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**ROCHESTER INSTITUTE OF TECHNOLOGY**

A Thesis Submitted to the Faculty of  
The College of Imaging Arts and Sciences

School of Art

In Candidacy for the Degree of

Master of Fine Arts

**“Boundary between human and machine”**

Seulgi Cho

November 2015

Master of Fine Arts in Fine Arts Studio

Rochester Institute of Technology

## **Thesis Approval**

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# Table of Contents

Abstract – 4

Introduction - 7

Development of idea process – 9

1) First Step: Inspiration - 9

2) Second Step: Ideas - 10

3) Third Step: Inspiration of Artistic Process – 12

Study of imagery and symbolism – 15

Body of work – 17

1) Woman – 17

2) Bionic Horse -19

3) Bionic Faces -22

4) Femininity – 26

5) I am timid series -28

6) Machinery men series -31

Painting Method and Material - 35

Digital base 4 color Intaglio-type Non-toxic Printmaking -36

My Art Education and Teaching Experience - 39

Before and After R.I.T – 41

Conclusion – 42

Thesis show - 44

Reference - 46

## **Abstract**

John McCathy and Peter Wright, who are technology philosophers while also being engineers, analyzed the technology of today and found that it transcends the mere role of being everyday tools, and claim that technology has such a significant existence that it can influence the emotions of humans. The products of technology such as machines that have become everyday parts of our lives are no longer simple tools, but their meanings in our lives have expanded into something more complex. The products of technology, they point out, influence and change the sense of perception and emotional state of people.<sup>1</sup> But, to me, they have not adequately explained all the ways in which technology and humans have become interrelated.

Through my work, I wish to describe in my own language the relationship between technology and humans that I believe is significant.

The world that I view is a world where people are infatuated with the efficacy of machines, and where humans coexist with machines. Machines extend the lifespan of humans and also make the lives of humans more convenient. Machines have become such an important part of our human lives that we cannot live without them, once we have benefited from such experience. If machines have become an essential part of our lives, we must now find a model lifestyle in which we can coexist with machines.

Through my thesis artwork, I convey visual portrayals of how the images in our society have transcended their natural form and how people, through artificial forces are now at the crossroads of transcending humanity. Also, by visually portraying how

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<sup>1</sup> Technology as Experience, John.McCathy and Peter.Wright , MIT Press, 2004

machines bring about symptoms of the autistic and shy tendencies of people, I wished to depict a paradoxical glimpse of our humanity through the reality in which we begin to be dominated by machines.



*Bionic Horses, Seulgi Cho*

*Digital Print, 2012*

## **Introduction**

As an artist, I am always thinking of innovative ideas and themes to communicate with people. Ideas come from thoughts that are taken from life experiences and personal research. Not only visual influences, but also practical changes in our lives such as new technologies and social issues have become my subjects and interest. Especially in my thesis, living in different regions of the world has given me exposure to a variety of socio-cultural environments. Experiences give me a diverse background from which to draw upon.

My work is a reaction to my life experiences and reflects my interests. My current interests and inspirations focus on new changes and images of machines. I have always had a keen interest in the image of machinery. As I was growing up, when I came in contact with newly released mechanical inventions such as mobile phones or computers, it was not possible to avoid being infatuated with the new forms and functions of these devices. New inventions have changed the trajectory of the lives of humans. Using ultrasound technologies enable us to see babies that have not been born yet. And, the day and age has come where we can change our physical traits that are not to our liking.

I hope to share these realities that I have felt and experienced through imagery that I have formed through the combination of technology and art. Now, technology is not just an aspect of our life, rather it is a norm on which we rely upon to sustain our lives.



I have experimented with the images of humans and plants by manipulating them to combine aspects of technology to portray how technology has become such an intricate part of our lives. My works intend to combine subtle nuances of social behavior with forms of life that have taken advantage of modern technologies. I want to offer new meaning to human or plant adaptation to a new environment by transforming the appearance and structure of these life forms by incorporating special bionic interfaces. By focusing on the delicate details in my work, I hope to give the viewer a more intimate experience and enable them to see and feel the world through my perspective.

# Development of Idea Process

## 1) First Step: Inspiration

“An accidental encounter”

By the 1960s, technology was having a greater influence in people's lives than ever before and began to define human culture. Some people admired the rapid technological developments and thought that we had found a resolution to problems such as starvation and disease. After the Industrial Revolution, a continuous development of scientific technologies in industry brought us material affluence. Efficiency and product output have increased and spatial distance has decreased. But, also, there have been some adverse effects on cultural development. A technologically advanced and automated society conflicts and infringes upon traditional consciousness and values.

