write a tale founded on the picture.

Sometimes the writer of a book on the old masters gets carried away by his literary ardour.

One reads how "Saint So-and-So is shown with her lovely face gazing in awe tinged with love, but not a trace of fear, etc," and, when you turn over the page and look at a reproduction of the picture being described, you see an ugly, doll-like face without a particle of expression in it.

Whistler frankly refused to invent subjects for his pictures. Artists often put in some object in their picture so as to give it a title. A study of the nude, by the addition of a swan in the distance, can be christened "Leda."

I used as a child to have terrible disappointments, when reading fairy tales, to find the beautiful princesses so very ugly in the illustrations. One has the same disappointments now, at exhibitions of "Fair Women" by old masters. Not one of the ladies portrayed could get an engagement in the last row of a musical comedy nowadays.

I suppose people take the will for the deed. If an old master paints a lady, then his picture is

beautiful. If a modern artist painted his sitter as ugly as that, his picture would be refused by his client.

Before I became aware that as soon as a picture had been given a title taken from a religious source, it became thereby a holy object, perfect and above criticism, I unfortunately shocked two clergymen very much.

A picture was exhibited and great stress was laid on the fact that the whole of it, every detail, was painted direct from nature, in Palestine. I went to see it, with a friend; we found it in a room that, except for the light on the picture, was pitch dark.

As at a picture palace, there were rows of seats placed before it, but the man who ushered us in looked like a pew opener and spoke in a whisper. The spectators—I should say congregation—were sitting in mute contemplation. A lady next me had a pair of opera-glasses, with which she was conscientiously going over every inch of the canvas, reminding me of a forester spying a corrie for deer. On the other side of us were two curates of the "Don't like London" type.

There was a donkey in the composition, and as

an animal painter, this naturally drew my attention. It was very well and conscientiously painted (except that its action was conventional), but the artist had unfortunately copied it too faithfully, using as his model an unsound donkey.

I said to my friend, "Look at the rings on the donkey's hoofs. He has fever in the feet!" Unfortunately the two curates heard me and looked at me as if I had committed a sacrilege.

The artist had painted so extremely accurately, that a veterinary surgeon would at once diagnose "laminitis"; just as in Rembrandt's *Lesson in Anatomy*, a doctor can diagnose consumption in the dead body.

But the artist of this religious picture had not represented the donkey shuffling along, in pain, from laminitis, with ears laid back, but had represented him with his head gaily raised and ears pricked, and stepping up like a hackney wearing three pound shoes.

Painters of religious subjects often are "terribly" funny in their religious pictures; I call it "terribly" purposely, as one ought not to make a joke of religion, but, of course, these painters do it unconsciously. In a picture of St. Sebastian, a

crossbowman is taking most minute and painstaking aim, as if he were shooting for the King's 1000 yards range prize at Bisley. He is aiming for the Saint's liver at a range of *two feet*, while the Saint is looking up with an expression that implies the wish, "If he would only hurry up and have done with it."

Another painted a picture of the Prophet who ran before a King's chariot. The holy man is moving like a Marathon runner, his halo on the back of his head, nearly flying off, and his long white beard streaming; whilst the King is driving his hardest to keep up with him.

CHAPTER XVI

KNOW YOUR SUBJECT

UNLESS the artist knows his subject absolutely he is sure to fall into innumerable mistakes. I can always tell in looking at the sculptured figure of a horse or of a man shooting whether the author is a horseman or experienced in the handling of a gun. The better the artist, if he is not familiar with his subject, the more palpable the mistake, as in the case of the donkey already mentioned.

An exceptionally well-painted picture of a girl mounted on a horse made a decidedly painful effect on me. The girl was riding by herself near the edge of a cliff, the rest of the party following, the horse walking as if very fresh and looking about him, the wind blowing, the girl sitting loose with her reins hanging. I feared that the people galloping behind would start off her horse, before she could gather up her reins, and that he would get over the cliff with her. By his good painting the artist had con-

veyed to a horseman, a distinctly different impression from that which he had intended.

Another very well-painted picture is that of a general standing in front of his troops addressing them. A shooting man could see that this general was in the greatest danger, not from the enemy, but from his own men, who all had their flint-locks at full cock, and finger on trigger, and who were all unconsciously covering with their muzzles various parts of their commander's body. In this case also the artist, by his very skill, made a cold shiver run down one's back, for a danger the artist never intended to portray, of the existence of which he was even unconscious.

Another form of mistake is making the figures handle things wrongly. I knew an artist who could not play the guitar, and got a friend, who also could not play, to pose as a guitar player; the result may be imagined!

I have seen a picture of men at a deer drive with shot-guns. One sees the same in "faked" photographs—a deer-stalking scene, the sportsman using a Martini military rifle in a thick wood, and shooting in the military off-the-knee position. The photographer evidently thinking a Scotch deer

forest is a wood, posed his volunteer friend in one.

Why, by the way, do sporting writers write of "grassing" a stag in Scotland? I have shot more stags in Scotland than most men, and never heard the expression used there, any more than the word "antlers" for the horns.

