



Short Course In Anatomy For Carvers

This handout is based on Will Sharp's *Day 8 - Short Course In Anatomy For Carvers* (4 Feb 1997) taken from his *Nuts and Bolts of Wood Carving*. This series of carving topics appeared as email on the Woodcarvers Listserve and later as a series of 14 articles on the Woodc@vers-ezine, an electronic magazine. To view these on the World Wide Web, point your browser to <http://www.WWWEzine.html.com>.

Introduction

The following is a very short course in anatomy for carvers covering both the human form and animals. It is in a general format and all of the rules are meant to be broken. This chat is meant as a guide only. In some small way, perhaps, we can avoid all of those flat-faced, square, carvings of both humans and animals.

Animals

I will start with a short animal course. It has to be short and it has to be general simply because there are approximately 12,000 animals (mammals) in this world and to do more than generalize is next to impossible.

No animal has a straight backbone. The spine will curve down from the head to the tail. Almost without exception, the bodies of animals will be about twice as long as it is wide i.e., it will fit into a horizontally drawn rectangle (without the head, neck, and legs).

The ribcage of most animals is the largest part of the animal and takes up a half or more of the animal bulk and, usually, the forelegs are shorter than the rear legs.

Most all animals will walk on their "fingers" and "toes" rather than on their "hands and feet". Most animals cannot retract their claws (exception is the cat family, except the Cheetah).

To visualize the animal nose, take your own nose and turn it up until the nostrils point forward.

Generally speaking, all animals (humans excluded) have ears that move continually. When you carve, express this movement. It will make your carvings more interesting. To visualize the look of the animal ear, take a toilet paper tube and cut one end off at a sharp diagonal and the other end a short diagonal. The short side is the head side.

Most animal eyes have the appearance of slanting up from the inside out i.e., from the nose to the ear, the eye slants up.

When you carve animals, try to avoid static positions. Allow the ears to be little different in position. Don't treat animal legs as table legs. Allow the legs to be placed a little different from one another. These slight adjustments will allow your carvings to come alive.

The Human Animal

We will begin with the general proportions of the classic male and female figure.

Male and Female

Both male and females are eight (8) heads high: From the top of the head to the chin is one head. From the chin to the breastbone (direct line from the armpits) is the second head. The third head is from the breastbone to the navel. The fourth head is from the navel to the crotch, and the fifth head is from the crotch to the middle of the upper leg. The sixth head is from the middle of the upper leg to the knee. The seventh head is from the knee to the calf and the final head is from the calf to the toes. From the armpit to the elbow is one head and from the elbow to the wrist is one head. From the wrist to the tip of the fingers is approximately 3/4 of a head.

The basic difference between the male and female figure (besides the obvious) is that the female's head is usually smaller (and therefore the figure is shorter), the shoulders are narrower and the hips are wider

Body Proportions

The change in body proportions for children is four heads for a 1-year old, six heads for a 7-year old and seven and one half heads for a teenager.

The "old" method of checking the body proportions is that a body will fit perfectly into a circle if you lie on your back and with your navel as center spread your arms out and up and your legs wide apart. The circle will touch the finger tips of each hand and the sole of each foot. A second method was theorized that if you are standing with your feet together and your arms outspread at shoulder height to form a cross, you will fit perfectly into a square.

The Head

Now we will be a little more specific and talk about the head for both male and female. The eyes are halfway between the top of the head and the chin. If we divide the distance between the hairline and the chin: The eyebrows and the top of the ears is one-third the distance from the hairline. The bottom of the nose and ears are one third again from the eyebrows. From the bottom of the nose to the chin is the final third. If we divide the distance from the tip of the nose to the chin again by thirds: The first third covers the distance from the bottom of the nose to the center of the mouth. The second third covers from the center of the mouth to the center of the chin and the final third covers the from the center of the chin to the bottom of the chin.

If we divide the head into 5ths from side to side (from ear to ear): it is one fifth from the side of the head to the side of the eye. The eye itself is the second 5th. From the inside corner of one eye to the inside corner of the other is another 5th. A 5th for the second eye and a 5th from the outside corner of the eye to the other side of the head is the final 5th. The corners of the mouth fall directly beneath the center of the eyes. The base of the nose (nostril flare) is one eye width.

