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A Thesis Submitted to the Faculty of
The College of Imaging Arts and Sciences
School for American Crafts
In Candidacy for the Degree of
Master of Fine Arts in Metals and Jewelry Design

Panorama

by

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Rochester, NY
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Abstract

The series of art forms “Panorama” was my visual representation of interpreting an individual’s world and invisible 360 degree space around him or her. By observing different scenes and people from above, I simplified them and their panoramic space into dots and spheres through my imaginary bird’s eye. The core idea of “Panorama” was a perception within or from this personal encompassing space.

With experiments and new techniques such as welding, the art forms turned out as a pentagon with five free-standing steel panels and four wearable pieces with aluminum structures. These wearable works were hung from the gallery ceiling within the 7 1/2 ft. pentagon. With the committee members’ advice and help, I was able to finish them because the materials, fabrication techniques and setups of stations for these techniques were new to me. This project allowed me to explore the values and meanings of panorama, which was not only a physically wide view of landscape. In addition, it was an opportunity to work on a larger scale project with various media and techniques.

After the exhibition, feedback at a thesis defense gave this series new possibilities to explore its theme with different materials, scale, and composition in another setup in space which would deepen my own understanding and interpretations of the concept. These factors would help viewers to interact with the work while increasing the clarity of my intention, to discover the uniqueness of the panoramic space. Several qualities of panorama—size, shape, spheric elements—were visualized in this series yet clarity to connect my project to the viewers could be investigated in depth.
Thesis Committee Final Approvals

Thesis Title: Panorama

Chief Advisor: Leonard Urso

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Introduction

A wide or all-encompassing view triggers illusions as if viewers are in the center of the world. The inner space within this view is an isolated and unique space that visually represents our range of perceptions or imaginary perceptions like a bird’s-eye view. By being in the center of a 360-degree space, viewers experience the separation between themselves and the rest of the world, or the integration of themselves into the world depending on their perspectives and (physical and/or inner) senses. In the 360-degree space—panorama—they capture a moment that boundaries between themselves and the world change. Therefore, different relationships between viewers and their perceptions or surrounding worlds were exhibited in this series of art forms, called “Panorama.”

Panorama: Concept

The term panorama is a wide image of unbroken view, which is familiar in the camera settings of a cellphone. However, in the contemporary art world, it is common for artists to interpret it as a space or art form which covers specific areas. Modern artists try to transform space into a different world, while viewers interact with the space through its media, layout or artwork itself. With imagination and free interpretation, artists add new or different concepts to existing ideas which have been constructed based on traditional interpretations and images by past artists and viewers. Therefore, what makes my work different from others’ artwork is how I interpret the idea of panorama and how to render it into tangible objects, just like how other artists explore with their imagination.
When I looked over a crowd of people from above, I imagined how differently they perceived the world. The world that somebody sees is different from the one I perceive even though we are at the same place and time. People do not share the same vision, which leads to a question; if a person's perceptions are visibly materialized, what images will they consist of?

Perceptions, including both physical senses and inner thoughts and feelings, shape our own personalities and determine who we are. Perceptions may determine people and how they live in their individual worlds. Here, I saw perceptions as an invisible 360-degree space surrounding people, a panorama. This space had boundaries between people’s individual worlds and the rest of the world. This space could be related to a personal space or territory, usually determined by a personal preference and cultural background. It meant that each one of the panoramic spaces had its own characteristics reflecting the person inside and shaping his/her inner world.

The 360-degree space expanded around the viewer and covered the area where that person stood. This encompassing area demonstrated the artistic interpretation of panorama: creating a world by defining a specific space through a unique composition and media. In this exhibit, panorama became a representation of a person’s perceptions as well as a symbol of his/her individual world.

**Shapes of Panorama: From a Dot to a Sphere**

As a representation or visualization of a person’s world, panorama was a 360-degree surface to separate the person inside from the rest of the world. Whether it was an open or closed
space, it was an isolated private territory where an individual could live. When I looked over the
crowd from above, these individuals looked like tiny moving dots. Their worlds and
personalities, shaped through their experiences and senses, were crystallized in the shapes of dots
within the sphere shape of the panorama.

