CAROUSEL

by

Nathan Bradley Hemenway

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Department of Architecture May 9, 1991

Certified by

Otto Piene Professor of Visual Design Thesis Supervisor

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Nathan Bradley Hemenway

Submitted to the Department of Architecture on May 9, 1991 in partial fulfillment of the requirements for the degree of Master of Science in Visual Studies.

Abstract

Carousel is a written and sculpural project which portrays an operating animation carousel. Carousel is a play on words, spoken in a world consisting of unexplored dialects of expression and thought. Allegory, metaphor, metonomy, onomatopeia, are sculptural techniques in this world of literary pursuits. Poetic examples provide demonstration as to how sculpture may encompass and motivate written form. I develop this technique of literary sculpture as The Illogical Dialect of Logic. It is in this dialect of logic that the sculpture of Carousel is presented.

Thesis Supervisor: Title: Otto Piene Professor of Visual Design

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Chapter 1

Introduction

Animals fear death and experience a sense of privation as a result of the death of others, at times to the point of dying or seeking death themselves. But animals do not know about death. Man, however, has known about it from the remotest times and in the most primitive conditions. He realized that his life was limited -in every sense of the word- by death. -Erwin Panofsky [Panofsky 62]

Much of what has gone into this project has developed from a rudimentary seed through which I have defined a personalized form of expression. The seed to which I refer is no less than the topic of environmental art. Much of this field of discipline has defined itself upon terminology developed in the 1960's and '70's. These decades witnessed a growth of events that have subsequently been titled happenings, performance art, site works, art in the land, and more broadly, environmental art. These practices were valid additions to the growing vocabulary of artistic expression that the past century has witnessed under the various titles of Modernism, abstact art, the avant garde, etc. I believe the ground upon which 'Environmental Art' was fertilized existed centuries ago. It was tilled via the machinery of monument and through the activities of ritual. I believe that sculpture, ornamentation, and ritual began, in many respects, with man's confrontation with death. Once human civilization had acquired some state of organization, sculpture, having began in relation to the tomb, branched into an expression of civil duty. Here monument enjoyed a prolific life in the tribunal sphere of the social-political culture of these early civilizations. This thesis is an attempt to take the monument of equestrian statuary, and incorporate it into a discourse, removing it from the static nature of its civil obedience into a revolving liquid form in a tradition closer to the secular funerary monuments of the early middle ages.



Figure 1-1: A Hypothetical Environmental Situation

Carousel is a project of two parts; the representation of a sculpture in literature, and the expression of literary ideas through a sculpture of a merry-go-round. The written and sculptural parts share an internal structure predicated by an isomorphic logic. Through this logic, references between the two media coexist as narrative and abstract discourse. Contrary to a true formal logic, I take delight in the use of the illogical, denying the constraints of all logical thought as if a spider could its web. Imagine a child delighting in stringing words together without reference to their logical order or meaning.

The magic in words of nonsense, and the magical formulas of fairy-tale often consist of syllables that rhyme or have rhythm. The phrases do not contain the meaning of the words from which they are composed. They are words around words which have no logical connection. It is with the structure of their sound that they become objects of fascination. Functioning outside of their intended context or use, they lose all sense they originally contained. They flow from the mouth as entertainment. They are excercises in the pursuit of linguistic competence.

It is in the idea of objects around non-sensical objects that Carousel may be seen as a rhythmic fluid form. Contrary to its fluidity, the ideas from which it is assembled, and with which we relate, are undermined and become decomposed by means of its internal logic in order to flow as an incoherent statement of rhythm and rhyme. The Illogical Dialect of Logic is my attempt to probe the edges of the physical world where the laws of logic reign supreme.

In this world of logic, I feel in many ways compelled to justify its use in relation to a thesis that is centered on the discussion of carousels within a tradition of equestrian monument. I am comforted only on a superficial level by the fact that logic has played a large role in the display of equestrian monument. This is testified by the proportions of base related to the horse and rider so common throughout history. In an analysis of the proportions of the base for Verrocchio's Colleoni Monument, Wendy Stedman Sheard discusses these relations quite well:

The proportions of the Colleoni Base reveal a simple but extremely beautiful scheme which relates every dimension organically to the height of the bronze horse and rider and their plinth.

Through her analysis she lays bear the inherent geometry via golden sections and proportioning of the sculpture. Drawing a line down the center of the monument she notes that two thirds of the entire horse and rider are positioned to the front of the sculpture. This she attributes to the impression of forward motion which is percieved when viewing the monument:

The arrangement counteracts the sublime stability imparted to the marble base by the square. circle, and golden rectangle which underlie its proportions. The horse is however

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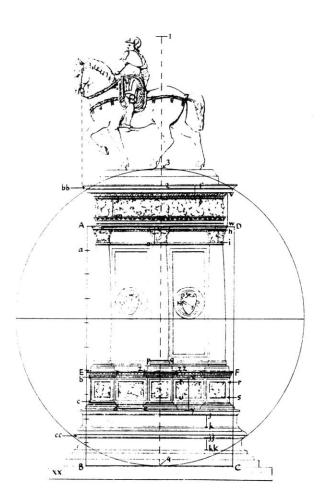


Figure 1-2: Verrocchio, Colleoni Monument

anchored to the design of the base by the left rear hoof, which is tangent to the circle which inscribes the base.

The history of classical thought is personified by rationality. If one were to describe its ethics, some discussion about Platonic geometry, and its prisoners to pure form, should be included. Carousel physically derives from this classical logic, sharing ideals and relations of geometry with rational intentions. CArousel goes beyond logic, it celebrates the illogical and derives an internal contradiction of form. Something crawls beneath its skin to disallow its function as a cohesive object for enjoyment. Carousel has traits of the distastful; it has fur and it has flowers.



Figure 1-3: Giovanbattista Piranesi's altar of San Basilio, Priorato church, Rome.



A sculpture which communicates this idea of a contradiction of form is that of Giovanbattista Piranesi's altar of San Basilio. To the faithful and attending public is displayed an organized labrynth of chaotic forms; twisted and entangled, clinging to the altar in fear of falling from their lofty position. Facing the back of the church, illuminated from the apse to which it is presented, lies a strict formal geometry of sphere and solid structure. Existing within the church of Priorato, it is the logic of this altarpiece which I find interesting. The composition of contradictory language in a physical form have led me to pursue my invention. The Illogical Dialect of Logic is that language which has allowed Carousel to exist both literally and physically.

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Chapter 2

Reflections on the Sculpture of Monument

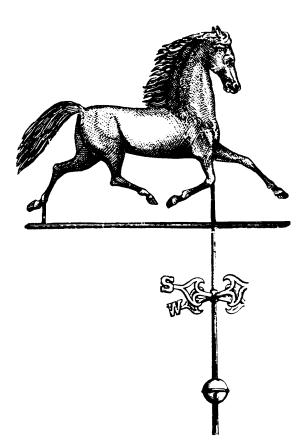


Figure 2-1: 19th century American weather vane

Carousel has been inspired by the idea of sculptural base. One may observe within traditions of sculpture a concern regarding the form of the base. This concern manifests itself primarily in various forms; physically as solid form, intellectually as context, or perhaps emotionally through complex denials which work on the painful history of the base in sculpture. Examples of base in relation to equestrian monument are discussed. Also I mention some projects of Vito Acconci, who has used the discourse on sculptural base in a critically entertaining manner.

Vito Acconci's ideas offer extremely interesting paths through which discussion of the base may follow. Much of Acconci's work has originated from his endeavors as a writer/poet who worked the space of the written page in a sculptural technique:

1. Notes on poetry: Words as props for movement, how to travel from left margin to right, how to make it necessary, or not necessary, to turn from one page to the next -Page as thing, the use of idioms, like 'from the horse's mouth, that draw attention to themselves as language: the material exists only as it's spoken, the words circle back on themselves and remain confined to the page, -Page as container, rather than have the page refer to outside space, something from the outside space can be installed on the page, -Page as map, make reading time equivalent to the time required to perform an activity in outside space -Vito Acconci [Acconci 80]

In the spring 1989, Acconci completed a sculptural work commissioned by Sculpture Chicago. It was located at a site on Michegan Avenue among many historically prevalent buildings. These buildings included the John Hancock and the Chicago Tribune Tower. A plaza was given to Acconci for the installion of a public sculpture of his own intention. He chose a 40 foot diameter clock, which was to lie face-up in this plaza. The public was allowed to sit and enjoy the sculpture, for the twelve divisors of the clock functioned as benches. The arms of this clock were functional. As one were enjoying a position on the sculpture they were bound to be sent along their way for the rotating arms extending themselves just above the surface of the circularly defined benches.

The work did not compete with the architecture by attempting to extend towards the sky. This could be a defeating factor in public sculpture when surrounded by tall buildings. The work was percieved from these surrounding buildings as a functional clock viewable from any floor. Its overall use as a sculpture of displacement (via moving steel hands over seats) within a complex of overwhelmingly busy pedestrians was impressive. The discourse existing between Acconci's written and sculptural works can be viewed in light of the

traditions of sculptural base. Both communicate to their audience an understanding of the media with which they are executed. In reference to the history, Acconci's works are very good solutions to these sculptural issues of the base.

The following events represent the sculptural tradition out of which carousel partially emerges. Focus is given to my interpretation of how sculpture is related to the world through base. My personal fantasy about lanterns and their forms is an important topic in this section. Various other forms which are related in abstraction are lampshades, birdcages, and chandeliers.

The purpose of much outdoor sculpture has been to preserve the meaning of individuals or events in durable three dimensional images, which command attention by sheer physical presence. When sculpture is placed outdoors, it is freed from the matrices of architechture, and relation of the sculpture to the base becomes more significant. Monuments are set apart from their surroundings by means of a plinth or some feature which serves to function as a picture frame. Classical thought on sculpture dictates that scale and position of the work should be carefully related to its site.

To fit in with the stability of architecture, statuary in general must first of all choose lasting attitudes having firmly established lines so as not to clash with the majestic immobility of a great building by a too literal imitation of life, which suscitates the idea of movement and can only lessen monumental dignity. -Eduard Lanteri, a 19th century professor at the St. Martin's school for sculpture.

A metaphor of bearing, enduring structure is present in equestrian monument. The austere cold immobility of the horse's stance, carried through to the ground by the base lends majestic qualities of authority to the horse's rider, and accentuates the architectural environment. Apart from the traditions of equestrian statuary that have evolved through European origins, I feel much of my work lays claim to the various forms of equestrian statuary that have originated in America, as wheather vanes, sign posts, gravestones, and, of course, carousel sculpture.