The basic difference between the male and female is that the female head is more rounded and not as squared off as a male. The upper lip of the male is narrower than a female and hairs in the eyebrows are more evident in the male than the female. The changes in the hairline as we grow older is much more noticeable in the male than in the female. The size of the head, between the ears, is usually smaller for the female.

For children, the facial area is smaller and the cranium extends out further in the back. Most children's noses will turn up on the end and the differences between male and female features is less defined.

The Face

Now that we have the *boiler-plate* out of the way, I will talk a little about carving the human figure and more specifically, the proper head.

Stand on a chair and look down on a friend, neighbor, your wife or one of your kids. Draw an imaginary line from the tip of one ear to the tip of the nose. Then another line from the other ear to the tip of the nose. You will see a 90 degree angle. What I am telling you is that the face is rounded completely from the tip of the nose all the way around to the ears. There is not a flat spot anywhere. Look at your own model (your face) and you will not see one flat plain. Round your head!

If you stand alongside your model and look at the profile you will see that the upper lip (where it joins the nose) starts in the middle of that nose. In other words, a full one half of the nostril flare is behind this upper lip line. You will also notice that the

dental mound (that portion of the skull that holds your teeth) is rounded all the way around the mouth and the dental mound itself will protrude a little further out on a female head than on a male head. The upper lip is usually sticking further out than the lower lip to allow for a normal *overbite*.

Now look at the position of the ear. The front of the ear is an extension of the back of the jaw. In other words the front of the ear starts at the very end of the jaw line. The front of the ear and the jaw are exactly in the center of the head. The ear will slant a little back from front to rear.

If you look at the profile of your finished head, you should be able to see the eye-mound, eye and the nostril of the nose, but not the far eye. If you don't see the nostril, the bottom of the nose is too flat and needs work. If you see the opposite eye, the eye sockets are not deep enough or the face is too flat. Round those corners, round the face. You should be able to draw a smooth curve from the tip of one ear over the cheekbone and over the tip of the nose and on around to the other ear. If you are doing a caricature, you may not be able to do this, but your head should still not have any square corners, unless, and this is a big unless, the carving is designed that way.

The Hands

Let me say a couple of words on carving hands. Hands and fingers are not square. The tips of the fingers, the joints of the fingers and the palm of the hand form smooth curves from finger to the next. If we start at the tips and draw a line from tip to tip we will inscribe an arc. From the first knuckle to first knuckle we form an arc and so on. The top of the thumb (as it lies along side the hand) cuts the arc formed by the first joint of the fingers from the palm. The fingers of the hand ARE NOT the same length. The *pinkie* is the shortest, the *pointer* is next, the ring finger is next, and the middle finger is longest. Please, no squared off fingers.

Now, all that I have told you so far, is nothing more than guidelines. All rules are meant to be broken and, in the case of the human figure, it happens everyday and in every way. As far as I know there is no ideal human figure in existence. Of course, we violate the guidelines on purpose whenever we do caricatures.

Caricatures and the Human Features

When we do caricatures we represent the human form, but we distort it to get a story told or to make a point. In other words, to have fun with it. When we do caricature, we will usually set the body height to five (5) to six (6) heads rather than the eight (8) in the classic form. We will distort features and forms, but we will still stay within the confines of a *good* form.

When you do caricatures, keep the general rules in mind to avoid distortions that distract from the figure and upset sensibilities. If the subject does not convey the general characteristics of the classic form, the eye of the observer (or potential buyer) will reject it out of hand. He or she may not even know why they do not like it. It's a little like doing an arrangement of fruit or painting a picture and using an even number of pieces in the art piece. Observers will reject without knowing exactly why. The reason is quite simple: In nature, very rarely does anything grow or exist in even groups. We like the regimen of nature even though it may be subconscious.

I cannot tell you how many heads I have done that are flat faced and how many bodies I have done that are square. Round, round, round and then round it again. Take off those corners!

I have not, in this little chat, talked about those little things like the hanging of clothing and those mean little creases we don't know where to place, but maybe after I finish the Dailies, I will.

Tip of the Day If you are a realistic or caricature carver: Find yourself a mirror and use it. Your model works cheap and is extremely good looking.

Keep Those Chips Flying!

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