



*Hina*

**Deborah Butterfield, American, born 1949**

**1990-91, Bronze, 80 x 28 x 112 inches**

**Collection of the Modern Art Museum of Fort Worth, Fort Worth, Texas**

**About the Artist**

Deborah Butterfield's life in Bozeman, Montana, is very much involved with horses. She trains horses to compete in the demanding sport of dressage (dre-sazh). During dressage competitions, riders guide their horses through a series of walk, trot, and canter movements without any obvious use of hands or reins, directing the horse mainly with leg and seat signals. The horse's movements must be smooth, precise, and graceful, and the spectators should not be able to see the rider's signals to the horse. During the competition, the movements are performed in a specific order.

Two or more officials seated in various places around the ring judge the contestants. The judges give the riders points for the performance of each movement, and they also give penalties for errors. When the performance is finished, the points for all contestants are totaled and the one with the most points wins the competition. The techniques used in this type of competition were originated by military officers who rode horseback. Because they had to use their hands to hold weapons, they gave signals to their horses with their legs and by shifting their body weight.

Since Deborah Butterfield develops an extremely close relationship with the horses she trains, she understands these animals in a way that only someone deeply involved with them can. For more than 15 years horses have been the only subject of her sculpture. Butterfield has built horses from many materials, from mud and sticks to rusty scrap-iron and bronze. She has used automobile parts, parts from motorcycles and other machines, and a variety of scrap-metal pieces.

**About the Art**

For this sculpture driftwood pieces were gathered and then cast in bronze to be assembled in the form of a slightly over-lifesize horse. Horses have been a traditional subject of sculpture in the history of art. The horse has been important to man for travel, warfare, labor and sport. Butterfield's horses differ from many of the equestrian statues seen in

city parks or plazas. Her horses are not ridden by heroes. Hers are riderless and seem to represent a gentler, more domesticated animal. They encourage us to think about the possibility of a relationship with a nature that is not threatening or imposing, but is simple, noble, and compatible with humanity.

### **Additional Information**

Sculptures are three-dimensional works of art. They have height, width and depth. Paintings and drawings, on the other hand, are two-dimensional works having the two dimensions of height and width.

There are three major ways to construct sculptures:

1. Additive processes,
2. Subtractive processes, and
3. Casting.

Modeling and assembling are both additive processes. Modeling is often done with clay, and as long as the clay is wet, the sculptor can add on more and more clay to build the form desired. Clay can be pinched outward, scratched with sharp tools, and sections can be cut away. Assembling is accomplished when individual pieces are put together to form the sculpture.

Carving is a subtractive process and involves removing material until the desired form is produced. Wood and stone are some of the common materials used for carving sculptures.

Casting is the method of producing sculpture that was used for Butterfield's *Hina*. Metals, especially bronze, are the materials often used in casting. Bronze can be heated until it is an extremely hot liquid and can be poured into a mold. *Hina* was cast by the lost-wax method, a complex process that involves several steps. The basic steps in casting are as follows:

1. The sculptor makes a full size model of the intended sculpture in clay or plaster.
2. A coat of synthetic rubber is used to make a mold of the clay or plaster piece produced in step 1. The rubber is applied to the model, and when removed makes an accurate mold of all the details of the original piece.
3. The rubber mold is now an exterior mold of the beginning model. It is coated inside with wax about 1/8 of an inch deep. The wax layer is the exact shape and thickness at this point that is desired for the final metal sculpture.
4. The hollow space inside the wax layer is filled with a plaster mixture that is allowed to dry. The rubber mold is removed from the wax layer, and many wax rods are attached all over the outside of the wax model. In a later step, when the hot metal is poured in, these rods will become channels through which the melted materials will flow out of the mold.

5. The wax model, with its wax rods and plaster core are covered with a layer of the same plaster that was earlier used to form the core, and this whole piece is placed in a kiln. The heat of the kiln melts away the wax (lost-wax), leaving an empty space between the inner plaster core and the outer layer of plaster. The molten metal is poured into this space. The metal takes the shape of the space once occupied by the wax. Sometimes it can take several days for the hot metal to cool enough to be handled.
6. The inner and outer layers of plaster are removed, the rough spots on the sculpture are filed away, and the final piece is ready to be cleaned and polished.

For the sculpture *Hina*, instead of a clay or plaster model (step 1), Butterfield used pieces of wood to make her full size model of the bronze sculpture she wanted to produce. When the rubber (step 2) was applied to the wood, it made a mold that showed the exact texture of the wood. Therefore, after the sculpture was cast, the finished piece had the same texture as the original wood.