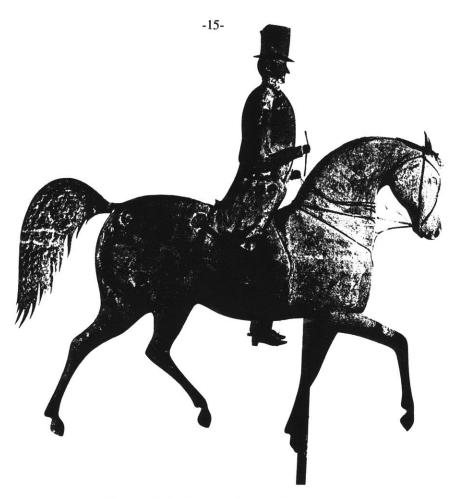


Figure 2-2: Equestrian sculpture

The equestrian statue is of secular origin, and in the religious art of the Middle Ages a figure on horseback often suggested the vice of pride. Contrarily, the most famous of the equestrian statues of antiquity, Marcus Aurelius, was to be interpreted as the monument to the victory of Christianity over paganism.

At the beginning of the 13th century, the equestrian statue was resecularized as a monument to civic pride, and liberties. At the same time the equestrian figure invaded the domain of funerary sculpture independently of the statuary having civil intentions. This genre of equestrian statuary, however, did not originate as some monumental image to attribute the deceased with the quiet dignity of a Roman Emperor. It began with small reliefs portraying the deceased in some heroic stance with sword in hand. From these humble beginnings as funerary art it developed into a longlasting and inspiring tradition, especially in northern Italy. This tradition had such far reaching influences that it eventually inspired Donatello's Gattamelata, 1446-1447. This famous monument, while not a tomb, was, however, built in the fashion of equestrian funerary monument. The pedestal was elaborarted into a mortuary chamber. This is attested by the motif of the door of Hades, positioned on the east side and facing the church Santo in Padua.

The agile mechanisms of carousels contrast against the stone bases with which most monuments stand. Carousels are classed according to their functions: calliopes, phonographs, motion picture projectors, merry-go-rounds, and perhaps any other broad class of objects which revolve. Carousels may function by one of the following five types of mechanization: 1. hand cranked, 2. mechanically operated, 3. anologue controlled, 4. digitally controlled, and 5. digi-mechani-morphologically controlled. All function according to some mechanical relation with time. In this they characterize the idea of machines functioning simply as a biological metaphor pursuing a passage through a sometimes vacant moment of life. Carousels guard these moments in order that we may not have to watch them ourselves. These moments are filled with music, film, and movement, and perhaps all levels of humanly meaningful entertainment, yet as timekeepers to our emotions, none share our insights and sensitivity as do the carousels of photographic motion operating in the 19th century.

2.1 Equestrian Monument and Cinematic Projection

Equestrian statuary is an expression devoted in most circumstances to some hero, primarily out of tribunal reason. Placed in public areas, open to speculation and comment, it is a mimetic depiction of the horse and rider. The equestrian monument stands frozen as the first pole for a dichotomy discussed in this thesis. Against the equestrian monument are the fluid forms of animation and cinema, shadows of life breathed upon public sculpture from ages past.

Cinema, capable of representing life and motion, claims the traditional artistic expression of the open-air arena and public realm where the equestrian monuments once stood. The moment the magic of the photograph unleashed the mystery of the moving horse, Muybridge, and all the preceding developments of projected moving pictures unleashed a Trojan Horse of the modern era into the cavern of oblivion: the cinema house. The form of the horse was then brought from the statuesque past and allowed to run, with freedom, among movies where the horse played grandiose roles, major and minor. Inside the cinema house and within film, actors and performers fill our imaginations with celuloid realities, while outside the cinema house, cities and parks lie vacant. They are void of meaningful and active forms of expression.

Carousel is a tribute to the motion picture projector as mechanism. It is a tribute to the mechanisms and machines which dismantled and freed the horse from having to drag another century's worth of dead weight around. The horse captured within metaphors of timely running machines, encompasses our intuition of horse as a rythmic, fluid, and dynamic entity. The projector, mechanically mimicking the horse's power, as well as animating representations of the horse through film, is the incarnation of the horse in monument. The motion picture projector as equestrian monument placed in the architectural setting of the cinema house, encases audiences in spectacles of epic and performance.

2.2 Magic Lanterns

The term magic lantern applies in general to a boxlike device that contains a candle flame, the light of which could be projected and focused on surrounding surfaces. There is no real telling as to the time of when the first were invented. Magic lanterns have appeared throughout history, and have experienced countless technical innovations. Almost all had the purpose of displaying some image via mystical or scientific purposes. Gradually it became more and more a means of projecting mysticisms and apparitions in various amusement shows and seances. All written cases report some fascination with illusion, whether magical or natural.

1770, descriptions of ghost projections onto smoke; George Schrophen stupified the participants at his seances. He served punch of dubious chemical nature to drink, and disoriented the participants with narcotic incense.

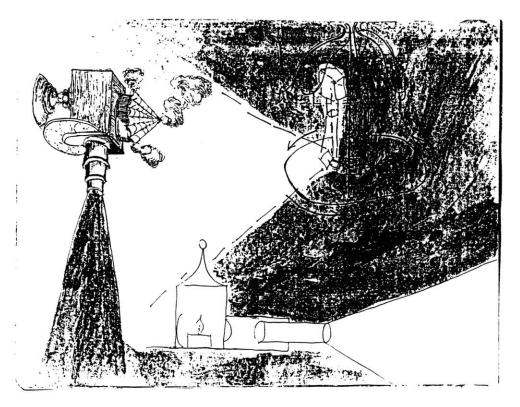


Figure 2-3: Projections of Ghosts via Magical Lanterns

1798, E. G. Robertson, using a lantern on wheels staged his famous Phantasmagoria in Paris - "Will introduce the phantoms or apparitions of the dead or absent in a way more completely illusive than has ever been offered to the eye in a public theatre, as the objects freely originat in the air, and unfold themselves under various sizes. such as imagination alone has hitherto painted them. occasionally assuming the figure and most perfect resemblance of the heroes and other distinguished characters of past and present times. [Leisegang 86]

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The theatrical quality and poetic nature of these devices offer continual inspiration. They vary in size from the very minute to the architectural. Whole light proof rooms were constructed as housings from which projections could originate. No doubt these were some rudiment of the cinema house, as they offer a tremendous medium through which to stage

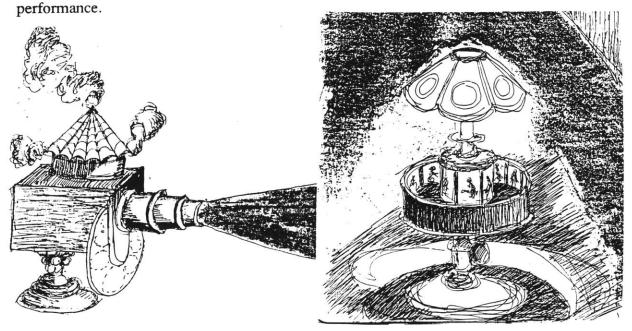


Figure 2-4: Magical Lanterns

2.3 The [X]-scopes

A physical phenomenon which led to the motion picture projector was the observation, made by many early writers, of the persistence of vision experienced when watching rapidly moving wheels and the intervals between the bars of fences as one passes them by at some speed. These observations witnessed the stroboscopic effect which occurs through the spaces of these objects. Numerous inventors incorporated the observations into machines that demonstrated such phenomena with various images.

Stroboscopic observations manifested themselves in an invention known as the thaumatrope; a circular toy with an image on either side, which when rotated, merges the

two images. Other experiments blossomed into such inventions as the anorthoscope, the Faraday disk, and finally, the phenakistoscope. These are instruments consisting of revolving cardboard disks which contain a ring of pictures and slots through which one views the moving pictures by mirror.

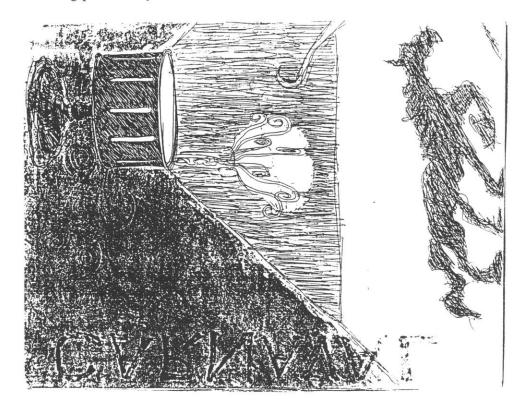


Figure 2-5: [X

-scopes]

All the revolving -scope machines invented derive their names in English by the addition of some Greek prefix (ie. phenakisto-, anortho-, zeo-, praxino-, etc.) to the suffix -scope. These machines will here after be collectively referred to as [X]-scopes. The [X] refers collectively to the various idiosyncratic prefixes that were used by the various subsequent inventors. Use of this short-hand device is employed to simplify the discussion from confusion with too many names.

1877, The Frenchman Reynaud constructs a [X]-trope where the picture movement is compensated for by a central prismatic mirror drum. This allows one to look down into the

drum instead of through slots or lenses fixed on the walls of the drum. Reynaud combines his [X]-scope with the magic lantern in a device he named 'Projection Praxinoscope'. Reynaud projected pictures painted on glass connected by pieces of cloth to form a looped band which is inserted in the [X]-scope . Moving figures were superimposed on a proscenium projected with a second lantern.

Reynaud subsequently produced three comedies which he used to give performances before large audiences. Reynaud opened his 'Theatre Optique' at the Musee' Grevin in Paris in 1892; by 1900 he had given 12,800 performances which had been attended by 500,000 visitors. Reynuad was the first to use moving pictures for theatrical performances. [Leisegang 86]

The use of three dimensional figures laid on the bottom of a drum, was put into practice by Czermak in 1855, and by the Paris physiologist Marey, who fixed ten sculptureed models of a flying pigeon (copied from his sequence photographs) inside a very large [X]-trope.

2.4 Carousel Performance

The relevance of these devices to Carousel is obvious. Carousel makes explicit use of this history and owes much to it. It is in these terms that the model of horse developed in chapter 7, is presented, rotated, and projected, in spirit, quite separate from the immobility which perpetuated through traditional equestrian monument.

Chapter 3

The Sculpture of Carousel

The character and general idea of mythology is what I believe to be the desires of our imagination which we announce through personified archetypes. In this I mean to say that our desires are communicated through our imagination. Ideas common through-out all mankind are the given animated forms in the shape of various animals and human characters via our imagination. These animated forms occur through-out history in various artistic methods of human expression. Carousel is my investigation of the forms of animals in the mythology of tombs, equestrian monument, circus and carnival, and kinetic sculpture. All of these I believe may be percieved through hypothesizing and contemplating ideas about animation. Isolating elements from each tradition as single frames of film demonstrates how they exist as shifting forms of artistic practice which may be captured in one structural form. Carousel is my use of this structural form of animation: the personified archetype of time and the mechanization of life.

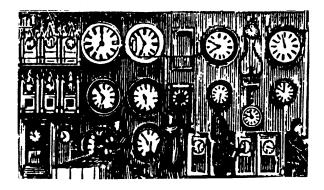


Figure 3-1: Time

Within a fantastic nonsensical world, Carousel exists in a courtyard, mapping the decay accumulating in its corners across time. It is a dream of a world seen from the outside with uncomprehending eyes, of one cut from reality. It has the quality of nightmare, and displays a world in constant and wholly irrelevent movement. It repeatedly demonstrates the poetic power of wordless and purposeless action. Language becomes a constant hum; rubble pieced together in an assorted mish-mash of performing marionettes, machines, and lights. The sculptural base as stage, parallels the spoken word, twisted in distortions of libretto. Autumnal clowns lead deathly processions of fantastic creatures across an emotionless setting: Carousel turns round reminding the characters of my play that time is merciless, always intent on moving forward. It is similar to the motionless vanitas pictures depicted in the 17th century by Dutch painters of a new merchant class. Carousel speaks to the still objects in these paintings, communicating to us our fragile placement in an unsympathetic atmosphere.