We cannot ignore the benefits and conveniences that an industrialized society may offer, but at the same time, we are losing our identity as a people and a culture. As more and more modern advancements change our daily lives, humans should also try to stay in tune with nature.

One of my shocking experiences that became my inspiration was a science experiment that I read in the news. In 1996, a transplant surgeon in Massachusetts tried transplanting human cells into a rat. He found out a human cell can be multiplied and linked together with the animal's skin. When I first saw the image, it was gross and weird. But the image has not disappeared from my head.

From this accidental encounter, I started to mix images with mechanical and organic parts. This was the beginning of my present art work.



*BBC Online news*

*25 April, 2002*

My painting has been influenced by this environment because I am part of the generation that grew up during this transitional period of technology's development that is related to changes in the quality of human life. I have been watching the news and newspapers that report on the introduction of and the rapidly changing nature of new techniques and inventions every day.

## **2) Second Step: Ideas**

“Boundary between humans and machines”

There is a word that sounds like something far from us but is actually happening next to us. ‘Cyborg’ is a word abbreviation of the term cybernetic organism. It means the incorporation of the body of a living organism and machine devices as one. Even though these mechanical elements cannot operate alone, they can replace biological organs or function in conjunction with a biological body. Artificial retinas, pacemakers and neurological devices are examples of these.

Technology can be used to better the condition of existing biological organs as well. In my case, I had Lasik eye surgery to improve my diminishing eyesight. Technology has replacements for sensory, muscular-skeletal and other organs of the

human body, which leads to the transition of becoming cyborgs. There is another word ‘Android’. The word ‘Android’ means the appearance of being a human, but with the internal mechanics exactly the same as a robot.

These two words demonstrate that the boundary between human and machine is very vague. In other words, we are losing our original human nature. We have imagined these phenomena in the movies or novels, but now we are actualizing this virtual reality into our real lives. The Movie ‘Surrogate’<sup>2</sup> illustrates an example of how the border between human and machine can be collapsed. In the film’s near-future setting, humans have withdrawn from everyday life almost completely. Instead, they hole up in their homes and send robotic versions of themselves, called “surrogates,” into the real world. The remote-control androids, which look like robots perform the operators’ jobs and interact with other surrogates.<sup>3</sup> We can find many examples of these in movies like ‘I-Robot’, ‘A.I’ and ‘Matrix’.

The movies give rise to the question about what human existence means in such a society. Even though, these examples are virtual stories, the 21’st century is heading to the virtualized life portrayed in the movies. I believe that we should look back at what we are missing in this fast advancing life. I want to explain to the viewer how I analyze the world with my eyes and show this to them through my art work.

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<sup>2</sup> Movie Surrogate is a 2009 American science fiction action film, based on the 2005–2006 comic book series directed by Jonathan Mostow.

<sup>3</sup> <http://www.wired.com/underwire/2009/09/surrogates-robot-technology/>

### 3) **Third Step: Influences of Artistic Process**

“Influences: Style and Artists”

Through the previous two steps, I began to shape the subjects and phenomena. Most of all, I focused on creating a new image about the relationship between the machine and the human which can be seen new and fresh by people who encounter my art work.

I wanted to find my own beauty through an artistic perspective from machines' functions and shapes that interested me. I thought that a machine's shape had beauty beyond the mere functionality of the machine. When I visited France, I remember that Center Pompidou was constructed with its bare mechanical systems visible from the streets and with the wiring and tubing exposed to the public. The infrastructure of the building shows the original bare construction materials, exposing the natural scenery of the building. I felt a kind of beauty from the entire building, even though I did not know the aesthetic meaning beyond the visible beauty at that time. Center Pompidou represented the architecture of a machine aesthetic. Machine aesthetic means something machine-made, acknowledging industrialization, mass-production, and engineering, or that uses elements of metal structures.<sup>4</sup> Originally, machines did not involve any aesthetic representation or design. The engineers focused more on performance and function. But, by the end of the 19th century, the outward beauty of machinery became interesting and this attracted the attention of designers and artists. Consequently, a new concept of “machinery aesthetic” emerged in modern art.

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<sup>4</sup> James Stevens Curl, *A Dictionary of Architecture and Landscape Architecture*, 2000, Oxford University Press. Retrieved July 27, 2015 from Encyclopedia. Wikipedia

This concept of “machinery aesthetic” is closely related to my artwork. The “machinery aesthetic” includes various elements of dynamic order, function and form. Similarly, my work style highlights dynamic shapes and the functions of machines in many different ways. In my work, shapes are connected and arranged. Once, a beholder’s eyes begin to follow the shape, they move along with the connected shapes and that gives the illusion of animation and movement.