One sees a photograph of a miserable five-pointer stag, and underneath the inscription, "A Splendid Animal Grassed by So-and-So." Similarly one sees a photograph of a horse walking through a gap, ridden by a woman who with a terrified face is half off to one side, her habit flying almost over her head, and entitled, Well Over.

I have several times refused to pose to a photographer with my revolver held close to my eye like a telescope, the photographer declaring that this was more in focus than the way I shoot with arm extended.

Of course, if a man took the position in shooting that the photographer insisted upon, he would get his eye knocked out by the recoil.

In a comic duel scene, Edward Terry used to say, when he was aiming at his opponent, "Keep still or I can't get the focus on you."

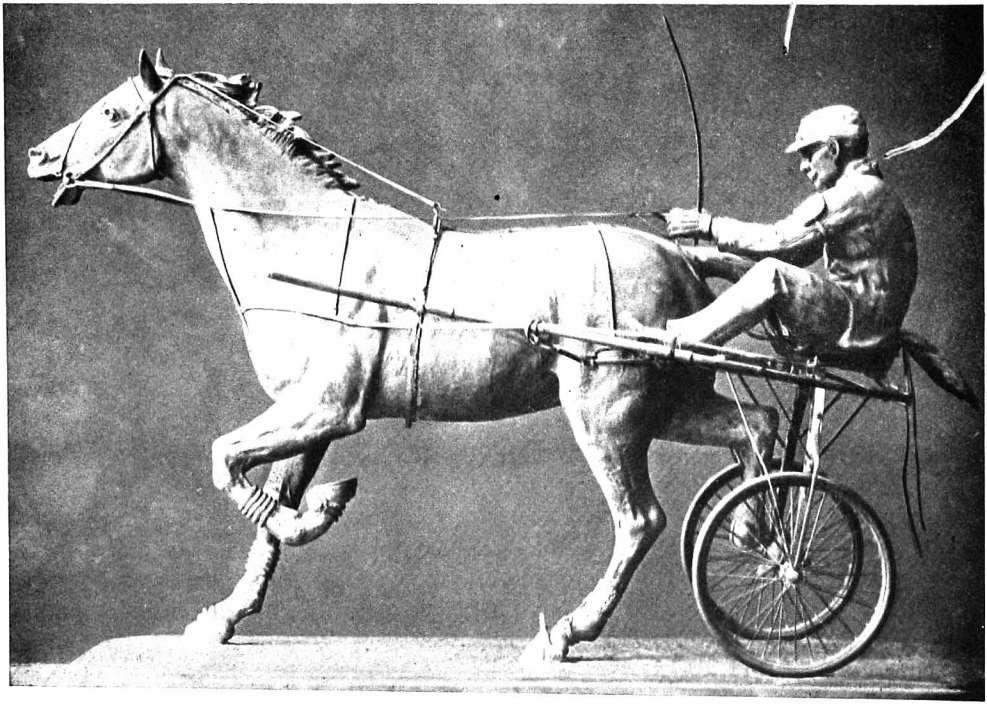

Fig. 21.—Statue of Crœsus the Trotter, by Walter Winans

Photograph by the Author

CHAPTER XVII

WHEN AND HOW TO WORK

EVERY sculptor finds that at times he has an inspiration. There are days when everything comes right at the first attempt, every bit of plasticine is put on in exactly the right place, and one gets results in a few minutes, that would, at other times, take days to do. This mood of inspiration only lasts whilst you can concentrate your attention. If you are called away to a meal, or anything distracts your thoughts, then when you begin again, the inspiration is gone.

Another phase is when one has been doing just right and then gradually one "loses oneself" and cannot see how to go on. In that case, I find it is best to stop; but if time is a matter of importance, and the work must be finished in a certain time, then, by going to work on another part, leaving the head, and working on one of the legs, for instance, may enable you to "find yourself" again.

Many keep several things going at once, in fact,

for a portrait sculptor who takes sitter in turn, such a course is imperative.

When one loses one's inspiration one can then put away that work and take up another.

To some, however, this way of working is impossible, especially to those who, like myself, have the whole statue thought out before beginning; who have, in consequence, made no sketch for it, and who cannot put their attention to any other composition till the first is finished.

If the sculptor is of this type of mind, he had better, as soon as he gets into difficulties with his work, lock it up where it cannot be hurt, and he himself cannot see it, and go away and occupy himself with riding, shooting, anything, till he feels the inspiration to work return.

He will then generally see at once where he has gone wrong and lost himself, and be able to put it right, and continue working, whereas if he had struggled blindly on, he would have spoiled everything.

I used to smash the work when it went wrong; I now put it away and look at it again when I feel I am in the mood to work.

CHAPTER XVIII

DIFFICULTIES

THERE are two ways of treating difficulties, overcoming them, or evading them.

Some of the old masters purposely chose the most difficult foreshortening for painting, seemingly for the pleasure of overcoming difficulties. Evasion, however, is the more usual practice, and the public, not understanding technique, do not notice it; but artists *do*, and the greatest proof of a great artist is, facing difficulties and overcoming them, not evading them.