When narrating a story, I structure it on some object that communicates the relationships which are important to me. The theatrical effects that result from this method have pure physical meanings that express more than any language could. Pure theatre: the abstract scenic effects of circus, carnival, mime, dance, marionettes, and shadowplay exist independently of words. Language is either only read or spoken, theatre manifests itself in live performance. The difference of the emotive powers produced is perhaps between that of the rationality existing during the Renaissance, and that of the Baroque that existed two centuries later.

3.1 Six Horses

Horses as shadows are pure form, emotionless until viewed in succession. They combine to communicate the pathos they share from a rich and entangled history as abused images of the spirit of animal; unbroken, untamed, raw power. Energy has poured from their bodies, now empty. They are day old fantasies from an innocent dream of survival. Their humble frames dance. They are at once marrionettes and living animals. Six horses distributed around a rotating platform resemble images of galloping horses. They are six characters in movement who cast their shadows upon surrounding surfaces.

3.2 Mirrors

Carousel makes use of a hexagonal pyramid built from mirrored surfaces in a device known as an image derotater. There is one mirrored surface for each horse of Carousel. The mirror, angled 45 degrees from the platform, rotates with the horse. This positioning allows light projections originating from the central column to be mirrored out Carousel across the rotating platform. Each mirror, paired with one horse, produces a shadow of the horse. It is carried onto surrounding surfaces and walls. The mirrors bend light in 90 degree angles, producing successive flashes at rates equal to the rotation of Carousel.

3.3 Automation

What separartes the automaton from the machine is the relation automata share with time. An automaton is an artificial representation of a human being, animal, or natural object, mechanically endowed with the power of movement.

Carousel is not an accurate imitation of life; as a mask, it is a pretense which leans towards mockery, a brilliant joke at the expense of life, a kind of dark ironic theatre. Carousel mimicks life, imitating it in order to generate gratifying illusions about its nature.

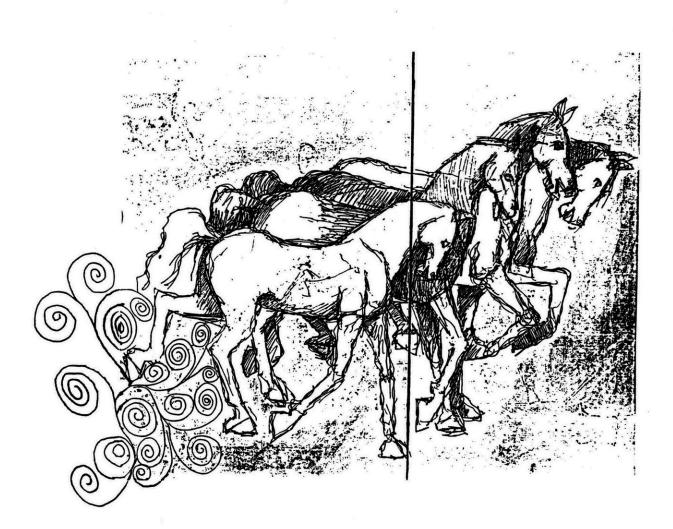


Figure 3-2: Horses for Carousel

The appreciation of automation is not such the innocent pleasure as it seems. Carousel is an object of illusion. Its place is a house of illusions. The image of a horse is reflected to produce life. The idea of the horse in motion forever signifies life, freedom of spirit, and untamed passion and desire; the land of dreams. It becomes a curious postulate, to use the horse, tied to daytime visions, and propose it to be the epitome of a night-time idea, lurking in shadow, awaiting a pulse of imaginative light to bring it alive. This is what my machine intends to be, a living automata capable of illusionistic projections of dreams

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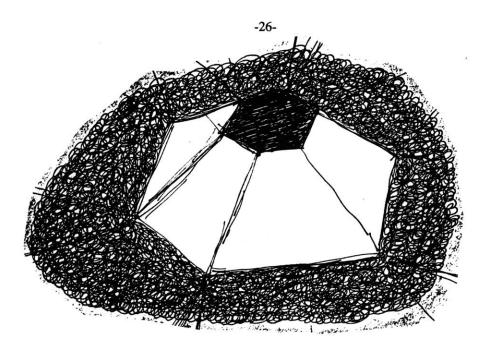


Figure 3-3: The pyramid of mirrors for Carousel

and desires hidden within a mechanically tuned appartatus. It is a skeleton of thought intended to suspend our earthly qualms.

Motionless, it exists merely as a list of cold metals fashioned together. When set in orchestrated motion, via a single belt driven pulley, it produces the illusion of life, via mirrors, light, and mathematical recursive trickery.

3.4 Ornamentation

It is through the language of ornamentation that Carousel is appreciated. Carousel is a bombastic Roccocoan dream of a giddish intention for an over-rated imperialist world. It exists under the skin of an audience who is all too quick to admire a well crafted object of fascination. As camouflage to the realities of a harsh world, there are no questions and no answers, it proceeds in no direction, balancing upon the fraility of its conception.

Through this I mean to say that while Carousel is a childhood compensation for a favor thus rendered, it thrives to be sarcastic. Carousel is a contradiction.

Despite Carousel's inherent problems, I intend the mere labor, by which I have

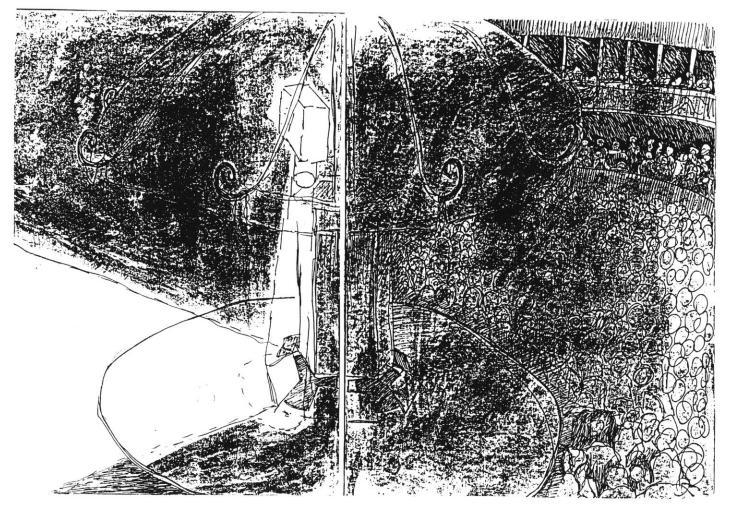


Figure 3-4: Carousel

constructed and assembled Carousel, to speak a passion for a craft that may rise above questions of material pursuit. I wish Carousel to exist outside this sphere of communication.

Chapter 4

Literary Models

Mimetic: the natural tendency to imitate says Aristotle, combined with a tendency towards rythm or pattern. The mimetic idea gives us insight into reality, imaginative and interpretative, reflecting a special view. It furnishes knowledge and it's value depends on it's truth. -Paraphrase from The Travelling Companion Edition of the Oxford English Dictionary



Figure 4-1: Written form is an expression of language.

4.1 Linguistic Form

I derive my idea about literary form from a number of literary examples which use the structure of language to model physical objects. These examples make use of various phonologic, syntactic, and semantic forms of language to give physical prperty to literary form.

4.1.1 Phonological Form

Onomatopeia was used by Virgil as a device to build drama into scenes of galloping horses.

...quadropedante putrem sonitu quatit ungala campum. -Aeneid, Book VIII, line 596. ...quadropedante putrem cursu quatit ungala campum. -Aeneid, Book XI, lines 874-875.

4.1.2 Syntactic Form

Lewis Carrol made use of logical structures called syllogisms in his literary achievements Alice in Wonderland, Through the Looking Glass, and The Hunting of the Snark. Syllogisms are a deductive scheme of formal argument consisting of a major and minor premise, and a conclusion. They are formulaic statements consisting of three lines. Each line is relative to the major and minor premise, and ends in the third with the conclusion. Syllogisms are deductive reasoning in a subtle, specious, or crafty argument.

Traditionally, there are approximately 19 forms in which sylogisms may appear. This is to say that if we were to assemble all the syllogisms that have been stated, we could arrange them and abstract from their idiosyncratic vocabulary. From the syllogism:

No philosophers are conceited;

Some conceited persons are not gamblers

Some persons, who are not gamblers, are not philosophers

We could abstract the form:

(1)No x are m Some m are y' !some y' are x'

It is from logical structures like these that there has been found approx. 16-19 syllogistic forms, depending on the logician you believe.

Lewis Carroll uses structures of this sort to substitute for variables found in (1),

various titles, names, descriptions and other trains of thought that are of particular interest in fictitious worlds. Caricatures of the likes of Mad Hatters, Chesire Cats, and royal dutchesses are given scripts via nonsensical syllogisms, and with these Carroll populates fantastical worlds.

It is through the structure of syllogism, based on reasoning presented by the sentence, which in turn is made up of syntactic form, that Carroll writes his stories. Through substitution of nouns, adjectives, verbs, adverbs into abstract structures of syllogism, Carroll states illogical relations via pure logic.

What I find in Carroll's playful use of logic and language is a denial of physical boundaries, an affirmation of a world where almost anything goes, to the extent that reason begins to decay. What mystifies and inspires my work is Carroll's ideas to build objects in language and logical meaning through their negation. My sculptural imagination departs using these ideas as foundation. Were Lewis Carroll an architect, we might have bridges for doorknobs, hinges for rooftops, and weatherproofing for our parlors.

4.1.3 Semantic Form

Pushkin symbolically and semantically employed statuary and monument, building his works with the static and physical weight of large scale sculpture. This device played a crucial role in his poetic mythology. The cycle of Puskin's poems about statues began and ended with inscriptions. And the relation which Puskin took to his writing is the same the poetic works play to the monuments, the destructive monuments, which are characterized in these three works are intended to parallel the monuments erected in honor of the Tsars of Russia:

1830--Stone Guest 1833--Bronze Horseman 1834--Fairytales of Golden Cockeral

One concurrent theme throughout these was to invest these individual statues with the qualities which represented the wretched and disatvantaged in Puskin's life. Puskin's

situation reached a level of poetic sculptural expression begining with the investigation of epitaph in relation to sculpture and statue. More particularly the political situation freed the capitulation upon Puskin.