I am greatly inspired by the artist, “Fernand Léger”. Léger was the first but represents other artists who take the mechanical aesthetic as their own paradigm. He interpreted objects as mechanisms and helped create *Cubism*, which dynamically treated people and nature as machine-like images. The process in which he discovers the beauty in machines is interpreted and reflected in his paintings, which is very similar to my work. Also, he found a method to go one step further from Impressionist form, one that destroys



**Construction workers, final state**  
**Fernand Léger, Oil on canvas, 1950**  
**Collected by MOMA**

shapes and uses the intemperate colors of emerging Fauvism. His works provided a lot of inspiration for the method of producing my work in which machine part is interlocked, forming contrasts or relationships in terms of color and form. Through the contrast of colors used in the engraving, ‘Machine Flowers’, commonalities between my works and Fernand Léger’s can be found in the method of expression

with differentiated forms and at the same time strange crossing lines.

“Kinetic art”<sup>5</sup> also influenced me through the idea of connecting the actual movement to the work to maximize its effectiveness. I installed real fans in my piece called “Machine Face”, in order to animate the stationary image by using actual movements. The movement metaphorically symbolizes the living, and it plays a role in evoking a real life from the dead objects. The “Machine Face” provides a strong message of difference between life and death in machinery.

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<sup>5</sup> Kinetic art is art from any medium that contains movement perceivable by the viewer or depends on motion for its effect. Wikipedia

## Study of Imagery and Symbolism

Symbolism means the systematic use of symbols or image conventions to express an allegorical meaning. Symbolism focuses on more philosophic meaning about the content of art than an actual style.<sup>6</sup> Modern symbolist painters applied symbols in different ways as their own visual language and reflected ideas beyond the meaning that literal objects contain.

*The symbol is an object of the known world hinting at something unknown;*

*It is the known expressing the life and sense of the inexpressible.*

*But in merely abstract paintings, the world of the known has completely vanished. Nothing is left to form a bridge to the unknown."<sup>7</sup> Jaffé*

Subjects are personally interpreted by the intuition of the viewer to yield meanings from the viewer's unconscious thoughts. The images deliver their import as the individual observer tries to discover how they are personally significant. Artists do not use objects as the sole meaning anymore. They add new direction beyond the meaning of an object's representation.

There are two ways that I use objects as symbols. One is utilizing the object's shape as a compositional element and another one is using the object to stimulate an association with the form. For example, when people express love in a work of art, they might apply a cherry blossom metaphorically to stand for the feeling. I intend

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<sup>6</sup> <http://www.tendreams.org/symbolism-art2.htm>

<sup>7</sup> Carl Jung, Joseph Hendersen, Marie-Louise von Franz, Aniela Jaffe, and Jolande Jacobi, *Man and His Symbols*, 1968, Aniela Jaffé, Part 4 Section "Symbolism in the Visual Arts", 310p



viewers to use their imaginations to transition from one image to another until it results in new meaning. Depending on the viewer, the creative image may provide different interpretations forming different meanings.

Mechanical parts shown in my works form eyes, noses, mouths and their functional activities. In the thesis works, I typically applied different mechanical elements to each part of the human face in order to show new sensational symbols for my definition of a machine.

My intention in providing a new definition for machines is that the viewer will create a new understanding of machines rather than simply recognizing the functions of machines.

## Body of Work

### 1) Woman



*Woman*

*36" x 36", Pigment & Gold dust on Mulberry paper, 2010*

When I came to America in 2009, it was around the time when President Obama announced ‘the Mexico City policy’. The U.S. government would not provide funding for families who wanted the services of clinics or groups that offered abortion-related services overseas, even if funding for those activities came from non-government sources.<sup>8</sup> Even though I was not a strong feminist, as a woman, when I heard this news, it made me think about the right to abortions and birth. Abortion is surgery that gets rid of a tiny embryo inside of a mother’s womb by scraping and cutting out the tiny fetus with a cold machine tool. This made me realize that new inventions could also come as a byproduct of technological advancement. When machines did not exist, abortions were difficult and dangerous. The invention of machines has changed life’s direction for each generation.

### **Detail**

In the painting, I wanted to give the feeling of a mother’s womb. When I was young, I asked my parents where babies come from. I remember they answered that they came from a person’s belly. This memory naturally linked pregnancy and a belly image. Pregnant women gain weight and it causes lots of back pain problems. To illustrate this issue, I strengthened the back with little machine parts connected to the hip.