I was at work on a centaur, and in consequence, examined all examples in art (unfortunately I could not find a live centaur as a model) to see how they had overcome the fundamental difficulty, the joining of the human torso to the horse's withers. I found that, *without exception*, every one, painter and sculptor, ancient and modern, had shirked the difficulty, and covered the join by drapery, except Rodin.

This shirking can be detected constantly in sculpture, the difficulties of the attachments of neck, wrists, shoulder, etc., is hidden by drapery.

The newest plan is to simply break off the unsuccessful limb and show the statue mutilated or else he embeds the part that presents difficulties in the rough marble.

Of course any mythical compound animal is a monstrosity, but I found in a centaur the most satisfactory, or rather least unsatisfactory, proportions were the following: Make the human part on the scale of the length of the human legs the equivalent of the horse's hind legs; therefore, the horse's forelegs are the same length as the human arms; then make all the horse's parts and the human parts to this same scale.

If one takes the horse's *forelegs* as equal to the amputated human legs, the human torso becomes too small.

The idea is to use comparative anatomy, as far as it will go, and modelling a centaur is a wonderful lesson in comparative anatomy. Of course do not go abruptly from the animal to the human, but by gradations, and make the two natures coincide, not each acting on its own account; also make the

human shape as horse-like and the animal as human as possible.

The horse's hind legs are the "legs" of the centaur; his forelegs and arms are a double set of arms, his body and head combined must be the length of a horse's neck.

I represented my Centauress as stretching, just waking, the human part with one arm up, and the other bent (the human yawn) and the horse's hind legs stretched back, one straight out off the ground (the equine yawn) like horses do on first rising; the transverse arm and leg moving together.

For a Pan, the legs must be the length of human legs, that is to say, the goat's leg from the hip to the end of the hoof must be the length of a man's leg from the hip to the end of the big toe (top of femur to third phalanx in both cases).

I have seen a Pan's leg made human length to the hock (corresponding to the human heel in comparative anatomy). The sculptor forgot that a goat's leg from the hock to the toe of the hoof (calcaneum to third phalanx) is the same length as the tibia, instead of half that length in the human skeleton. He, therefore, made his Pan into a sort of grasshopper, all out of proportion.

In comparative anatomy the human legs correspond in measurements to the dog's hind leg. The human "hock" (*i. e.*, the heel) being "well let down." The goat, on the contrary, has the hock high up, as has a horse or deer. In translating a man's leg to a goat's leg, whilst keeping the "overall" length the same, the length from the hip to the knee must be shortened (femur) as also in a minor degree, the length from the knee to the heel (tibia), and the total length so gained added to the length from the heel to the root of the big toe (calcaneum to third phalanx).

CHAPTER XIX

SUPPORTS, BASES, AND COLOUR

IF you are modelling for bronze reproduction, you very seldom need to model any supports, except the natural ones of the limbs, but if for marble, a support of some sort is often needed to prevent the work being too fragile. (I refer to the finished work with the clay or plaster.)

The Greeks and Romans put supports quite frankly and openly; most of their figures lean against a tree trunk, and horses even have tree trunks under their bodies to support them.

Later such a tree trunk would be partly concealed by what journalists call "trappings" over the middle of the horse, which hung down each side of the tree trunk and partly concealed it (Fig. 13).

Also if a foot is raised, it is quite usual to find a prop from the ground up to it.

The best examples I know of horses in stone where the supports are well disguised, are the

two life-sized "man and horse" groups in Vienna. The horses are rearing and the men are holding them.

There is long grass, and drapery hanging from the figures over the quarters of the horses, trailing in the grass, and the whole so well and artistically and naturally arranged that only one used to the technique of sculpture would know it was the result of thought, and intended for support, and not merely for artistic effect.

A sculptor must be an engineer and understand stress and strain and the use of counterweights, counterlevers, etc.

Often in groups of two or more figures, each figure is represented in a pose which, insecure by itself, can be made quite firm as part of the group by having the figures touching each other at various places (Figs. 17, 19, 20, and 21). My horse supports the man as the "Sulky" is too weak (Fig. 21). These points of contact can be out of sight (just as highlanders marching in line can keep their dressing by grasping each other's kilts with the finger and thumb). This way of supporting and balancing gives a very light and natural effect, in subjects of rapid motion.

Fig. 22.—Study of a Sioux Indian Chief, by Walter Winans. Awarded Silver Medal, Paris Exhibition, 1900

Photograph by the Author

A good example is the bronze group of running men, each figure only having the big toe of one foot on the ground and yet all firm, because they each have the combined support of all.

A certain amount of local colour can be obtained by having the base of a statuette of a different material to the object. For instance, a reindeer in dark bronze standing on a white, unpolished marble base, looks as if he were on snow. A Polar bear in silver on a piece of rock crystal looks natural, as the crystal resembles ice.