All of which endeavored to decieve Tsars censorship by means of a masterful tangle of allusions, hidden meanings and allegories. The Symbology within the three poems is likened to favor stiff forms of life and uses of metephor which suggest a concrete objective coldness to all living figures, and in many love scenes, images of corpse and stone are predominant. The myth of the destructive statue belongs to the period of Boldine. It is a time of successive autumn stays in Boldine over an extension of 4 years. It begins in the spring of 1824 with the marraige proposal to Natalie Concarova

Puskin's invections against Alexander were responsible for repelling Natalie's Mother towards an indefinite and evasive answer to his marraige proposal to Natalie. At this time associations between the age of Natalie's mother and statues are less infrequent. The social confines imposed upon the artist Puskin account for his particular frozen symbology during this time. One concurrent theme throughout the work was to invest the individual statues with the qualities which represented the wretched and disatvantaged in Puskin's life. Everything irrational standing between Puskin his lover Natalie Concarova finds a meaningful equivalent in the power of the stone antagonists existing in the three Pushkin works. Absurd hindrances grow out of certain fictions; poet's happiness depends on the bronze grandmother, provokes an obtrusive thought about death.

1830--Stone Guest 1833--Bronze Horseman 1834--Fairytales of Golden Cockeral

4.2 First Model

A model acts as a symbolic representation which directs attention to patterns and events in the behavior of complex systems. Models structure how we view the world and how we understand the interaction of objects in our world. Models are 'useful-fictions' for they create stories with which to understand reality. They may interpret the literal for the fictional as well interpret the fictional for the literal. They are spectacles which aid our sight.

My first model of a sculpture in written form is descriptive. It maintains six components heirarchically governed by a central argument. This heirarchy of six components parallels the six horses of Carousel which spin around a central column. By this method the laws of physics are mirrored by the laws of language. No discrepancy between the two worlds may exist, an error in either world of representation leads to inequality.

The important aspect is a level of mimetic representation between the sculpture in the physical world and the sculpture as it exists in this thesis. If my sculpture consists of plaster and metal, then that should be mentioned here through description. No deviation from the sculptural work occurs that would misinform the reader as to what my sculpture is precisely. While this model requires descriptive information, I reserve the right to add a discourse which includes various uses of figurative language to inform the reader of my motivations and insights. Mimesis, mime, imitation, shadow boxing

Chapter 5

Myth

Myth is the form of the mouth; it is passionate/aesthetic, and historic/explanatory. Myth possessing as many idiosyncratic views as there are mouths, is perpetuated by being told and retold. If there are any forms capable of supporting the idea of inherent structures to human artistic expression, they may be found in myth. Myth assumes various forms in the literature among people widely separate in time and place. Because of this, it is entertaining to contemplate relative similarities in different stories, giving reason of resemblance in myths which are culturally isolated.

Myth is to be thought of in some ways as the age old game of telephone. Beginning as a spoken message and travelling linearly through various narrators, it arrives to the present in a form divergent from that which it originated. A fuller analogy conceives of the game operating spatially, in all directions. Some forms will change rapidly, others will evolve not at all, and some appear here and there as slight variants on common themes. Myth can be thought of as a plate or platter which serves the form of the mouth in a banquet of fictions originating from common thought. At opposite edges of our platter contrasting myths are placed. In the center lie historical concoctions which present no inherent contradiction to be separated. These myths vary only in some minute detail.

Myth is perhaps a slow form of animation. It is projections of an imaginative form, isolated frames of a moving picture, an animal transforming from either one people to another, hunted or scavenged, and brought to some point of communication in time.

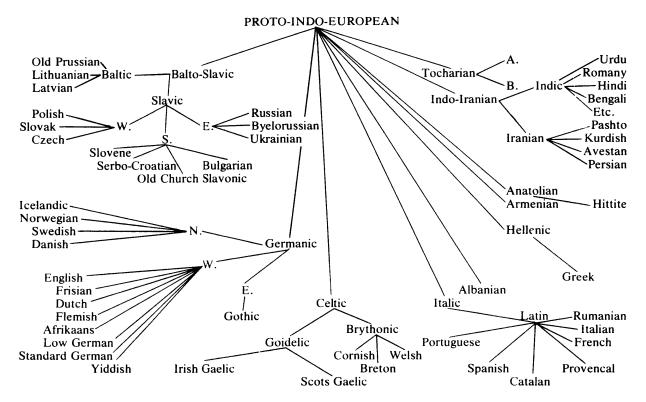


Figure 5-1: Tree diagram of language families from the Proto-Indo-European

5.1 Interpretive Models for Myth

The use of this chapter lies in its extremely brief survey of some issues that I believe exist in a discussion about myth. Interpretation of myth, via models based on language, allow for creative statements on how literary structure may be invented. This chapter is perhaps best understood as a beginning for a more detailed development of a creative literary style. Through attempting a comprehension of the history of language and the means by which it is able to operate, I feel I can achieve a style of literature based upon the ideas of myth's structures of thought. Myth can be examined in relation to the development of language for they have obviously evolved together in many respects. Language is perhaps man's most important accomplishment, and it is through its figurative use that myth has been perpetuated. Knowledge of the processes of language can only lead to a better framework with which to discuss, interpret, and criticize the world of myth.

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5.1.1 Deterioration

The main tenet of this theory is that the telephone game is hindered by inherent defects in our language. Lapse of time causes discrepancies of common facts, moral and religious ideas, and conception. Therefore players farther along in the chain of communication receive diluted and filtered versions of 'pure' truth.

Philology, a method employed in the interpretation of myth, assumes a disease of the memory by reason of which men misunderstand, confuse, and misapply the meaning of words. The philological theory of myth relies heavily on etymology. By tracing the words of a particular myth through various languages it ascertains and brings to light kindred forms and families of the myth. So philology discovers in what language a myth's name is born, and by supplying the original meaning of names is able to throw light on legends and origins of myths.

5.1.2 Progression

The improvement theory states that in the beginning there were only crude dreams and fancies about experiences, life, the world, and God. We gradually develop truer and higher conceptions about nature, duty, art, religion. Subsequent generations then preserve senseless elements through allegory so as not to fully reject past religions. Advocates for the idea of myth's progression believe curiosity (which leads people to question the cause of things) and credulity (which impels people to invent childish stories) to be the characteristics of those who invented myth. Those who upheld myth as fact were supposed to believe that forces of nature, animals, and inanimate objects have powers and attributes of humans. humans were believed to have: 1. Relationships to animals and the ability to be transformed, and transform others into animals and objects. 2. Magical accomplishments such as the power to call up and visit ghosts and the region of the dead, and power over the seasons, the sun, the moon, stars, and weather.

5.1.3 Mythical Structure

Uniform ideas originating among entire peoples unknown to each other must have a common ground of truth. -Giambattisto Vico

Levi Strauss studied the unconscious infrastructure of cultural phenomena and focused on the relationships between their units. He regarded the entire domain of culture as an organized system governed by general laws. When confronting myth, the scholar must look for the units of meaning and discover how they relate to one another within a coherent and organized system. -Levi Strauss

Claude Levi Strauss introduced a rigorous use of algebraic methods and mathematical formulas into the study of myth. All were organized to pursue his central tenet that of the common humanity of both savages and savants, individuals work inventively with what is at hand, this being their cognitive facilities. Their is not an unlimited number of ways in which the human mind can work, humans are strictly limited in the kinds of combinations we can make. We are limited by the distinctive features or oppositions we can play with.

Levi Strauss views the relation among myth as 'quasi-biological' in character, analogous to the physical transformations of anatomy and physiology which relate animal species to one another. In this lies the claim that there is one seamless chain of mythological being, a single logical myth. These ideas may be expressed in terms of single logical propositions, and if they are to be understood, these logical terms and relationships must be specified. The specific terms or objects that appear may differ across myths and cultures, but the underlying laws of discourse and the operating constraints of combinations and transformation does not vary.

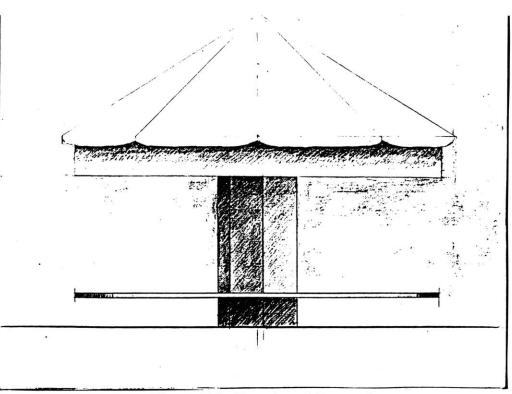


Figure 5-2: Drawing of Carousel

5.2 A Living Mythical Form

Mythological poems are a language of imagination, they are a world in themselves. Myths are void from the interconnectedness of actual things; imagination forms and shapes as it prefers. In its great or small circumference it mirrors the relations of things, of life, and the fate of men. Magic and science are only a few steps apart, both claim the power of dividing the elements, of using secret virtues of minerals, and of understanding the voices of birds.

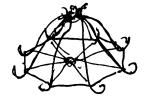
The descriptional patterns of myth as abstract concepts of interchangeable logic provide a superficial basis for how an idea of fictions can be interpreted. The introduction of various logical elements from the preceding chapters may be used as methods of construing and perceiving the interpretation of fiction and myth. Intuitively it implies

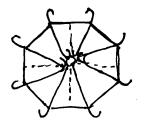
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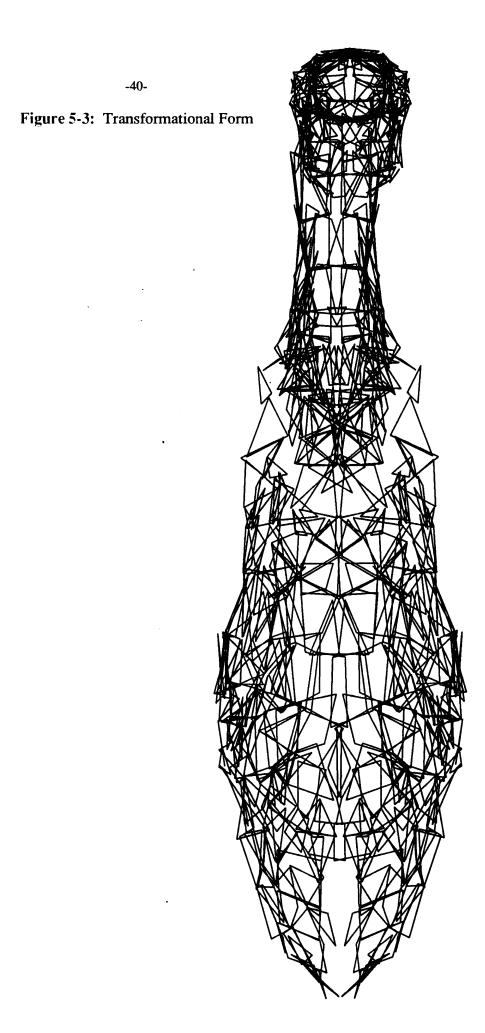
finding some abstract variables and to specify rules for how the component variables may be assembled. These ideas about logic may be put together to form a mesh through which details and characters can emerge as innovative relations between objects. The importance of this to remember is that relations are held together according to a logic underlying the work.

If we take this inherent logic for granted, we only have a backbone for myth. It is only a web on which the spider's life depends. Any structure may provide shelter, yet it is what we grasp from myth that we find inspiration. How creatures dance and how the dew may settle on the intricate spider web is what is of interest to us.