I painted the background color with a skin tone and a bloody red color gradation and positioned the subject as if it is floating in the belly. To portray the body of a pregnant woman, I drew the flesh as it is stretched across the body to the point where the flesh had burst and was being held together by wires. The woman’s entire body is

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<sup>8</sup><http://abcnews.go.com/Politics/International/story?id=6716958&page=1#.UEpUelTGzC4>

interconnected with machine parts and holds the remainder of the body intact. Also, I made machine hearts that reached to the belly. Many viewers said its' shape resembled a kangaroo, but it makes sense in that a kangaroo also has a bulging stomach and their baby lives in the pouch of their mother.

## 2) Bionic Horse



*Bionic horse*

*55' x 30', Mixed Media on Mulberry Paper, 2011*

The Horse as a symbol of power and strength is widespread through most cultures. I intended to change the meaning of 'power' from natural energy into artificial energy so that it contains a paradoxical expression. Basically, it has the

appearance of a horse, but machine parts replace all the details. In the past, we used to use armor to protect humans or animals, but in the 21<sup>st</sup> century we are using science to make a creature stronger rather than protecting their exterior. As we use bionic devices to improve humans, they will eventually reach animals when we overcome scientific limitations. I imagined that humans would fortify natural functions via transformation or machine devices. I transposed my imagination of this idea into a painting.

### **Detail**

My art usually comes from spontaneous thought. I imagine entire stories and shapes, but do not sketch any detail in the initial phases of my art. I draw only basic underlines and start sketches from one point on the surface. Images pop up in my mind while going through the initial framework of my art and the details are incorporated into the piece.



**On the process of creating Bionic horses**

This painting was sketched and painted according to the flow of my art routine. From the first horse to the background, every object interrelated to the others. They share their energy as a family through wires, but also separate forward and backward with dynamic contrast between the objects. One of my favorite movies 'Avatar' shows that the avatars communicate with each other by using their tails. The way the creatures

connect and share information and energy were really impressive factors in the movie. I applied this concept and linked horses with wires and wanted to show viewers that they were connecting with each other.

The key to the painting is the sensory organ's change. Animal's senses are vitally important to their survival and their wellbeing. I thought if I replaced the sensory organs with some technological elements, it would be very interesting. I replaced every sensory organ with more powerful modernized parts. The horse's teeth were replaced with saw teeth and the nose was transformed into little fans so that they could make wind and its sense of smell would be exaggerated by this wind. These organs interact and have more than one function. The moving fan in my work also represents a kind of life force. However, I try to insinuate the appearance of modern society that produces energy solely relying on machines rather than humans.

### 3) Bionic Faces



*Bionic faces*

*55' x 30', Mixed Media on Mulberry Paper, fans on the top of the painting, 2012*

I worked on this piece at the same time as 'Bionic horses'. Both pieces use similar methods. What is unique about this piece is the fact that I utilized an object. Professor Tom Lightfoot at R.I.T inspired me to use objects as an experiment. He encourages students to use various materials or objects so that they break the boundaries, which are fixed in their minds. Since I have worked only with paint or art materials, I decided to use something different that connected to my work.

I was concerned about what objects would be relevant to my work in order to present movements symbolically. The object that interested me was a fan. First of all, a fan plays a role in visually delivering movement. I judged that if the human face moves with the fan's power, which turns by electricity, then this could also become the source of power for the functioning of each part of the body. It would appear, visually, very ironic.

### Detail

The human face has thousands of sensory cells, an organ that plays various roles in eyes, nose, mouth and ears. The sensory cells of each organ are connected to the brain, moving by receiving signals from it. This is a very organic process in which a problem that occurs in any one of them affects another one.



On the process of creating Bionic faces

First, I expressed the left side of the face as if iron envelops the solid skull that covers the human brain, which creates an image where a steel panel protects the brain. Also, I made an image of antennas for the ears that play a role in hearing to replace the ears' function. I added mechanical elements like screws or gears rotating in the



eyes and nose while trying to express the look of the human face.

I emphasized the eyes at the center of the human face. For humans, our eyes are one of the most important organs. Especially, once I met blind people at R.I.T whom I did not frequently meet elsewhere, I became more empathetic and realize the importance of the eye. The eye consists of various organs of sight such as the cornea, pupil, lens, retina and optic nerve. I substituted each of the structural elements that are complex and play a role in seeing by complicated mechanical elements to show that they play seemingly simple, but internally complex functions.

I highlighted the eye in the third face on the right, too, but expressed it to have a little different look. I separated the muscles next to the mouth subtly moving several lines and reconnecting them to small parts so they look like they move organically. Under the skin, divided by a line, I tried to express the idea of gold colored blood flowing in the blood vessel by using gold dust. This vessel leads to the fan. The source of its power is the fan's power. In exhibitions, I intentionally turned off the fan in the middle of the other three fans. Since two fans were turning, I wanted the stopped fan to induce the audience to turn it on and off by pressing the switch. This would be a more direct communication between the artist, artwork and the viewer.