This sort of thing can be still further elaborated. A penguin of dark bronze may have its breast and the underpart of the wings of silver, and touches of gold where in nature there would be yellow markings. If the bird is placed on white marble or rock crystal, a great deal of local colour is infused.

For animals "mat" bronze is best.

Never let a visitor see any of your work in your studio, unless he is an artist. If you show it to him in the drawing-room placed on a pedestal, it does not matter in how embryonic a state the work is, *he* considers it as completed, and criticises it as a completed work; if he is a would-be connoisseur, he even admires it as Post-Impressionism.

But if you show it to him in your studio, especially if you have left a tool near it, it does not matter if you have pushed it to the utmost elaboration of finish, he will, after looking at it with a supercilious air, say, "That will look very nice *when* it is finished."

Above everything, if you value your reputation as a sculptor, do not let him see a head with any features incomplete, an eye only as yet indicated by a scratch of a tool, etc. He will at once fix on that point and say what a funny expression you have given the face.

If one of the limbs of a horse is only as yet indicated by a few touches of plasticine on its wire armature, he will say, "What a funny leg that is!" There is no use explaining matters, you are ever afterwards associated in his mind with the fact that you are the man who "sculps" horses with funny legs.

CHAPTER XX

WILD BOAR

THIS is one of the subjects in which artists generally blunder. They make a boar turning his head, looking, whereas a boar has very little play to his neck.

The characteristic of a wild boar (you can see it in the domestic pig) is to keep his head straight, and if he wants to look to one side he does not turn his head, but hops round on his forefeet until he is in a position to see. He is too short and stiff in the neck to turn it, except very slightly; this habit is one's safety in fighting him with a knife.

When about to rip with his tusks, he does not turn his head like a dog biting, but keeps his neck stiff, like a man in a stand-up collar, and watches out of the corner of his eye, and suddenly using his hind legs as a pivot, hops round on his forelegs, and then charges straight forward, with a sideways and upwards rip of the nearest tusk.

All forms of wild animals are worth studying by

an animal sculptor, and he will often find himself in quite new ground untrodden by other sculptors. I do not mean to include as profitable studies half tame animals in a Zoölogical Garden, standing in conventional attitudes.

The sculptor at Hagenbeck's got wonderful details in reproducing the gigantic extinct Saurians, as to how they moved, folded their wings, etc., by using their modern prototypes as models.

Some tropical lizards of small size are very near miniature reproductions of these gigantic extinct lizards, in shape, and by analogy, in colour.

It assists in modelling an animal like a wild boar (whose shape is disguised and modified by his bristles or hair), to study him when he is in his summer coat. A wild boar looks almost bare when in his summer coat, and one can study his anatomy, and then one sees how, after his anatomy is modelled, slight additions representing tufts of bristles give him his winter shape and appearance.

People will say how can this studying be done? Well, it is difficult, but by patience and taking trouble I have accomplished it.

CHAPTER XXI

DEER

IT is curious, but I do not know of a single good piece of sculpture of deer, except that by the German sculptor, Palsenberg (Fig. 4) and Lieberich's *Dead Fallow Buck*. All others are so very conventional as well as inaccurate. Many Germans and Austrians do good modelling as far as they go, but I mean a real fine piece of work.

The sculptors and painters of the Middle Ages must have had plenty of opportunities in the court hunting and shooting parties, especially as the game was driven into nets and slaughtered under the eyes of people sitting in stands, and yet the stag was always represented galloping with his hind legs straight out, his forequarters very high, and his neck bent backwards in an "s," with his head nearly to the withers, and nose in the air,—an absolutely conventional pose, whereas a hunted stag humps his back, carries his withers low and

his neck straight out with his head down to the ground, as the cave-dwellers drew him.

For any one taking up animal sculpture, deer are the best opening, as there is so little competition in that line, and what there is, is so bad.

I suppose though there is very little market for it in England, continental sportsmen are keen naturalists of deer and appreciate good work in sculpture.

Only the early peoples represented deer properly, but they lived amongst animals. The modern deer stalker has a man to spy the deer for him, load his rifle, crawl in front of him, take off the cover and safety bolt for him, and tell him to "wait till he is broadside" and then grallochs the stag for him, and load it on the pony for him, and drink his whisky for him; so the poor man does not get much chance to be a sportsman and learn the habits of deer.

CHAPTER XXII

COLOURS AND MARKINGS

THIS brings us to the fact that some animals, owing to their markings and colour being very conspicuous, and their principal characteristic and differentiation from an allied species, are not well suited for reproduction in sculpture. The tiger (Fig. 25) and the zebra in sculpture are apt to be confused with their kindred species, the lioness and the wild ass.

One of the greatest living sculptors of wild animals had to alter a pair of groups of lions and tigers, respectively into lions and polar bears, as otherwise the tiger group would have looked too like a group of lionesses.

A polar bear is so different in both shape and proportions to a brown bear that want of colour does not cause confusion.

Jaguars and leopards look too like lionesses without their spots, and the zebra and quagga too like wild asses, to be good subjects for sculpture.

