

Design and Cars

The purpose of my AHS Capstone this semester is the investigation of artistic design and how it relates to the styling of automobiles. In the course of this work I came to the conclusion that it is not unreasonable to view automobiles as examples of sculpture, when seen from the standpoint of design. A simplistic definition of art is that which has form and content¹. Form is made up of the elements of art, the principles of design and the physical materials. An artist uses combinations of color, value, space and line (elements of art) as well as balance, contrast, emphasis and proportion (principles of design) along with a physical medium to create artwork.

Content, on the other hand, is defined by what the artist meant to portray, what the artist did portray and how people react to the art. The aspects I focused on this semester are largely contained in the form, however it is impossible to fully divorce the content from an understanding of any piece of art. Sculpture in its broadest definition is any three dimensional piece of art. My intention with this project is to evaluate an automobile as a formal sculpture and investigate whether this approach is relevant and meaningful. I do not intend to argue that cars should be treated as works of art, but rather to explore the use of tools and methods typically taught as part of studio art curriculums applied to a less traditional subject. You have not addressed comments from previous draft in this section.

Of course, the factors that make a piece of art successful are quite different from those that make up a successful car design. Cars are by nature a product, and as such the

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success of a model is largely determined by its sales. These sales are strongly influenced by the design of the car, but elements such as reliability, performance and consumer perception are also very important. Despite recognizing this, I have chosen to ignore these externalities and evaluate an automobile purely as a static piece of sculpture and, as much as possible, solely in terms of form. In order to do this, I will be using the traditional tools of formal evaluation. First I will demonstrate these tools on a traditional sculpture, then I will apply them to an automobile. My goal is to show that the tools of artistic design and critique are useful even when applied to non-traditional pieces.

The Bronco Buster



Figure 1: *The Bronco Buster* By Frederic Remington

The sculpture I have chosen to evaluate is *The Bronco Buster* by Frederic Remington. This piece is the end result of fifteen years of refinement and permutation by the artist. The original piece was cast in 1895 while this example dates from just after his death in 1909. This piece is much larger than the previous ones, over two feet tall and nearly three feet long. The subject is a cowboy riding a newly saddled stallion. The subject floats free of context, presenting a dynamic and lifelike view of a moment captured in time. The sculpture exudes power and wildness both through its content and its form.

In exploring the overall form of a piece, the first question asked is “Where are the gestures?” The primary gesture in this piece is the curve of the horse’s body. The gesture starts at the rear hooves and extends up the body of the best, bending back towards the base plane at the neck. The secondary gesture follows the wave of the cowboy. It originates where his body meets the horses and extends up his torso and out his right arm. This can be seen in the image below.

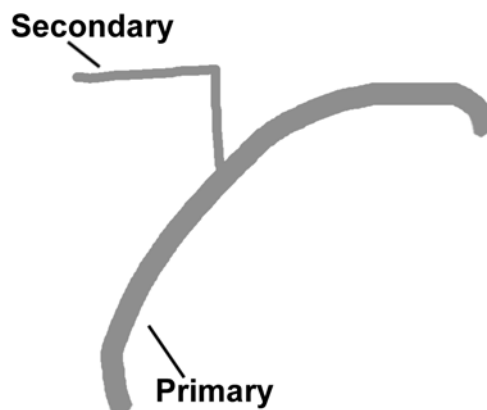


Figure 2: The primary and secondary gestures of the piece

The dominant form in the piece is the body of the horse. It is the largest element and the most dramatic. The subdominant form complements the dominant, and in this case is the body of the cowboy. It expands the dimensions of the piece and helps to define and expand the character of the dominant form. The subordinate form is the cowboy's arm. It introduces both a third element and another axis that expands the piece. This form is perpendicular to the major movement of the horse and complements the existing forms. A vastly simplified version of the piece makes these relationships apparent.

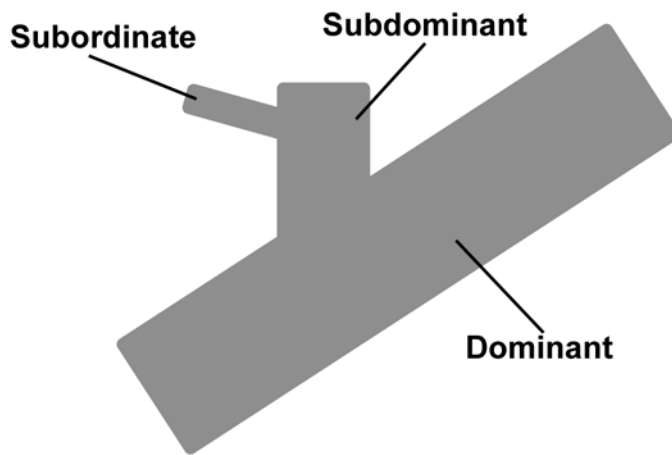


Figure 3: The forms of the piece

In addition, this piece does an excellent job of activating the negative space around it. Because this piece stands on its own without context or background, the negative space that surrounds it is supremely important. The space under the horse in particular contributes to the dynamic feeling and tension of the piece. The unusual top heavy positive volume of the piece furthers this feeling of tension, making the piece more visually interesting. The space between the rider's left arm and the horse is particularly active, seeming more a part of the piece than a gap. The way it is surrounded draws the