I used warm colors to connect to the overall series. I also wanted to induce viewers to become interested in the mechanical materials through the reflected light from the gold dust.

I usually produced small sized works, emphasizing small details. But this time, I

tried to create a more intense impact by increasing the size. I refined and enhanced the part that I was not familiar by increasing the size of small parts of the subject.

Changing the size showed an awkward harmony at the beginning. But, through trial and error, I found new possibilities. In the future, I plan to continue with a new series using different sizes and objects.

#### 4) Femininity



**Femininity**

*48"x24", Mixed media on Mulberry paper, 2011*

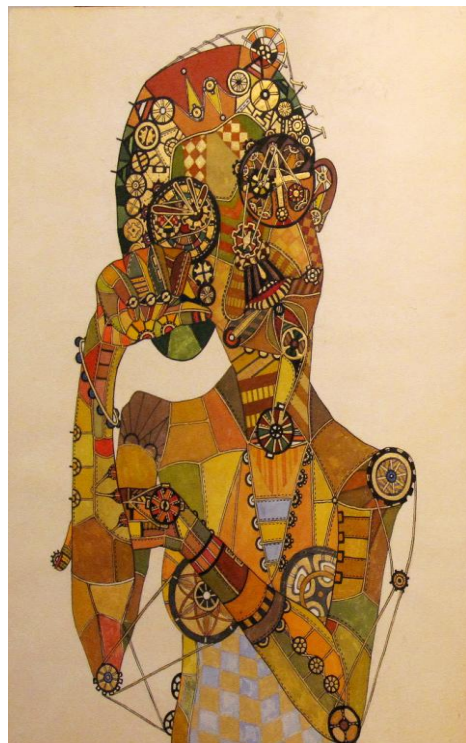
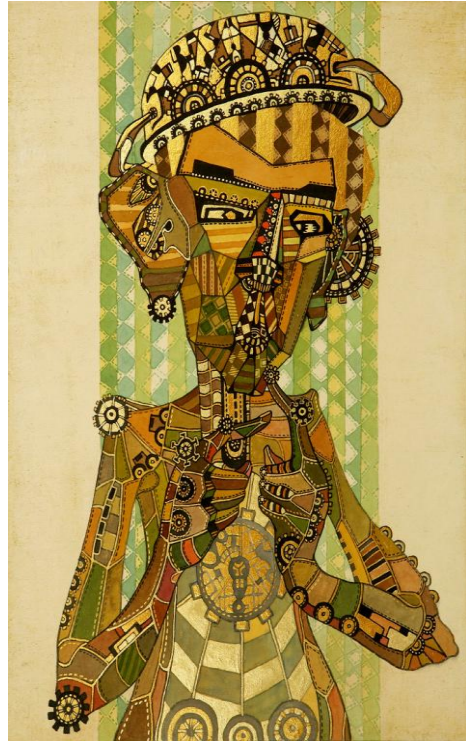
## Detail

“Femininity” is an artwork about femininity as shown in the title. The reason why women often appear in my work is that the curves or characteristics of the female body are very attractive images. The waist lines or shoulder lines and curves like the shape of the bosom suggest subtle feelings different from those of men. I tried to make a paradoxical image of the difference between the inside and outside by mixing this pure natural feeling of the woman with the cold and hard image of the machine. The face represents seeing, hearing and feeling; the breast produces mother’s milk; the womb has the role of producing a child; and each part or joint is involved in moving. All body organs in this piece are organically connected through fine lines like interconnected blood vessels, and these lines are finally bound together with strings. I tried to create a work in which, if the viewer’s eyes start in one place, they will move naturally along the flow of lines that are organically connected. And by distributing mechanical elements in each part along the flow of the moving gaze, the viewers would enjoy the entire work without missing any parts.



**Part of Femininity**

5) I'm Timid series



*I'm Timid series*

*Each 18"x24", Mixed Media on Mulberry Paper, 2009 ~ 2011*

Human emotions are segmented in various ways. They face new problems, depending on time and the environment, and then experience new emotions. With the invention of the computer, game addicts appear which causes maladaptive phenomena like socio-phobia or social maladjustment. Working as an art teacher, I have met various little children who have problems with emotional expression. The cause for the children's passive and clumsy expression of their emotions can be found in genetics, and at the same time, they are greatly affected by educational methods and lifestyles. Also, the maladaptation of lack of emotions caused by computers, smart phones and games gradually makes human emotions colder.