A true transformational animal explores these regions of life. It is an architecture that allows us to raise mean and obnoxious children who grow old only to throw sticks and rocks through shop windows. These annoy us, yet again such is myth, the structure who allows us to decide what is good or what is bad. It allows us to appreciate modest ideas. Myth allows us to walk in the rain.







Chapter 6

A Second Model of Representation: Logical Structures

6.1 Intoduction

Alternatively to the model I presented in chapter four I have a fascination for the idea of the horse as a logic machine which encompasses some pure form of computational puppet/machine. As an automaton machine the logical horse requires rationality. Whether mimetic or not, it must be stated in formal languages through concise and clear notation. This is the language of the engineer, the state of innovation, and stated well it is the state of the art, and so is encompassed by art. Logic is the language that makes it possible to construct the machine, the technological language allows people to know and communicate. The limit of technology is comparable to the level of our logical language.

In this chapter I present a model of a language and notation derived from different literatures on logic. The model will be based upon a constructed theorem of logic. Variables of this theorem will be filled, or rather bound, with my own objects which I have written based upon more primitive theorems.

6.2 Formal Language

To accomplish a heirarchy governing six components I might supply a statement which is supported by six arguments. Each of these arguments would reason towards some following argument. Each proposition then argues for some next proposition. This method, continuing through to the final argument, produces a spiraling or circular method similar to how proofs in formal logic are presented. This could be a reasonable way of modeling my sculpture through a written work. It requires me to make some formal statement and argue for it with six other statements. The acceptance and validity of the whole will rest on the validity and quality of interest of my six constituent statements. Each constituent statement would represent a sculpture of a horse by some method. This method differs from a mimetic model. Instead of descriptive statements assembled in some whole idea, abstract elements called variables will represent the building blocks of description.

6.3 Mathematical Notation and Language

The model of a central pole upon which we construct six consecutive arguments leading into one another is conventional. It concerns primarily the methodology of formal logic and the reliance on the use of a proof. This originates from the traditional logic developed by Aristotle. I suggest a more concise logic. A logic advocated by either H.V.Quine or Lewis Carroll uses symbolic notation which can be used to represent or render whole statements and thoughts. These systems of logic rely on inherent structures within human thought for their reduction to such primitive constiuents as 'x', 'y', 'z'.

A logically true statement has this peculiarity; basic particles such as 'is', 'not', 'and', 'or', 'unless', 'if - then', 'neither - nor', 'some', 'all', occur in the statement in such a way that the statement is true independently of it's other parts.

Consider the classical example:

(1) "If every man is mortal and Socrates is a man then Socrates is mortal."

Not only is this statement true, but it is true independently of the constituents 'man'. 'mortal', and 'Socrates'. No alternation of these words is capable of turning the statement into a falsehood. While the individual words in this statement do infact contribute significantly to the meaning attributed to any idiosyncratic combination of those words there is still no denying the inherent structure of this statement. -Quine, Mathematical Logic

Parallel to how we may interchange the words in the statement "If every man is mortal and Socrates is a man then Socrates is mortal" we could just as easily say: If every car runs on gasoline and Volkswagens are cars then Volkswagens run on gasoline.

That there is structure was an observation we might attribute to the symbolic logicians who used their symbolic system to describe not only the above statement, but various other arguments and statements which may be said to approach the number of total possible statements in language. This system is not only concise but the symbols it employs, despite obvious differences, portray a somewhat illustrative characterization of the literary structure I am seeking. Mathematical logic may not be represented on the basis of simple constituent phrases such as (1), it accomplishes something quite different. Logic supplies a finite set of terms and a syntax for construing these terms. From this finite set of syntax and terms an infinite set of propositions may be generated. I use the syntax of logic to model how Carousel may be constructed in literature and evolve in time. Any constituents developed would be combined through a linguistic theory of government and binding. It is how logicians use thier tools to describe language that allows my model of artistic tradition and change. According to this I would search for a descriptive grammar which allows the statements I require for a systematic analysis and creation of literary form.

6.4 A Notationally Descriptive Model of Carousel

To specify movement: 1. Specify an object 2. Define all transformations 3. Give objects different values or properties at differing times at designated intervals.

6.4.1 Proposition

Propositions define our world. Following several proposed theoretical frameworks [Chierchia and Ginet 90]. I define a proposition as a function that associates with each relevent world or circumstance a truth value: true with the circumstances in which it is true.

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false with others. Worlds, equivalent to circumstances, are capable of holding some linear point on our time continuum. Each position on a time continuum is a 'possible world'. Propositions are sets of worlds with which they share agreement. Which specific worlds accepted by a given proposition determines what that proposition affirms or negates in that point along a time continuum. Structure may implied through quantification of the component parts. Homogenous parts used to construe a single entity are universally quantified. Single entities will require existential quantifiers.

6.4.2 Form

The structure of a proposition via the circumstances it affirms, whether alone or with other propositions, determines form. Form flows and is capable of assuming any shape. Form depends on the relation between propositions. In addition to this, any set of propositions may also determine a particular form. It is the nature of these sets existing in a particular circumstance which are considered the expressions of a certain era. Which propositions refer to one another, affirm one another, or negate one another contributes to the form of that set. Sets may be embedded in a single form just as sets may be proper subsets of other sets. Choosing what set of propositions to consider is to determine form. For the whole set of propositions existing there exists one encompassing form.

6.4.3 Archetypes

The usual way to specify a class is by citing a necessary and sufficient condition for membership in it. Alpha is bound to a given occurence of 'Alpha' if it stands in a formula beginning with the given occurence of 'Alpha' and stands in no formula beginning with a later occurence of 'Alpha'.

The Ideas expressed concerning propositions, motion, and form allow for a much fuller desciption of archetype. How various instances of these same forms occur (or rather recur) is what will be known as an 'archetype'. 'Archetype' is here not what we might hypothetically refer to as some shared cognitive 'unconscious' meaning. 'Archetype' is what will be used to refer to objects that share the same propositional space in our model of worlds. Archetype will be used to define various configurations that our time continuum may assume. This amounts to saying that we will describe archetype as various manifestations of form that seem to recur along our linear/planar time vector. Common patterns will be referred to as names and our set of names will comprise the set of archetypes.

It is not mandatory that at every point in time there be a categorizable pattern with which we can assign an archetypal description. Conditions of formless time will be described as generative and irregular. Generative is used to describe new patterns of form in the time continuum. A generative archetype is categorized from a future perspective because these may only be looked upon historically as 'new' archetypes. Irregular are those patterns or configurations which have held no previously similar pattern. Because they occur between periods of regular pattern the irregular will often be reffered to as transitive. Irregular patterns are also active, for given any new pattern with which it is similar the irregular suddenly becomes regular. And it is by this definition that an irregular archetype may suddenly become generative.

Fountains, equestrian monument, towers of various odd sorts, and other public forms of expression which will be discussed, comprise the set of individuals which may exist in our world. From these may be found one encompassing archetype which I label as the animal of art. This archetype is equivalent to the superset of forms which have existed in the time continuum. The name 'animal' is chosen as it provides the poetic power of eliciting the idea of a changing organism. It comprises the set of propositions and how we trace thier development through various instanciations, which describe their interaction.

6.4.4 Time and Rotation

To allow for movement of time I consider not only propositions and forms comprising archetypes, but as well I consider these entities at different times. Logical space may thus be represented as having two coordinates, 'w', and 'i'. Propositions should be thought of as non-continous regions of this logical space, as sets of world (w), time (i) pairs; sets of circumstances. This can be thought of as saying that propositions are objects which make statments about particular spaces at given times.

What this really amount to is an understanding of a world where archetypes are easily defined and communicated. They are delineated by associating with each and every object, one and only one ordered pair, (w,i). 'W' is the logical space of some proposition, and 'i' is the instance in a continuum of time where 'w' occurs. Only the first component of the pair, the domain, may be of the form (x, y, z, ...). The range of the ordered pair must be one and only one instance from a continuum 'T' for time.The linear model of time is better described as a plane which moves outwards in all directions. Whether there is a proposition or more at a given time point determines the breadth of the plane at that particular moment. Depending on the number of propositions at a time coordinate our plane may extend in any direction.

The time continuum is alive. It may constantly under go growth depending on which past present or future worlds are affirmed. The time continuum contains infinitely many propositions at a given moment so propositions are able to exist in parallel. This depends on whether the propositions in question refer to one another, negate one another, or simply exist with no reference at all.

6.4.5 Animation

Animation consists in stating a particular transformation to occur to an object that exists in our logical space. Our objects are propositions, individuals, archetypes and forms and worlds. A transformation entails specifying a beginning value for one of these objects at a time 'i' and then changing the value of that object at a differnt time 'ii'. The value of the object changed may be represented by color, light, shape, position, etc.

The skill in calling values which communicate some sort of meaning or relevence may be termed choreography. It is the choreography of objects which allows our worlds to become animated and full of life. When these movements are given varying degrees of logical and illogical interactions we begin to interpret our world in varying states of dream. When our dreams reach a level of confusion our ideas reach states of fascination. But in the pursuit of fascination we risk jumping into the territories of incoherence; at this point state a new proposition, and give it another transformation.

Chapter 7

Horse: A Composition of Literary Devices

By its capacity to serve as a substitute, the stick becomes a horse in its own right. -

E.H.Gombrich

Puppets and marionettes concentrate on a mimetic duplication of human characteristics. In this mimetic atmosphere, the simulation of movement and gesture takes precedence over realistic representation of form. Puppet theatres ability to engage and hold an audience is a function of its nature consisting in the animation of lifless objects. The theatricality of the puppet also distinguishes it from mannequins and dolls which do not necessarily rely on a means to be operated.

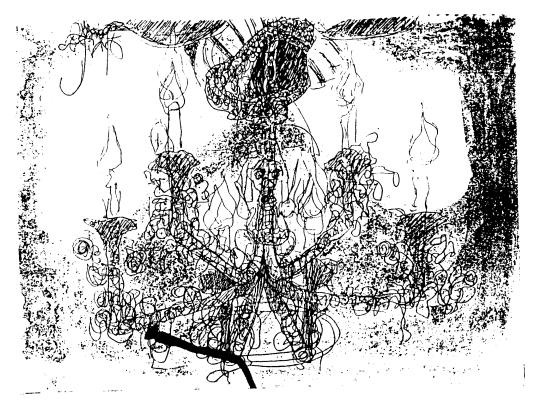


Figure 7-1: Marionette device

7.1 Horse

Is a horse a noun or a verb, a preposition, or an adjective?

The idea of marionettes I believe captures some personalities which I will attempt in the six horses of carousel. As mechanical characters operating upon a stage, marionettes capture the poetic aspects which should manifest themselves in the equestrian statues of carousel. How philology uses etymology provides an example about how an idea of horse might begin. I will use the etymology of literary terms to arrive at a set of primitives to build a model of a horse. To define a horse I specify an abstract object that can be said to represent the meaning of a horse literally. I intend to define an object with words that can represent the physical characteristics of a horse. My horse of words will interact in a literary space, as horses are able to interact in our world.