The giraffe and the okapi, although so conspicuously marked, are *also* so peculiarly characteristic in shape that the absence of marking in sculpture does not matter.

The Japanese overcome the matter of stripes in their bronzes by incising the stripes and even cross-batching them, so that the stripes appear dark, but this destroys planes and modelling (the chief charms of sculpture), and turns it into a mere convention, to carry which to its logical conclusion, the shading should be done as in Heraldry where various "Tinctures and Metals" (as colours are called) are represented by shading at different angles. For instance, a maccaw would have horizontal shading on its blue feathers, vertical on its red, and spots on its yellow; and a book of conventions would have to be carried when looking at sculpture.

Cain has very cleverly indicated the "eyes" on a peacock's tail in Fig. 25.

Levy et ses fils

Fig. 23.—The Lion on the Monument to Emperor William I., Berlin

CHAPTER XXIII

CO-OPERATION

I DO not think such good work can be accomplished by two sculptors working together, as can be attained by either working separately. No two men can see with the same eyes, or think with the same brain, and therefore the work is not harmonious as a whole, but its various parts are discordant and clash.

Even in copying, and not creating, two men cannot work together. If a man engraves my picture, he does not make my "points," as actors say.

A manuscript copied in alternate paragraphs, by two different men, would not look symmetrical, the handwriting, strength of strokes, etc., would differ, and it would not look as well as if the whole was written by one man, even if an inferior penman.

It is the individuality of technique, as much as of ideas and of temperament, which prevents two

sculptors from producing a satisfactory work in common. Each man has his way of modelling or painting a drawing, which is as distinctly his own as his handwriting.

Go to a gallery where pupils are copying the same picture. Each is handling it differently, although each is trying to copy it. Even the tone and colouring vary, which seems to confirm my contention that colours make different impressions on different people, as few are entirely free from colour-blindness.

If one goes into the Royal Academy one can instantly know, amongst the constant exhibitors, by whom a picture is painted, without any need to look at the catalogue or name in the corner.

Quite independent of the subject, a man's brushwork, colour, or even the shape he gives his objects are as plain to recognise as his signature. One instantly recognises "Old Mustard Pot's" "Analine Dies" colouring.

CHAPTER XXIV

ACCESSORIES

THE addition of easily broken accessories, such as reins, whips, rifles, etc., requires careful treatment. In small statuettes, especially, these very soon get broken or bent, and then have a ridiculous appearance. A figure may be shooting with a rifle, the barrel of which is bent like a fish-hook. Such things not only get broken, but, if servants in dusting happen to break them, they generally "put them right," wrongly.

By the exercise of a little ingenuity it is often possible to model fragile things in places so that they are protected, or even model a part or the whole of them in bas-relief and thereby make them unbreakable.

An equestrian statuette I modelled fourteen years ago, and had cast in bronze, has the reins perfect yet, in spite of the fact that it is standing on a mantelpiece where it is dusted daily (Fig. 20). But the reins of a neighbouring statue are broken

and the stirrup leathers twisted round the horse's neck.

I managed it in this way; the horse has his head down between his knees, backjumping; the rider, who is attempting to mount, has the hand holding the reins on the raised pommel of a Mexican saddle.

I modelled the reins in relief from the pommel down it of the saddle, and then down the horse's shoulders. A short part of the reins from the bit to the neck *had* to be free, but they are guarded by the horse's legs on each side of them, which protect them so thoroughly that the housemaid cannot get at them with her duster, and break them off.

This free part of the reins might even be omitted as, the horse's nose being between his legs, the absence of reins here would not be noticed.

I really think, in a large, serious piece of work, reins, whip, etc., would best be omitted, and the work done as the classical sculptors did, who portrayed the movements of drawing a bow or taking an arrow over the shoulder, by making the figure merely hold a few inches of bow in the left hand, at the same time drawing an imaginary arrow with the right.

This gives all the movement required and there is no danger of making it ridiculous by a bow bent out of all shape, the string broken at one end and twisted round the bow and the arrow, as after it has had a "spring cleaning."

A properly modelled horse and horseman will show that the man is restraining the horse just as plainly without any bridle or reins, as it would if the horse had a Chifney bit and a gag snaffle on and three sets of reins. Housemaids can dust such a group as much as they like, without making it ridiculous.

If your work must have delicate details, on account of its subject, it ought to be always under a glass case. A flattened glass, half globe, such as is put over clocks, is very inartistic and has all sorts of reflections. It is best to have four flat glass sides and a flat top fitted together without a metal or wood frame, but merely a gilt angle plate at the four upper corners, and the bottom edges of the glass plates fitted into grooves in the base.

When modelling an equestrian subject, on a small scale, it is advisable not to put reins in the hands, but to send the founder a careful drawing showing how they are to be held (Fig. 9).

For the various stages of casting in plaster, it is better, still, to keep the casts without reins, etc., and only have them put in the final cast in bronze. The founder has to take away the reins in order to cast the hand, and if the hand is on a small scale, the modelling of the fingers is destroyed thereby.