My "I'm Timid" series starts from observations of such social phenomena. The disabled I met after coming to R.I.T turned my eyes to a new place. I would see looks in the actions and facial expressions of students who are not emotionally settled. The main issues included their constant eye movements without keeping them in one place or crying due to the clumsiness of expressing their emotions and their maladjustment to society expressed through violent behavior. I am aware of these unique movements or characteristics in others because I am sensitive to the visual as an interesting form. By expressing this in my way, I want viewers to empathize with people who have emotional problems.

### **Detail**

The first and the second work symbolized a child who is thinking timidly, folding both hands. It is said that it is difficult to note common symptoms in depressive people, but the experts say that the symptoms are expressed as a decrease in concentration, helplessness or timidity. As one side of this look, passive children

prefer independent play like what is experienced with computers or mobile phones. It is very ironic that cold machines like cell phones and computers have become the media that replace feelings. The starting point of this serial work is the mixing of frail and weak humans with mechanical images paradoxically allowing the viewers to feel sympathy and compassion. The brain is expressed as an image of a machine running, and the child with an immature appearance is described as a child who is covered with a pot.

The third work is an image of a tender-hearted little girl who is surprised by something. Women are often shown as frail or weak symbolically when seeing an insect or a disgusting or brutal scene. I tried to show a humorous image by symbolizing a girl who is surprised, holding her own body made of mechanical parts.

The fourth work is one that shows a crying little child. In South Korea, there is a saying, "A woman's tears make a man weak." To that extent, a woman's tears symbolize weakness and frailty and arouse other's protective instincts. I would like to produce a subtle paradoxical feeling by mixing this frail image of a woman and the intensiveness of a machine. The gold dust used in the work was used for creating the brilliant feeling of a machine. By expressing the inside of the body with patterns, I tried to divide the outside and inside of the skin.

## 6) Machinery men series



*Machinery Men series*

*Each 8"x10", Mixed Media on Canvas, 2009 ~ 2011*

When I came to R.I.T for my first year, I had no idea what kind of artwork to do. Beyond school, life itself was a difficult matter for me. It was really hard to start with large-scale work without a car to get materials. Even, art supplies such as mulberry paper, brushes and frames that I used to use were not even in the art store.



I had to begin with a small series of acrylic paintings, the ‘Machinery face series’ and not think about the shortage of supplies. It had been a long time since I used acrylics in high school. I mostly used oriental materials during my undergraduate studies. The different materials and supplies that I had not used for a while made me consider different textures and moods. Compared to paint on paper, painting on canvas with different brushes and different color schemes made new images and I realized that I could express various forms of images with all kinds of materials and that would break my artistic mold.

Acrylic or oil paintings and Eastern paintings have their own characteristic colors. Eastern paintings have calm and toned-down colors while acrylic or oil paintings have very intense and vivid colors. Dealing with both kinds of materials, I realized that the images and directions match the characteristics of the materials. I decided to produce a new series using acrylic materials that I had in front of me.

After worrying much about what subject matter embodied my surroundings, my interests and my situation, I decided to explore the new perspectives I experienced. The appearance, style, fashion and characteristics of the different people I met after coming to the U.S. always caught my eyes. In South Korea, there are usually fashionable items or styles in each period of time. In contrast, most American people I met used old cars until they got rusty or hardly ever threw away clothes and shoes. Also, I found the field of beauty treatment less developed here, so I had the impression that the untouched personalities of individuals could be noticed more. After thinking of American’s characteristics, I came to think about uniquely turning people’s faces into mechanical images. Since then, I began brainstorming by drawing

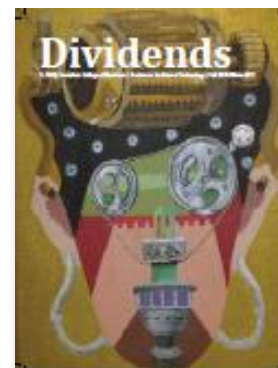
the images of memorable people I met when I was shopping or on the street and grafting on the mechanical images I came up with. Although people do not speak the same language, our visual language is not greatly different, globally. I judged that people's appearance would be very interesting and connect with the viewers.

### Detail

The first work from the top left shows a student who majored in metal. I produced an image with the iron wheel, a protective tool he uses while working. By grafting a machine to his eyes, the image reminded me of the student. This work was put on the cover of the Magazine of the College of Business Administration at R.I.T.

The work on the right side expresses a reticent lady. In South Korea, a taciturn and quiet man is expressed as 'Having a heavy mouth.' I symbolized this through the heaviness of the scale.

The figures in the second line are the students often encountered at school. A smoking, female student was expressed by having her hold a screw between her lips while the look of a hardworking student was expressed by substituting round glasses with spiral spring. I expressed their staid image of tangled hair by driving screws into their heads.