I begin by assigning sets of properties to our horse and describing how these various properties interact. The final mechanism will among other things depend on a system of heirarchies which are stated to be various properties of the horse. If the geometry and movement aspects are correctly interrelated, the overall horse will be believable. The movement of the properties should be continuous through a single rotation. When given a specified number, perhaps six, the mechanism will divide the rotation into equal divisions, and return our object at six equally spaced positions through the rotation. Heirarchy in the horse structure is specified as a phrase structure. Phrase structures are devices employed in the study of sentence structure in the science of linguistics. They specify, through what is referred to as 'trees', relations between various components of a sentence. Some component will apply to bind internally the subsets of the sentence. This is often called the sentence head, and it normally occurs 'high' in the tree. In my model grammatical heads will be substituted by the various parts of my horse. The phrase structure operates **metaphorically as the strings to a complex marrionette of my horse.** It remains to be said what comprises the parts of my horse.

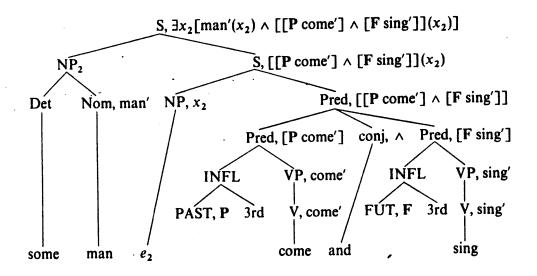


Figure 7-2: Phrase structure of an English sentence

7.2 Primitives

The following two sections discuss terms to be developed in the framework for the specification of a horse. These are not for the purposes of strict definition, but are to characterize certain ideas that communicate much better once we have a tool for observing their operating mechanism. These primitives will be used in the construction of complex objects for our models of form. Logic binds the primitives together through defined relations. Through the combination of devices and objects can be made puppets, wind-up mechanical toys, and illustrative block constructions. A horse will be constructed to serve as an example for the final model of Carousel.

7.2.1 Devices

Devices are tools through which we can structure thought and expression. Each contains its own paradigm which has a loyal history of contributors. My ideas about sculpture concern some incorporation and use of these devices through a process of elaborating their definition:

Mimesis; imitation, mimicry.

Mime; the art of portraying a character or a narration through body movement.

Onomatopoeia; the naming of a thing or action by a vocal imitation of the sound associated with it.

Personification; incorporation of human qualities into inanimate nature, animals, and abstractions.

Denouement; the final outcome of the main dramatic complication in a literary work. The outcome of a complex sequence of events.

Reflexive fiction; fiction in which the reader is reminded directly or indirectly that the story is artifice, the creation of a write, who is consciously shaping all the narrative events and elements, not reporting facts to draw the reader into a consideration of the creative process as well as that which is created.

7.2.2 Objects

Objects are heavy matter with which any sculptor must become familiar in some way. In many respects, the devices we choose to handle, determine how we must bear our objects throughout a project. The objects in this section are very broad in their scope. They are in all cases made up of much smaller units. These primitives are in most cases chosen from a list of symbols, words, letters, illustrations, and diagrams. How these primitives are assembled together and what their sum total amounts to saying, determines whether they are of the following categories:

Archetype; an image, plot pattern, or character type, that recurs frequently in myth, religion, folklore, or literature. The original pattern or model of which all things of the same type are representations or copies: prototype.

Imagination; attributes of life are bestowed upon inanimate things and abstract ideas.

Metaphors; perpetuate and diffuse the poetic illusion. Metaphor is th implication of likeness or analogy between two entities without the overt usage of either 'like' or 'as'. It is an imaginitive comparison between two dissimilar things where a word or a phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them. Metaphor stems from the Greek 'meta + pherein'. 'Pherein' being a verb meaning 'to bear'. Metaphor therefore carries the connotation that it 'bears' the menaing with which it is in reference.

Metonomies; we use the sign for one thing signified.Metonomy is a figure of speech consisting of the use of the name of one thing for that of another of which it is an attribute or with which it is associated. It also stems from the Greek word 'meta-' and the word 'onymia'. 'Onymia' being a name or word. The connotation derived from the Greek stems is meta-name or meta-word, better described as a 'name for a name'.

7.3 A Mechanical Horse

The movement of the marionette has a center of gravity. It is controlled from the interior of the figure. The limbs are nothing but pendula followed by themselves in a mechanical way without further assistance. Limbs describe curves, and the whole figure, assumes a rhythmical movement similar to dance.

To say that an individual horse has a particular property, is to say that horse is in the extension of that property. And extensions of properties are sets To say every horse has the property of galloping is to say that every horse belongs to the set of galloping. From here it remains to be stated what other sets are in the set of galloping as well. (ie. Objects are sets of sets)

All horses are the set of all sets to which all horses belong. Some horse is the set that contains all the sets to which that horse belongs. A determiner combines with aset to

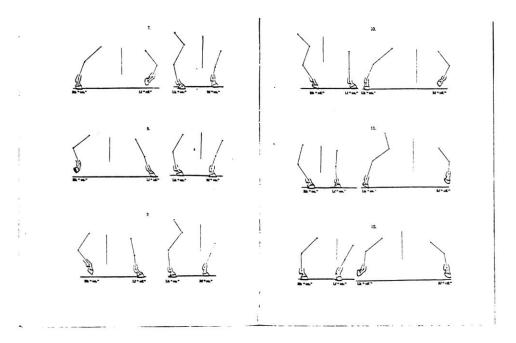
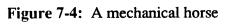
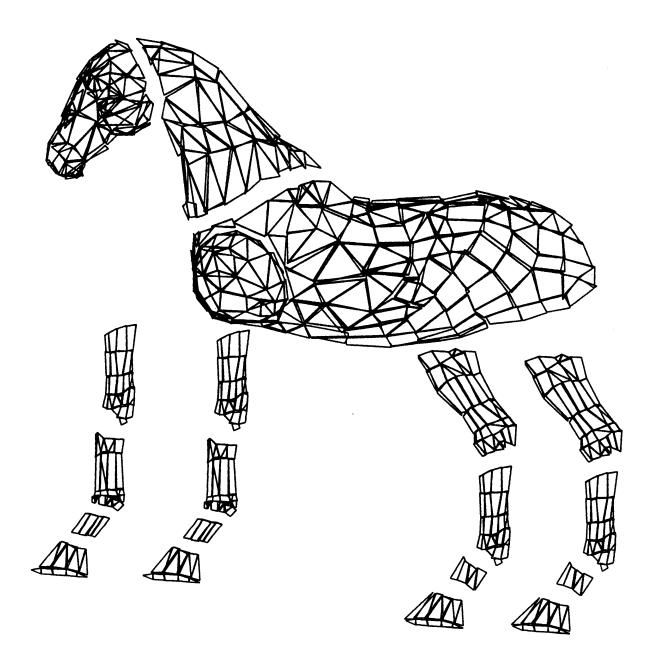


Figure 7-3: A linear chart of horse movements

produce a set of sets; 1. set1 = semantic value of an object, 2. set2 = semantic value of an quantified object (ie. determiner(object) = quantified object.) Determiners are functions from sets of individuals to generalized quantifiers.





Chapter 8

The Position of the Horse in Bestiary: A Carousel of Animal Form

My motivation to include ideas about Bestiary in this thesis is twofold: 1. There can be found many different sizes, shapes, and kinds of animals in the genre of American carousel sculpture. These animals include horses, rabbits, lions, pigs, giraffes, cows, peacocks, reigndeer, sea horses, tigers, dragons, camels, cats, and elephants. 2. Many of my ideas of Carousel have been bound to an idea of a revolving mythical form (which I label as an animal) which merges all the various forms of expression into one coherent structure of human sensitivity.

Perhaps an image which comes closest to capturing my feelings about this animal is the chimera: Because of this uncertainty of form, she becomes more of a verbal than a pictorial symbol. She who, in myths, was purely a fiery apparition, without a voice or a history was to become in the early days of modern philosophy the en rationis, the creature of language, the metaphor of metaphor. -Ginerva Bompiani [Chimera 89]

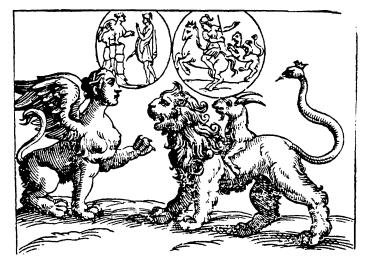


Figure 8-1: Chimera and Sphinx

8.1 The Character of a Horse

The idea of the horse discussed in this thesis belongs to the collection of animals found in bestiaries. This is because the nature of the horse construction from various illogical parts should not be placed among the general class of horses. My horse belongs among the variegated mish-mash of anatomically incorrect animals who reside in legend.

Qualities of a Horse

Hold before me what is mine It remains hidden a throw from your daughters room found by a pillaging marauder. Why have I not seen you; an image a thousand times. Screaming down as voices rise I have returned beaten by your weary eyes perpetuation perpetuation listen to your ear your hand is in darkness the cold cleanses your arm Hold on to me, hold on to me we go round until your mine. It is not quiet here, ther are many in this bag. ride slowly so I may see you.

a thousand images spin me around lead me away where the horses now stay the places they once were are gone Lead me away where the horses now stay I find them here no longer prancing figures on a stone cold wall your legs are broken, eyes dripping, tails crumbling Neighbors on the mortar road I believe the horse has vanished where we once saw.

Horses are sensitive animals. Thier ears are extremely mobile, presented with an unfamiliar or unexpected sound they become tense and listen with the greatest of attention. The entire surface of a horses skin is extremely sensitive, it quivers at the slightest touch. Horses also convey thoughts of force and power through their movement and proportions. Their bodies are thick but not heavy: the shoulders are set back on a wide chest, the thighs are muscular, the legs high and slim, the hind legs are strong and nimble, and the head is supported by a voluptuous neck.

It is a metaphor of enduring structure which is percieved in the use of horse in equestrian monument. The austere cold immobility of the horses stance carried through to the ground by the architectural base, which is to lend majestic qualities of authority to the hero in the saddle, is used to accentuate the environment.

To fit in with the stability of architecture. statuary in general must first of all choose lasting attitudes having firmly established lines so as not to clash with the majestic immobility of a great building by a too literal immitation of life, which suscitates the idea of movement and can only lessen monumental dignity. -Eduard Lanteri describes the place of horse in monumental art.

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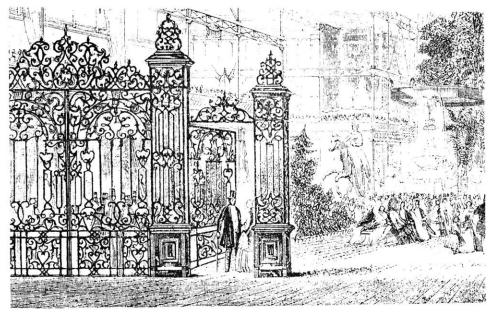


Figure 8-2: A horse

In the discussion of horse, it is the dual character of literature containing references to well formed structures and proportion, versus agile and balanced mechanisms, that allows the horse to become a location for references which seem contrary to the nature of horse.