Be sure, however, to send careful drawings for the final casting in bronze (or better still photographs from nature), showing exactly how the reins and whip are to be held, also all details of bit and reins, and also how the foot is put in the stirrup.

How many equestrian statuettes one sees where the founder's fitter has put the stirrups with the leather twisted the wrong way!

A man who is not a horseman always *assists* the rider to mount by pushing his foot into the stirrup, the leather twisted the wrong way.

An amusing incident happened in my experience from the founder's fitter knowing a little about horses, but not quite enough. I had made a very poetical and sentimental group in which a female Centaur figured, and had taken great care with her hoofs, which I had modelled from a mare that had never been shod, and which, in consequence,

had wide feet with perfect frogs, no contraction or thrush.

I gave especial instructions that I wanted the work as carefully cast as possible.

It came back with the Centauress's feet rasped and pared in the most approved village blacksmith style, and *shod!* Her forefoot, which was lifted in a graceful Russian dancer style, was shod with a heavy cart-horse shoe, with long calkings.

Sculptors of the classical school always have their horses in equestrian statues shod in cart shoes with long calkings, both in front and behind, like Percherons for hilly work on cobblestones (Fig. 16).

Jewellers, till within the last few years, made horseshoe pins and lady's horse shoe jewellery always in heavy cart-horse shoes. I fancy I was one of the first to have the racing plate and trotting shoe copied for jewellery.

CHAPTER XXV

WATER, FOLIAGE, AND ARMOUR

IT is sometimes desired to portray an animal half immersed in water, as a moose browsing in water-lilies up to his knees in a lake, or swimming; a wild boar looking out of a thicket, etc. In all such cases the base must be at least as deep as the length of leg immersed, else the effect is that of legs cut off.

If modelling entirely in a soft material, the shape of the animal is easily, and almost inevitably, lost, in modelling ripples or leaves partly covering the animal; in scooping out billows, one accidentally and unknowingly scoops out bits of the animal.

By my method of having the animal, after it is modelled, cast in plaster, and *then* modelling the ripples and foliage in plasticine, the animal cannot be spoiled.

When modelling skin, hair, and fat on the animal cast in plaster, a plasticine of the colour of the plaster is preferable, for it shows the effect of the finished work; otherwise what looks a great con-

Levy et ses fils

Fig. 24.—The Lion on the Monument to Emperor William I., Berlin

trast of volume or shape when put on the white plaster in dark plasticine proves, when it is recast all one colour, hardly noticeable. On the contrary, when modelling foliage, etc., against the animal, a contrast of colour in the plasticine is an advantage, as it enables you to keep your modelling and form of the foliage and ripples distinct from the form of the animal.

In the instance of the moose in the water amongst water-lilies, you can even, with advantage use a different colour plasticine for the lilies and leaves from that which you use for the pool of water, the ripples on it, and the water dripping from the moose.

In this way you do not get confused, and find the most beautiful, complicated, and subtle effects (often accidental and unexpected) when the work is cast all in one colour in bronze—in fact, effects too complicated and impossible to secure if you had modelled all in one colour.

I had an unintentional compliment paid me by a critic who objected to a work of mine, because it was too laboured and "had an absolutely bewildering amount of detail." If he had looked at the work when in progress, he would have seen there

were very few and simple details, but his criticism showed me that I had obtained the effect I desired, which was "an Indian on his pony covered with endless head embroidery and feathers" (Fig. 22).

A horse with a fly net over parts of his body can easily be modelled by my method, and also one in armour. Armour has involved curves of its planes, and if it is modelled whilst the horse is in clay or plasticine, difficulties are almost sure to arise.

Suppose the armour on the breast is not curved enough, you take a little out of the centre of it, so as to increase this curve, and find you have taken a piece out of the horse's chest. Under such circumstances you have to take off this piece of armour, and remodel the horse's chest.

But if the horse is cast in white plaster first, by using coloured plasticine you know the moment you come to the plaster, and can judge how much to apply to represent the thickness of the armour. You cannot spoil the shape of the horse.

Drapery on a human figure can be modelled the same way, and it is the method usually adopted in the case of the veiled busts, which people who are not sculptors think so wonderful and wonder at.

CHAPTER XXVI

IDEAS ON ART

VERY curious ideas concerning art are entertained by the general public. Labour-saving inventions in machinery or business are to them "most ingenious" or "very clever," but in art they are at least "not quite fair" if not a distinct fraud.

I have come across men who seem to look on art as though it were a game like golf with rules calling for strict observance or like those Chinese carvings of rings and perforated balls interlaced one inside the other, which are not "fairly carved" if they are made of joined pieces, but must be carved all out of one piece.

These art critics even object to a marble statue being "pointed" from the plaster, but consider it must be "carved" (their expression) from the marble direct, by the sculptor, as one peels an orange to get at the pulp. In the same way a bronze must not be cast from the plaster, but must

be filed and rasped direct from a solid block of bronze.

In modelling groups, I have the base made to take apart and to put together again, dovetailed, so that, when I work at the sides of two animals where they are almost in contact, I can separate them, and work at my ease at parts otherwise inaccessible.