**Dividends Magazine  
Fall-Winter 2010-2011**

The figures in the third line represent friends. One is depicted with eyes of different sizes by choosing objects with different weights and painting them using a

different scale. I reflected the unique characteristics of a friend who loves cars by expressing his head like a tire. The right side shows a friend who majored in film. I illustrate his head with rolling film and it rotates around the eyes, nose and mouth.

The figures in the last line are a couple; a blunt old man and a countrified old woman. The old man with an unfriendly and harsh tone was expressed by a machine with a sharp edge, while the red-dyed perm hair of the old woman, who looks unsophisticated, was expressed through the shape of a running fan.

## **Painting Method and Material**

Materials that I use reflect my identity. I have painted on mulberry paper with various colors, used reflective materials like “gold dust” along with printmaking techniques. These materials are very common in oriental painting. But, instead of sticking to a traditional style, I have tried to find new ways and believe it is unique compared to the traditional ways. I want people to read aesthetic characters through images and materials.

Color, as a major component of expression and emotion, has been a powerful tool for me as a painter to express my concepts. The process I use with several layers of brush strokes might seem monochromatic, but it shows subtle and different degrees of depth that seems very oriental and delicate. Texture and pattern are also important components of my work, and the results give an intriguing surface quality that also helps to convey meaning.

The main materials I used for painting were Oriental paints and gold dust. To express the image of metals and machinery, gold dust was dissolved into the paint pigments. Depending on the angle of the lighting in which the painting is viewed, the parts that use gold dust reflect light and people who see this textural quality are able to empathize with the machine imagery.

From a material point of view, I wanted to receive a different type of admiration from the audience. As an Asian and as someone who uses Asian materials, I wanted to know what Westerners thought of these materials. For many people, before they

realize that I used Asian materials, they enjoyed the work simply from a pure point of view without any prejudice. And, they also came up to me to ask what materials I used. After hearing that I used oriental art materials, they became more interested and wanted to know more.

## **Digital base 4 color Intaglio-type Non-toxic Printmaking**

While I studied at R.I.T, I had the chance to learn the Intaglio print making process from Professor Keith Howard who began experimenting with non-toxic printmaking in 1996. He was the foremost developer of Non-Toxic Intaglio-Type techniques. I have learned lots of different traditional print making techniques in Korea, but I had no information about this technique until I came to RIT.

Non-Toxic Intaglio-Type includes a wide range of techniques that are different from traditional toxic materials. This technique is based on transparent films on metal plates. One of the different features of this technique was the ability to recycle the plates for another image. Also, Intaglio printmaking can combine multiple techniques at the same time and print over the image with different plates. The most significant development in this new field is a photo polymer (i.e., light-sensitive) film, originally designed by Dupont for computer chips. This film can be laminated to a metal or plexiglass plate, exposed to light with a stencil, and developed in a dilute soda ash solution. This permits photographs, hand-drawn images, or other stencils on mylar or transparencies to be printed. Photo-based Intaglio-Type is often combined with other Non-Toxic Intaglio-Type Techniques.

This intaglio process is meaningful because it is a technique that started from a deep exploration of materials. Traditional printmaking processes are often harmful to humans. Any materials used in this non-toxic process of production are harmless to the human body. In addition, what was attractive about this was imaging work with a computer. People usually use their hands when they make an intaglio print. And yet, this work uses a method harmless to the human body, simply exposing the plate to light using a transparency made with a computer. I felt as if the process of using a machine, a computer, had a thread of connection with my work, which made it even more attractive.



**Machinery flowers**

**Each 24"x18", Intaglio Printmaking, 2011**

## **Detail**

I did not miss any of Kieth's classes over two years. Not only was I curious about new techniques, but also I thought that I could apply them to my work. The part I found most attractive of all was the color of the inks. The ink produces delicate colors that are different than in oil or acrylic painting. The colors created by overlapping two or more colors achieved with several printing plates are similar to those colors I produce by overlapping them on the paper with a brush. I was very fascinated by the colors of intaglio when I encountered this technique for the first time. I wanted to deliver these delicate layers of color in my exhibits.

The reason I chose sunflowers as the subject matter for this print is that, if I look at the round center of a sunflower, it sometimes gives an illusion of a machine moving. In other words, the sunflower was one of the flowers that had a mechanical impression for me. With this sunflower, I created mechanical images using Photoshop as an extension of the machine series. I produced four plates by separating the file into four layers using Photoshop. I chose yellow as the main color and attempted to create various colors on the remaining plates to produce four versions of the sunflower: yellow tone, blue tone, red tone and brown tone. It came up with stronger colors than those in my paintings.