8.2 Bestiary

Symbolism is embodied in the representation of animals in the early epochs of sculpture. Animal forms were the means by which certain ideas recieved material expression: the lion was symbol of courage ; the cat, of mysterious prudence and treachery ; the hawk, of avidity; the cow was sacred image of beneficient fecundity; the serpent , the owl, were the emblems of watchfulness; the soaring bird signified the upward flight of the soul.

All kinds of animals: cats, monkies, vultures, are represented in Egyptian art, to which the natural forms of the animals are not strictly adhered. Different species are associated in chimeric images: rams assume the claws and tail of lions, which in turn asssume the head of a man or woman. Much of Egyptian and Syrrian ideas of animals insisted only on thier characteristic points, on the more expressive and decided features. (insert discussion of bestiaries)

The Circus Maximus was not a great circle, the meaning to which the Latin word refers. It was however five days of gladiatorial games, races, and combats where a fierce slaughter of over five hundred Numidian lions took place. This gallant fiesta was accompanied by chariot races, equestrian riding, and acrobatics. All events which seem worthy of such a cruel destruction of animals, in the most ironic sense. For the opening day of this event, a parade was graced through the city. Horses pulled chariots and wagons were drawn by mules and elephants.

The bestiary is a still life where a certain specific set of relations hold.

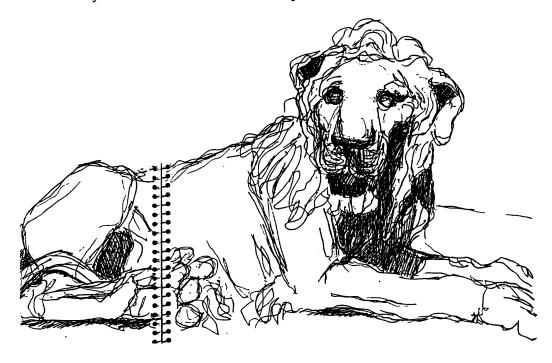


Figure 8-3: A lion

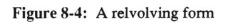
8.3 A Revolving Bestiary Which Transforms Animal Form

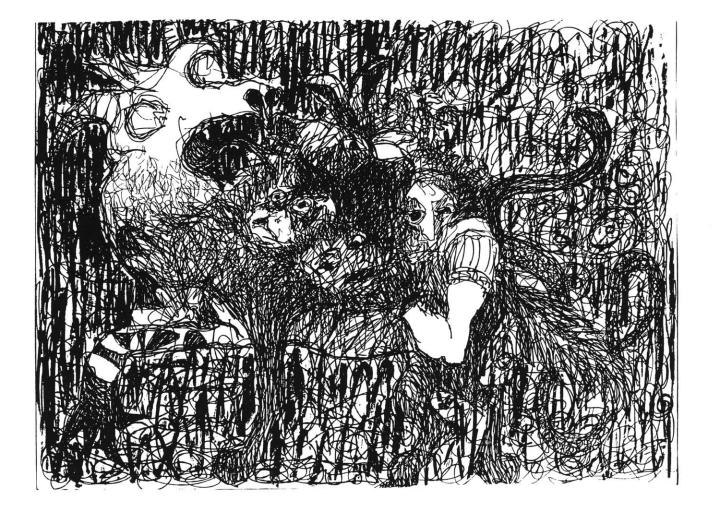
It is the absence of the architectural element in Environmental art that gives fluidity to the forms of our era. Carousel is an attempt to take the immobile image of the horse and revolve it around an axis, projecting outwards upon the walls of an encompassing architecture the roving spirited forms and uncaged energy of the horse. Carousel is a bestiary of my ideas about animal form.

Sculptural kinetics reside in the movement of mechanical parts and poetical dynamics reside in the generation of the different aspects of language. It is this idea that has lead me to pursue how different art forms and literary expressions are used to express common propositions, or how expression may arise from the same logical form. How one interprets the shift and change from the different manifestations and their underlying similar propositions is what shall be referred to as the animal in art.

One evolution of form is the manifestation of various horse propositions that come from the tradition of equestrian monument. These propositions it will be seen have evolved through the history of animation machines and the motion picture projector into the art of film and the technology of digital video. This evolution involves the kind of subtitution demonstrated in logical statements and various other literary devices that will be defined.

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Chapter 9

A Revised Literary Model for Carousel: The Illogical Dialect of Logic

9.1 Background

Language is a device; it transforms literal physical worlds. The formalizations discussed in chapter 6 become mechanical devices for manipulating language and ideas. Words and illustrations as objects, have weight and mass. They are dictated by the laws of the Illogical Dialect of Logic; a defunk dialect/version of the of logic presented in chapter6. This chapter is a perverse world where objects just do not adhere to the gravity of formal languages. Machines are powered by strings and blocks of words, shapes of form, and optico-illusions.

Distinction should be made between standard mathematical logic as it is discussed in chapter 6 and my idea of an Illogical Dialect of Logic which I introduce here. I use knowledge of mathematical logic as a language to develop a dialect of logic where physical laws are not clean and ideal. Reality is not part of this dialect. Objects operate in contradictory ways, and physical laws operate according to a faulty language system. It proposes analogies bewteen the normal context of a word, and a new context into which it is introduced. 'Hokus-Pokus' applied to machines allow them to function in nonperfect situations.

9.2 Mirrors

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Blackened curtains, rooms, boxes, assistants, and controlled light have played principle roles in magic. Mirrors assembled at angles play curious illusions on our eyes. For this reason it should come as no suprise that mirrors providing the illusion of animation for the horse sculptures of Carousel. Mirrors are magic. Many notable tricks, put to use by magicians, involve the use of mirrors. Blackened curtains, assistants, and controlled light have all been important, but these in no way reduce the significance of the mirror in magic. Double exposure in cinematography, through the use of a mirror positioned at 45 degrees is a common trick. This device, merging two images into one, allows complex superimpositions and the creation of mysterious depth to film.

The central functional device upon which Carousel has been patterened is traditionally known as the zeotrope. Zeotropes are rotatory mechanisms which provide the illusion of animation by means of a prism. These prisms may be referred to as image derotaters. Image derotaters are mirrored faced polygons consisting of one mirror for each image to be rotated.

The ideas and components arranged in this thesis serve to order my idiosyncratic method of developing a creative world within which objects and events may be placed. Fountains, equestrian monument, towers of various odd sorts, and other public forms of expression which will be discussed, comprise the set of individuals which may exist in our world. Wether this is an illusion or closer to some inuversal truth is a function of the adequacy of any particular model. Models are therefore more functional in supplying a useful tool for perceiving the world. Ordering perceptions by bringing forward aspects which perhaps were not noticed before. The world I describe is one motion-picture projectors are time-keepers designed as logical spaces. Each logical space is equivalent to an individual circumstance. The whole of history may be thought of as a large collection of motion picture devices

Figurative speech depends on multiple levels of speaker meaning. The same is true for rhetorical strategies. The point of ironic utterances is to caricature an echoed utterance by performing essentially the same spoken act in a manner designed to suggest that what the locution explicitly expresses is inappropriate. This presents those who utter it as stupid, insensitive, or unsophisticated by mockingly imitating them. A speaker may utter an expression that is conventionally informative, yet convey that information secondary to the speakers intentions or perhaps not even as a purpose at all. There is an explicit level of meaning, and an implicit level on which something else may be meant, these two levels may contrast and effect each other to varying degrees.

9.3 Animation

Animation (anima) is capable of reproducing a world of physical objects by produces the idea of moving form. Carnival and circus are settings or perhaps a theartres where the transformations of beasiaries, and animal forms may perform, in evolving spectacle.

Animation is often composed of beautiful layers of recumbant images. These pictures move together, allowing each other to surface at various times in a performance. The image existing in the frame, however, is only a fraction of the creative energies that are confronted in a successful animation. Other particular significant aspects include the script, the storyboard, and perhaps most importantly, the relation of the movement to sound. This relation is often one of proper timing. Timing relates an often specified duration, the length of the performance, to the passage from scene to scene, and sequence to sequence, including the actual movement of the action.

9.4 Projections of Form: The Six Horses

Vestiges of living form, illustrated by the representation of animals delineate the movement of this living structure. Reading these traces we see that this movement of a living structure is one of a passage, a passage that may shift from the literary style of metaphor to the literary style of metonomy. The movement from the tradition of tomb and shrine to the tradition of animation demonstrates a shift from a concern with simultaneous

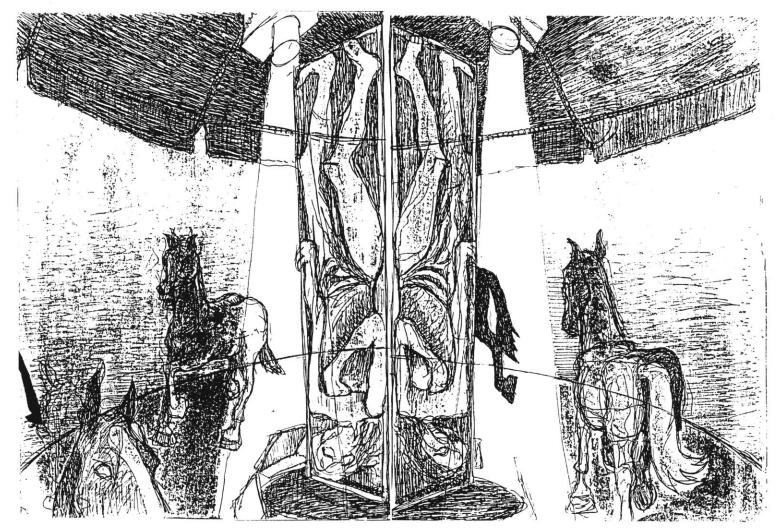


Figure 9-1: Carousel

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meanings and simularity to a concern with succession of time and contiguity. Projections of moving form produces physical objects through carefully geared relations.

One evolution of form is the manifestation of various horse propositions that come from the tradition of equestrian monument. These propositions it will be seen have evolved through the history of animation machines and the motion picture projector into the art of film and the technology of digital video. This evolution involves the kind of substitution demonstrated in logical statements and various other literary devices that will be defined.