viewer's eye into it and provides no exit. It helps define the separation between the dominant and subdominant forms in the work. The three forms are also placed in such a way to make the piece visually appealing from all angles. The forms are easily distinguishable and have their own character for any point of view around the piece.



Figure 4: The negative space in *The Bronco Buster*

The tension present in this piece is very important, because it is this property that creates visually interesting forms. Tension in artistic works is a point of increased awareness, a feeling that something stands out or is important². The entire *Bronco Buster* is a study in tension. The horse is frozen in an unstable position, moments from crashing back to earth, while the cowboy steadies himself, providing an anchor for the wild movements captured in that moment. The subordinate form extends perpendicular to the

² Hannah 35.

major gesture of the piece, creating tension in the right angle. The studied look on the cowboys face opposes the wild thrown mane of the horse. The foot out of the stirrup, the fanned tail and the coil of rope trailing on the ground both contribute in their own way as well. These tensions are spread throughout the piece, forcing the viewer's eye to move from the largest examples to the smallest, taking in the whole piece slowly. They contribute a lot of what makes this such a compelling and evocative piece.

The physical medium of this piece is cast bronze, which yields several interesting properties. It is because of this material choice that the piece is physically possible. A weaker material would not have supported the weight of the cowboy and horse on two thin legs, especially with a large portion of the mass cantilevered so far out. The bronze also gives a uniform color and reflectivity to all the elements of the piece. There is no differentiation by color or surface finish. This means that the volume of the structure is the only differentiation. The minute detail in this piece comes into play here, expressing the differences between saddle, pant leg and horse skin. In addition this homogeneity creates a visual continuity across the entire piece. There are no discrete parts or join marks. The piece is a visual whole, only the form gives it differentiation and meaning.

Ford Mustang



Figure 5: The original 1964 Mustang and the 2004 Concept.

(from fordforum.com)

The latest iteration of the iconic Ford Mustang is a revisiting of the styling of the original car, introduced in 1964. The Mustang has been described as the quintessential American muscle car, and has attained the status of cultural symbol. The Mustang was also the first car to become a movie star. The 1968 film *Bullit* elevated the car's already huge popularity to cult status. For many baby boomers, the Ford Mustang was either the first car they drove or the first car they wanted. This popularity has not worn off in the ensuing 40 years. The newly restyled Mustang is as popular as ever, delivering aggressive styling and muscle car performance at a reasonable price³. Mustang enthusiasts can be found all over the United States gathering at classic car shows,

³ <http://www.edmunds.com/ford/mustang/2007/review.html>

meeting in restoration clubs or just enjoying their vehicles on the open road. Despite its popularity, the mystique of the Mustang has not diminished⁴.

A car is designed very differently than a piece of art. The lead designers generally work as part of a large group, involving engineers, sales and marketing as well as artists to create a design. Throughout the process prototypes may be built so that the design can be examined at full scale. There is often extensive market testing, yielding input from prospective customers, as well as ideas from executives for how to make a car more saleable. Manufacturing engineers may approve or disapprove of specific components or ideas because of the factory capabilities. Finally, government regulations dictate many of the required features and the restraints on the car's shape, size and materials. All of this severely restricts the design space of the car in question.



Figure 6: 2005 Ford Mustang (left view)

⁴ http://findarticles.com/p/articles/mi_qn4155/is_20040906/ai_n12557279



Figure 7: Ford Mustang (rear quarter view)

Again, in approaching the Mustang, we will use the same tools we used on *Bronco Buster*. The gestures in this car are somewhat subdued and difficult to recognize. The primary gesture starts in the aggressive front of the car and follow the line of the floor back and up towards the slanted rear end. The secondary gesture flows from the end of the primary, over the curved surface of the roof and down the hood, ending at the sharp nose of the car. This combination of gestures can be seen below.