## **My Art Education and Teaching Experience**

Art education has been part of my life from when I was young. I have been raised by a mother who has been a teacher for 25 years. She was an educator at home and at the same time a mother. There were always reasons for what she tried to teach. She wanted me to learn music, art and sports. She also thought experiencing different kinds of life would be helpful for our future. I went to an art middle school and high school. I learned some art techniques in middle and high schools. This solid education background led me to have confidence in teaching students and these experiences naturally made me contemplate the role of art in education. It made me want to teach after I got into the university. I have taught art from elementary students up to highschool students in Korea and I also had a chance to teach college students in America while finishing my master's degree.

The experience of conducting seminars on techniques using Oriental materials and the techniques of making paper for students at R.I.T as an instructor over two years was wonderful for me. It was a great chance for me to experience the differences between Eastern and Western students. Eastern students who are familiar with Western materials and Western students who are unfamiliar with Eastern materials all had different attitudes toward the materials. I realized that American students appreciated the novelty and had a strong curiosity about Eastern materials and techniques through these classes. Some students told me that they signed up for my class because of the different styles of production they saw in my graduate work. Western art materials in South Korea have become familiar because of the long influence of Western countries, in addition to the influences from Japan since the



Japanese colonial period. The unfamiliarity and freshness that the American students felt about Eastern art materials motivated new research and work for me while I introduced these Eastern materials and techniques.

### Seminar Class

When I teach, I want the students to start by seeing and touching the object or subject. Then, students find clues to build interpretations and thoughts. They gain an



awareness of, and confidence in, their own thinking.

Concentrating their awareness to sensate subjects supports a type of knowing that is informed by insight and imagination. The making of art and aesthetic analysis offers an education where learning proceeds from direct sensate experience, intuition and actual doing.



Feeling and experiencing the characteristics of the materials themselves and producing works of art inspired by the materials will arouse

pleasure and interest in viewers of the unique art. Hopefully, this experience will be the foundation of exploration of new materials without prejudice.

## **Before and After R.I.T**

My work at R.I.T was a new experience in which I could find my interest and sense of beauty in a new environment and background. Examining the process in which I express my own images, symbolism, machines and various new interpretations of eastern materials provided me with new motives as an artist. In the past, I mostly used paints on paper. While, the intaglio techniques and other lessons I learned at R.I.T opened the possibility of trying new methods of expression. By trying large-scale works, I was able to graft objects onto them or try new subject matter, breaking away from the traditional style of work that I had previously concentrated on. I experienced different intensities that the different sizes provided. In the future, I am going to try to use new objects more. Grafting new objects onto paintings not only inspires me in finding new subject matter but also provides visual fun.

The greatest thing I got from RIT and my MFA program is the confidence I feel in communication and dialogue with people. In South Korea, I excessively stuck to the completion of my work and learning new things. I invested a lot of time in this. However, I developed a vision by looking around at the surroundings and at myself through critiques and conversations during my master's program. In addition, I felt the charms and benefits provided by the properties of the eastern materials themselves. My experiences in America made me see what I took for granted as an Easterner.

## Conclusion

As I wrapped up my MFA exhibition, I was able to reflect upon my life experiences from this place. The difficulties I had with language when I first arrived and the difficulties I had due to changes in my living environment have manifested into the current results I have now. The interest I have always had in the images of machinery, and my habits of perceiving the fast changing nature of the world seem to be embedded in my work in the form of vestiges of the hardship of adjustment I had in this place. And here, I was able to discover many new techniques and approaches. My exploration on the relationship between humans and machines will continue.

I remember once reading an entertaining but somewhat sad article “A machine that cries for you.” In that article, when bodies lose various functions, implants, artificial eyes, feet and wigs etc. serve as support devices by filling the roles of the functions lost in people’s bodies. The supportive device can even cry for people with weak “emotive expression”. The device is used in a situation where someone has to cry but just cannot release tears. When a button is pressed, a tear shaped designed device releases a crying noise. It is just like a robot. As I was reading this article, I was reminded of my last project<sup>9</sup> I worked on at R.I.T. Using a rotating gear on top of a small TV, I made an eye and used a lantern to make an ear. Although the TV did not function properly, it made a static noise and made it seem as though a crying boy was speaking.

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<sup>9</sup> Picture on 43 page

I still love flat surface work, but through many new experiences and many realizations at R.I.T, I plan to focus on new objects and attempt many new things. And, I look forward to my life communicating and interacting with my audience through my exhibitions far into my future.



**Crying Boy, Mixed media, 2011**

## Thesis Show



Scene of thesis show





**With John Remo, Scott Riddel and Herick Soderstrom at the thesis show**



**With my committee Professor Zerbe Sodervick and Tom Lightfoot**

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