9.4.1 Nina

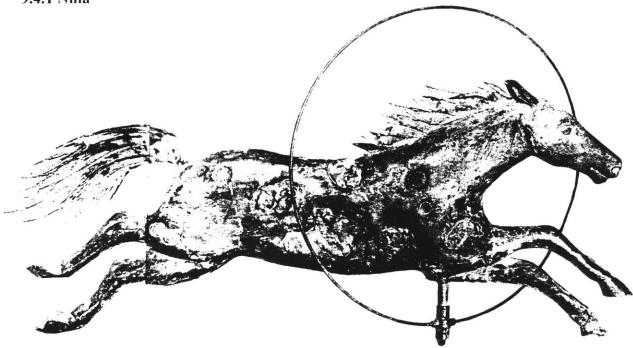


Figure 9-2: Nina; Sheltering, decorative and ornamental

9.4.2 Pinta

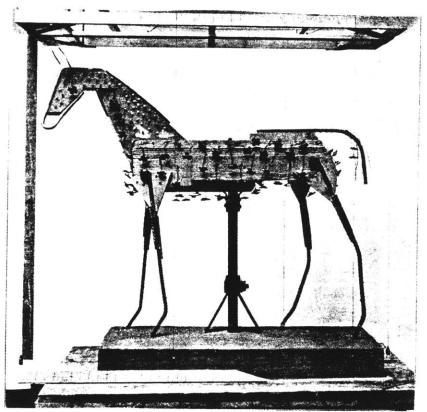


Figure 9-3: Pinta; Metal work and caging, birdcages, chandeliers, forging

9.4.3 Santa de Kaleidascope'

9.4.4 Helter

9.4.5 Skelter

9.4.6 John

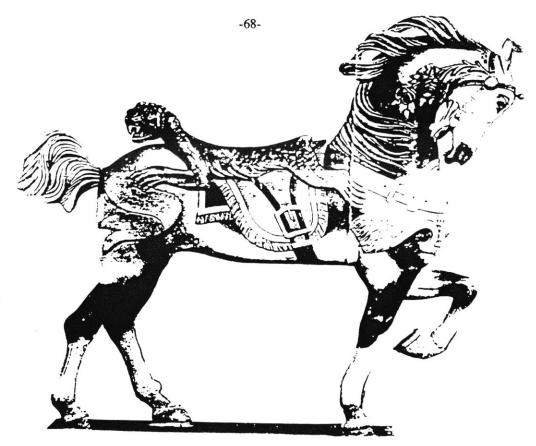


Figure 9-4: Santa de Kaleidascope



Figure 9-5: Helter; Rotating disk animation.

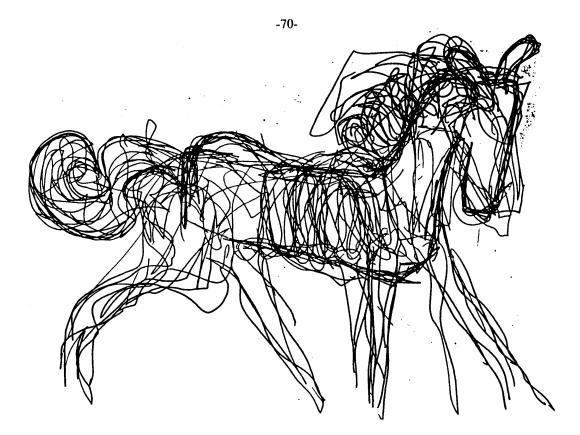


Figure 9-6: Skelter; Six horses skeletons, redundant-frail wire forms.

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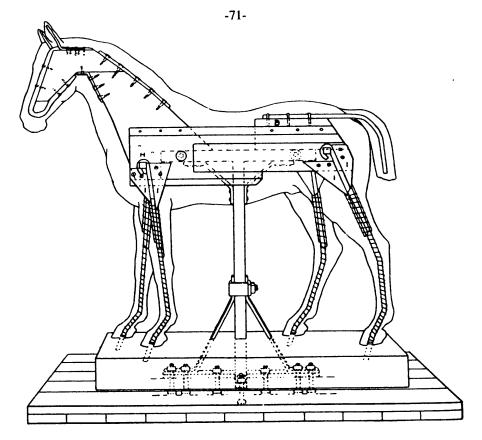


Figure 9-7: John; Variable controlled motor, constant and in flux.

Chapter 10

Possible Worlds for the Model: Carnivals, Landscape, and Societies

Contrary to any intuition of Chimera as beast and so within bestiary, chimera ws not mentioned in any bestiary of the Middle Ages. Chimera did not exist, rather chimera was structured according to some landscape or rather an allusion to time. Chimera is material for interpretation. The concept of landscape and time gives unity to such diparate elements as mountains, sun, trees, animals. -Ginerva Bompiani [Chimera 89]

People are hooded in cloaks, colors are colors, and if you have not walked straight up to now, it is time to turn back.

10.1 Situation

Carnival opposes the cold austere architectural setting from which equestrian monument is placed. If there is anything which represents the dialectic relationship to the contained, highly designed settings out of which the tradition of monumental art stems, it is the idea of carnival, where so often the form of the carousel is found. The placement of this Carousel sculpture in a world of carnival is very important.

10.1.1 A Carnival of Form

The idea which I describe may be regarded as a 'Carnival of Sorts'. All things are contained in pronounciation dictionary from which a set of formal rules are written. To attend the Carnival, words slur, ideas faulter, and questions about reality arise. There is a side show of illusions. I t functions as a merry-go-round. Upon the merry-go-round we turn in circles, going everywhere and nowhere at once.

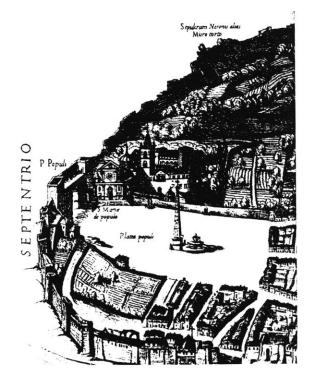


Figure 10-1: Landscape of an overriding dream

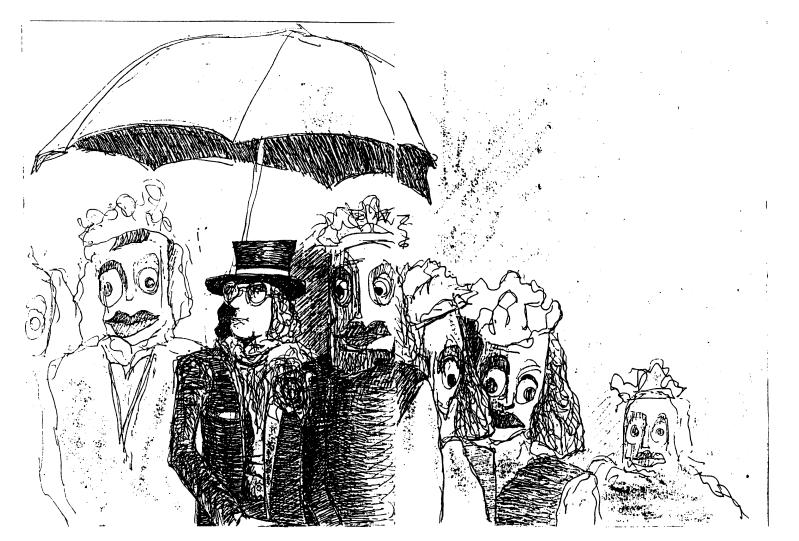


Figure 10-2: A Carnival

10.2 Landscape

Carousel carnival exists in a landscape where everything is transformed by a pronounciation dictionary of slurred, faulty ideas, and unstable facts. One concurrent theme throughout these three works was the investry of these individual statues with the qualities which at each respective time represented the wretched and disatvantged in Puskin's life.

It is from this pronounciation dictionary that a common space is defined. Variations of dialect, sounds, and illusions must be given sound reasoning so that any potential confusion may be avoided. The landscape is our alphabet from which we can choose single letters to inhabit. These make up the symbols by which we live our lives. Perhaps the landscape could be comprised of the various vowels which are articulated in the English dialects.

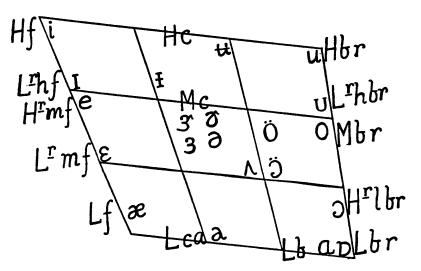


Figure 10-3: Landscape of Vowels

Vowels are pure form. Consonants are for the most part absent. Where they occur they distinguish idiosyncratic dialects. Consonants cause decay and decrepitude to the environment of pure vowel form. What happens is, a consonant, say /r/, affects the various vowels with which it interacts. These vowels are perhaps changed by either physical laws of reduction or quality changes.

In our landscape of sounds, letters become minerals, they are physical resources which are mined and processed. From our alphabetic landscape are built entire civilizations, and from these structured fabrics, the written web of the illogical is woven. In the land/language where Carousel exists, it is celebrated in pure form via carnival which gives it animalistic tendencies towards the ecstatic. Carousel is an expression of pure human form.



Figure 10-4: Society

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References

[Acconci 80]	Kirshner, Judith. Vitto Acconci. Museum of Contemporary Art, 1980.
[Aeneid 34]	Virgil. Aeneid. Harvard University, 1934.
[Carroll 86]	Carroll, Lewis. Symbolic Logic. Potter, 1986.
[Chierchia and Gi	net 90] Chierchia, Genaro and McConnell Ginet, Sally. <i>Meaning and Grammar</i> . MIT Press, 1990.
[Chimera 89]	Bompiani, Ginerva. <i>Chimera Herself.</i> Zone, 1989.
[Design for Death	67] Jones, Barbara. Design for Death. Bobbs-Merrill, 1967.
[Disney 84]	Johnson and Thomas. Disney Animation; The Illusion of Life. Walt Disney Productions, 1984.
[Edgerton 79]	Edgerton, Harold E. Electronic Strobe, Flash. MIT Press, 1979.
[Folk 74]	Bishop, Robert. American Folk Sculpture. E.P. Dutton and Co., 1974.
[Gombrich 63]	Gombrich, E.H. Meditations on a Hobby Horse. U. of Chicago, 1963.
[Grammar of Orna	ament 86] Jones, Owen. Grammar of Ornament. Studio Editions, 1986.
[Haverstock 79]	Haverstock, Mary Sayre. An American Bestiary. Abrams, 1979.

[Historical Lingui	stics 89] Jeffers, Robert and Lehiske, Ilse. Principles and Methods of Historical Linguistics. MIT Press, 1989.
[Hunting for Dina	saurs 72] Kielan-Jaworowska, Zofia . <i>Hunting for Dinasaurs.</i> MIT Press, 1972.
[Lanteri 85]	Lanteri, Eduard. Modelling and Sculpting Animals. Dover, 1985.
[Leisegang 86]	 Leisegang, Franz Paul. Dates and Sources; A Contribution to the History of the Art of Projection and to Cinematography. Magic Lantern Society, 1986.
[Norris 85]	Norris, Margot. Beasts of the Modern Imagination. John Hopkins University Press, 1985.
[Panofsky 62]	Panofsky, Erwin. <i>Tomb Sculpture</i> . H.N.Abrams, 1962.
[Quine 85]	Quine, W.V. Mathematical Logic. Harvard University, 1985.
[The Book of Ima	ginary Beings 69] Borges, Jorge Luis. <i>The Book of Imaginary Beings</i> . E.P. Hutton, 1969.
[The Life of Form	s in Art 89] Focillon, Henri. <i>The Life of Forms in Art.</i> Zone, 1989.
[Verrochio 71]	Seymour, Charles Jr. The Sculpture of Verrochio. New York Graphic Society, 1971.
[von Frisch 74]	von Frisch, Karl. Animal Architecture. Harcourt Brace Jovanovich, 1974.
[Willis 90]	Willis, R.G. Signifying Animals; Human Meaning in the Natural World. Unwin Hyman, 1990.

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