A man (of course not an artist) saw me doing this and was shocked. He said "How unfair!" He seemed to think I ought to stand on my head to work at these parts. He would have been still more shocked, if he had seen the way I have my modelling stand turn on trunnions with the base of the model clamped to it, so that I can turn the model upside down and work at my ease on the underparts.

I suppose that according to him the model posing for a painting of "Icarus Falling Headlong" must hang head downwards for days instead of the canvas being turned upside down.

Of course all means like this, to assist working, are legitimate. Also if there is a recurring pattern, it would be ridiculous to keep modelling the same thing over and over again. Instead a

piece is cast several times and these casts are joined.

I bought a very fine statuette of a goose girl by a French sculptor. Around the base is a procession of geese in bas-relief. The sculptor modelled only three geese in different attitudes, but by varying their order (only three can be seen at any one time on account of the curve of the base), they all seem to the superficial observer to be individual.

But what is *not* legitimate or fair, is in fact, a fraud, and is perpetrated when anything is made to look well for a short time only. For example, to balance the statue on such a fragile and insecure base, that, although it will stand, if not touched or moved, it will collapse and break, if any one buys it and takes it home, is not honest sculpturing. Again, if a picture be painted in such fugitive colours that after it is bought, it fades in a few days, that is "not fair," to put it mildly.

Turner is said in one of his pictures to have put a blob of red sealing-wax for the disk of the sun, because he could not get any pigment bright enough. This was perfectly legitimate. But it would not

be legitimate for a man to cut a round hole in his canvas and put a light behind it and pretend the light was painted, or to paint part of his picture in oil colours, to give it greater depth, and exhibit it at an exhibition restricted to water-colours. On the other hand, if the exhibition was not restricted to any one medium, he could, to my mind, quite legitimately paint it as follows: Sky and clouds, water-colour; middle distance, pastels, etc.; foreground in oils.

Some years ago an artist attracted much notice by the way he caught likenesses in caricature by just a few lines and dots. I was discussing this with an artist who told me that what looked like the result of a few careless touches was the result of very conscientious work. This artist, he said, made several most carefully finished portraits in soft pencil, till he secured a satisfactory one. Thereupon he went over in India ink just those lines absolutely essential for the likeness, and erased all the rest with stale bread.

Only one who is an artist himself can understand the self-denial and self-sacrifice necessary to destroy work which one has taken such pains to perfect.

A few days later, at a dinner, this artist's name cropped up, and I told my neighbour the method pursued by this artist. I was overheard by a man opposite, who got very indignant and accused me of attempting to belittle a great artist by thinking him capable of resorting to "such a mean, contemptible trick."

Eliminating the non-essentials after finishing, often improves one's work, and gives breadth, repose, and style, especially to work on a large scale. The larger the work, the simpler and more elementary the planes should be.

Still, a mass of detail gives a rich effect on a monument, especially if confined to the accessory groups, and contrasts well with the simplicity and broad planes of the principal figures.

The French sculptors employ this with very good results. As I have already said, a mass of detail can be suggested without actually modelling every detail; in fact, if well done, suggestion with an occasional very finished detail, looks more detailed than if every bit is fully modelled.

CHAPTER XXVII

ALTERING NATURE

A WRITER of the "Sculpturesque School" wrote somewhere that "a lion must not be modelled with a lion's proportions, but must be made half as wide again 'to make him look strong.'" He evidently confused fat with strength. Imagine this man thinking he could improve on Nature! By making a lion broad in the chest, he takes all the cat characteristics out of him.

The best lions in sculpture are the four round the base of the *Emperor William* monument in Berlin; they are real wild fighting lions, (Figs. 23 and 24). I do not think they are by the same sculptor as the rest of the monument.

Compare them with the Landseer lions at the base of Nelson's monument which are obviously reproduced from a zoölogical garden lion lying in his cage after feeding time (Fig. 6).

It is curious what comic effects even the greatest artists often quite unintentionally produce when