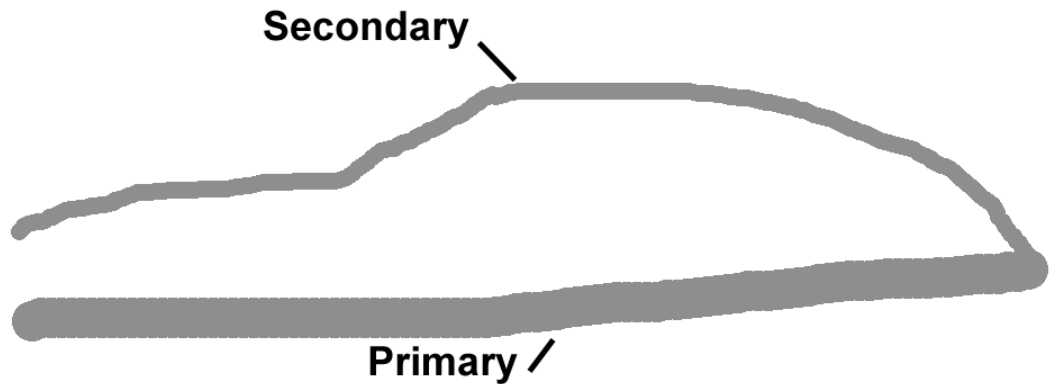


Figure 8: Gestures in the Mustang

In the car the dominant form is the basic box body. This provides a base for the rest of the car and provides a sense of stability to it. The slightly front camber gives it an aggressive and active feeling. The subdominant form is the dome of the roof, reaching over the passenger compartment. It returns the viewer's eye from the rear of the car back to the front with a gentle slope, contrasting the angular lines of the dominant form. The Subordinate forms are the wheels of the car. They connect the base to the ground, but also provide a sense of lift and freedom. Their round shape gives the sense that they are self-contained. While they support the other forms they don't necessarily interact with them because they blend in with the base plane too much. However their support creates a lot of negative space, creating that lifting free feeling. Unfortunately all of the forms in the Mustang are aligned along the same axes. This causes the forms to blend together,

reducing their impact. Without any real distinction, the forms express little in and of themselves.

While the negative space in the *Bronco Buster* was an integral part of the piece, the Mustang makes minimal use of it. In fact, other than the clearance underneath the car there is very little. Negative space can be used to great effect to direct the viewer's eye and attention. The lack in the design of the car is part of what makes it difficult to appreciate the whole of the car without getting caught on details. There seems to be no intention with regard to where you are supposed to look.

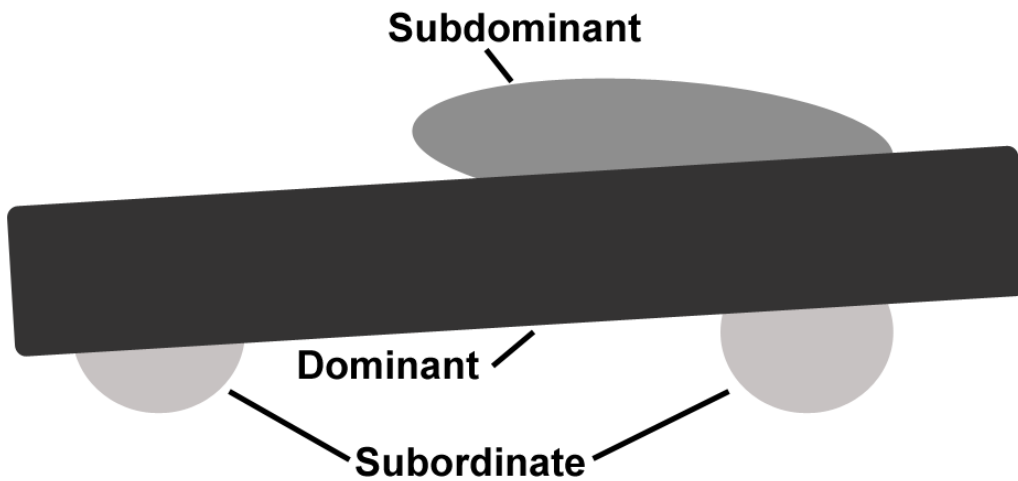


Figure 9: Forms of the Mustang

As with the negative space, there is a definite lack of tension in the car's form. The only place where it really is apparent is in the grill of the car. The sudden change from long, smooth and flowing lines to sharp, short and angular ones draws in the

viewer's eye. The Mustang's grill is one of its most distinguishing features, so it makes sense from an identification standpoint to draw attention to it. The sudden change from horizontal curves to vertical lines as well as the change from smooth metal surface to hole-filled grill also contributes to the tension. The overhanging nose of the hood with its small but noticeable cantilever defying gravity adds to it as well. The front of the car is definitely the most visually interesting. Unfortunately the car is not nearly as exciting from other angles. The rear echoes the front, using the color change of the lights instead of the texture change of the grill. However, the smooth joins between the deck of the trunk and the back undermine any possible tension.



Figure 10: Ford Mustang (front quarter view)

As with the *Bronco Buster*, the materials used in the Mustang influence its final form. In this case they are primarily stamped sheet metal and glass. Sheet metal is an interesting material to use because it allows for long thin features with smooth slopes.

However, small details like those seen in the *Bronco Buster* are not possible. Glass is similar in this regard. Despite the drastic changes in opacity between the metal and glass the two pieces don't seem separate. The surface finishes on both of them share the same smooth reflective qualities. While the change in material could have been used to great effect to direct the viewer's attention it instead seems to be used for purely practical reasons, allowing riders to see out. There are several attempts in the car to break up the monotony of the smooth metal, including the bulges for the wheels, the folds running down middle of the doors and the accent line from the rear wheel to the brake lights. However they do more to draw attention to the boring sameness of the surface than actually fix it.

Discussion

The application of the tools of artistic design to these two pieces provides some interesting insights into both the nature of the tools and the aesthetic qualities of automobiles. One of the stated reasons for doing these critiques was to explore the use of traditional artistic critique tools on non-traditional subjects. Using these tools and methods of examination on a car provides a different perspective on the design, expanding a person's understanding of it. The concepts of gesture, forms and negative space usually are not taken into consideration when viewing a car. Keeping these ideas in mind forces the viewer to evaluate the car from a different perspective and can provide insights that would not otherwise exist. For instance, the power of the nose of the Mustang was not necessarily apparent before this critique. While the grill design is iconic of the car, the reason why was not clear. Understanding how critical that part of

the car is in establishing artistic tension and terminating a form, shows both how and why it is critical to the car's design. In addition, the material a car is made is generally taken for granted as sheet metal. However, when thinking of the Mustang as sculpture, one must evaluate the material used as a choice rather than a requirement. Exercising these design tools in such an unconventional way also enhances the user's understanding of them. Rather than repeating them by rote when viewing a piece, their essential character and value become apparent by exercising them in an unusual fashion.

When considering car as a piece of art instead of a manufactured object, the design space for the car opens up. The possible variations on the basic car idea expand tremendously. Unfortunately, while this creates some exciting prospects for new designs, it also makes existing designs seem overly constrained and unattractive. There are several reasons for this. One is a result of the functional requirements discussed earlier. The legal regulations on automobiles, the manufacturing capability and the decisions necessary for a safe and efficient car necessarily limit the design space. *Bronco Buster* appears so much more dynamic than the Mustang in part because it is not required to have four points of contact with the ground. The rearing up with two legs in the air is much more visually exciting than the car squatting on its wheels. There are also no requirements that it be balanced to avoid tipping during high speed maneuvering, or that it have sufficient space and clearance for airbags and bumpers. These are just a few examples of the considerations that restrict the possible choices car designers can make.

Furthermore, the design choices necessary to create artistic tension and a dynamic design are in general opposed to those necessary to create an aerodynamic car. Forms at right angles to each other, small, sharp lines, planes and curves and visually interesting

cross-sections are exactly the opposite of aerodynamic. The recent directions in car design has been towards more efficient and aerodynamic designs, however, there is still some leeway for interesting dynamic designs to exist. Concept cars are always edgier and more interesting than the final production models. Aside from the constraints on the designer's side of the equation, there are also the expectations of the public that serve to narrow the available design space. These expectations are generally ingrained ideas about what a car is supposed to look like. Cars with more or less than four wheels can seem either unbalanced or over constrained and heavy because of expectations about what cars should look like. A lack of clear distinction between the front and rear of a car can distress other drivers and may even result in more accidents. Because the primary goal of an automobile design is to sell copies of itself, going against consumer expectations can prove financially disadvantageous and ultimately result in failure. Unfortunately, for the reasons discussed and more, the choices required to produce good art and good car design are not necessarily the same. This results in successful automobile designs that are nonetheless bad sculpture.

Conclusions

One of the principal reasons for choosing these two pieces was because of the parallels between the two. Both are evolving pieces, anchored in previous versions, but stand on their own as distinct specimens. Horse imagery is part of the content for each of them, even though it is somewhat subtle in the Mustang (with the exception of the grill ornament), and is meant to evoke feelings of power, wildness and freedom in both. However, after examining the Mustang through the same methods and viewpoint as the

Bronco Buster, it quickly becomes apparent why one is considered fine art and the other not. The Mustang is certainly an aesthetically attractive car, however even as such it is still not aesthetically attractive art. The tools used in the art world for evaluating form are certainly valid when applied to automobiles, and I think helpful. As long as the context of the car is kept in mind when doing the analysis, useful criticism can result. However, this should not be construed as a defense of automobiles as artistic works. As can be seen in my analyses, while they can be viewed as pieces of sculpture, they are unsuccessful as such.

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