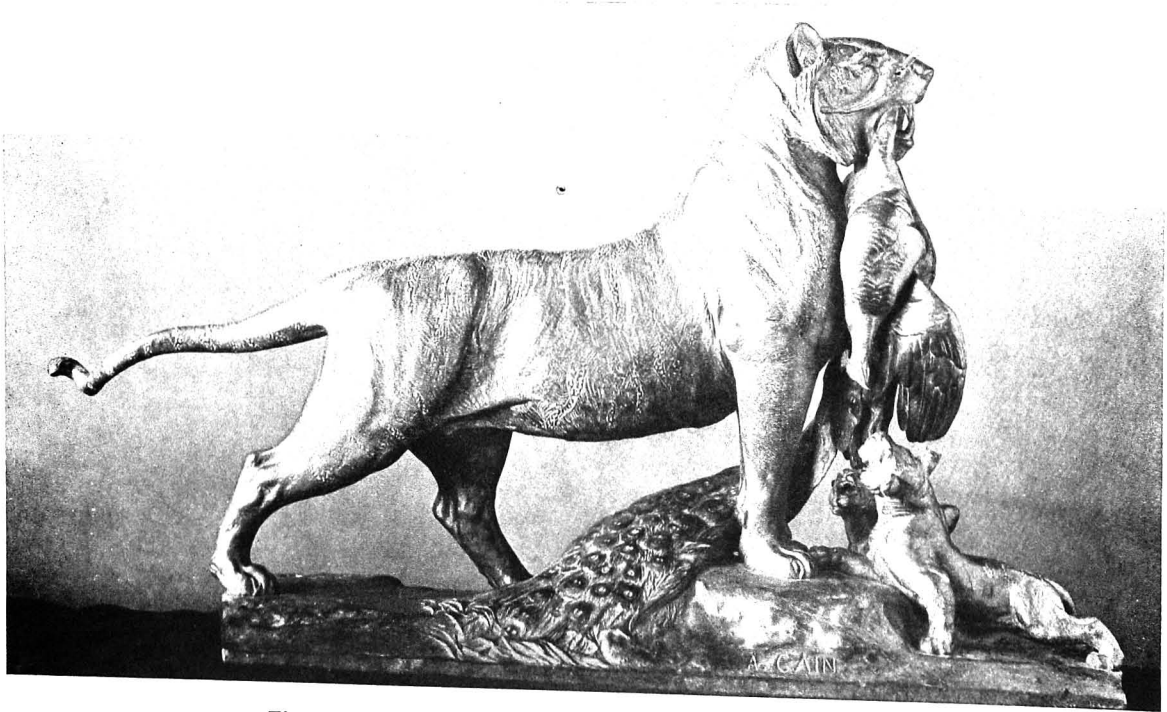

Fig. 25.—Tigress Bringing Peacock to Young, by A. Cain

Photograph by the Author

they attempt lions. The lions of the old masters, Rubens for instance, have comic old men's faces. Look at the ridiculously supercilious expression of some of the stone lions in London.

All this comes of trying to be sculpturesque, instead of keeping to nature. An angry lion, or even a wild cat, is grander and more dignified in his expression of fury than is one composed by the sculptor's imagination. I saw a wild cat, newly caught, in a cage, which a lot of "Hooligans" were teasing, till the keeper came and stopped them. The animal was the incarnation of fury for a few moments; then realising it was helpless, he turned his back on the jeering crowd, and, in the most dignified way, put his face in the corner where it could not be seen. No man could have shown more dignified contempt under insult.

He died a few days later, of a broken heart, when he found he could not escape. People call this "proof of a soul" in a man, but "merely instinct" when the sufferer is "only a cat."

CHAPTER XXVIII

FUR AND PHOTOGRAPHY

HAIR and fur are very difficult to treat in sculpture. In some animals the fur and hair are part of the form and are included in the planes. The hair round the neck of a stag, during the breeding season, starts in a fan-like ruff from his chin, which meets the long hair from his shoulders. The chamois in winter has a ridge of long hair along his spine called "the beard," which forms a characteristic of his upper outline.

These masses of hair need only indicating in large masses at their junctures and edges, and are really part of the planes. But there is hair and fur which grows as a covering of forms below it, and this is the most difficult thing of all to express in sculpture.

Some conventionalise it as did the Egyptians, Assyrians, Greeks, and Romans (Figs. 10 and 13); some of the moderns frankly ignore it and do as a sculptor advised me to do: "If you can't model a

thing, give a few touches and leave people to think you could but have not taken the trouble to do it. In fact never let people *see your limit*, but just when you get to your limit, leave a ragged touch and call it impressionism."

That the human hair *can* be expressed in sculpture, if the sculptor has the requisite skill and patience, is seen in Mr. Bruce Joy's work. He even distinguishes between dark and fair hair, and dark and light eyes, by the general treatment and depth of his shadows.

Photography, though very useful for many things, should never be relied on for proportions, and often not even for form. The lens always distorts, especially in foreshortened objects, and objects near its edge.

A photographer took a series of photographs for me of stags I had shot. One was very foreshortened, and was in consequence very distorted. The nose, which was close to the camera, looked as broad as that of a moose; the width between the eyes, so characteristic of a stag, was narrowed owing to its being farther from the camera; the forelegs were too long with enormous feet; the hind legs were only half the length of the fore ones.

I knew this would be the result of the photograph, but in using it, I made allowance for all these distortions, and, of course, had my measurements from the real stag. I let the photographer make what use he liked of the negatives, and he sold quantities.

Some years afterwards I saw a deer-stalking picture, with this (my stag) in the foreground, copied literally with all his distortions, the body looking like a kangaroo *reversed*, enormous shoulders and head and no quarters. One can always recognise literal copies from photography.

In conclusion, I would warn all animal sculptors to keep the proportions, anatomy, and habits of the animal they are modelling correct, and pay no attention to what any one says as to making it more sculpturesque by altering to conventional ideas. There is only one sculptor who is absolutely correct in plane and outline, and never makes a mistake; that sculptor is *Nature*.

THE END

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