A sphere, the shape of the panorama, has been related to a shape of perfection and the
world in many cultures. This implies universality of our ancestors about how they viewed and
imagined forms of the world; at the same time, it proves the value of a spherical shape. In these
cases, a sphere represents a never-ending cycle, almightiness or closed territory facing all
directions. It became a symbol of unity, harmony, protection, perfection and universe within our
world.

In the process of investigating the shapes of the panorama, spheres had been often
distorted, exaggerated, transformed, and overlapped in my mind. This process was an inner
transition from my images, memories, and feelings to simple or chaotic abstraction. For example,
my lens were set at various angles: at the ground where people passed by to look up at them and
what was beyond them. Whereas, in a bird’s eye view was to see the edge of our expanding
world, and the horizon to separate the earth and sky. By seeing the view at multiple angles,
panning, and zooming in or out of my lens, layers of images were constructed, which would
evoke feelings or memories later.

These images were altered or remained close to original scenes (I do not know how they
change and how long it took—my brain and mind did that) and then, I could start to connect
different sceneries. This was similar to the movement when a path of dots becomes a line or
multiple dots are connected in lines. These lines are connected to form a shape with dimension
while other dots spread and expand the image of a world by keeping lines longer and more
complicated. These transforming graphics overlapped with the simplified image of people who looked like moving dots from my imaginary bird’s eye. (Diagram 1)

Diagram 1: transforming graphics

- Dots in different sizes, intensity and shapes
- Lines created from multiple dots
- Shapes created from more than a single line
- Dimensions created in shapes with various dots and lines

Therefore, when I simplified the shapes of people as dots, I also saw a sphere encompassing each dot because their 360-degree vision or individually independent world took a form of sphere around them. As a result, I repeated dots and spheres throughout the series of my work. Sometimes dots were starting and ending points or connecting sections to create a line, as well as spheres which linked with lines or other spheres to define a surrounding space around a human body. Abstract images were created from dots and spheres (the two elements connected with lines) and displayed panorama as solid objects that surrounded people.
Individual and Panorama: Inside and Outside of a Panorama

When focused on the relationships between panoramas and individuals, I realized that there might be three potential players: panorama, the person inside the panorama, and the person/people outside that panorama who could interact with the person inside his/her panorama. Here, panorama was restricted and expanded by the relationship between the person inside of it and outer factors. Also, it was based on the distance from the person to other individuals. In this show, my intention was to exhibit the aesthetic value of panorama in multiple sizes and shapes and how it changed among the three players.

As an example of three players, the Colosseum in Rome is a stage to look at. There, the actor or fighter, depending on what the spectators want to see, becomes a focal point, being stared at by the audience around him. The stares from spectator seats create implied invisible lines in various lengths towards the performer while the performer expands his panorama to reach them through his body expression. If he can successfully remain as a center of attention on the stage, the interaction between the audience and him continues within his panorama. He can take the audience in his own world treating the whole arena as his panorama; at the same time, he reacts to spectators’ emotions (excitement, disappointment depending on his level of performance) through his panoramic vision. Either way, the performer and spectators share the panoramic space and communicate with each other. This imaginary image displayed the visual relationship between the performer and spectators in the extraordinary panorama which became beyond personal space, and yet it could be controlled at a personal level. (Diagram 2)
Diagram 2: the panorama in the colosseum

- Colosseum: outer solid line (concrete)
- Performer: bottom outlined dot (concrete)
- Spectators: solid dots (concrete)
- Direction of interaction from spectators towards the performer: dotted lines with arrows (abstract)
- Interaction from the performer towards spectators: dotted circle (abstract) / Large Panorama
- Personal space around each spectator: dotted circle (abstract) / Individual panorama

In this series titled “Panorama,” I hung four wearable pieces from the ceiling within a pentagon, composed by five free standing panels. This layout was similar to the panoramic world in a colosseum, but with various dimensions. These five panels created a boundary between the inside (arena) and the outside (the rest of the world). Their contour played the same role as the architecture of the colosseum that divided drama (a panoramic world where a performer and spectator lose their own personalities or “selves” through a performer’s art) from reality (where spectators were located). Within this space, the roles of performer and spectators would be carried in three different ways. These ways could be: (1) viewers inside and outside of the pentagon become spectators and performer (2) viewers inside and outside of the pentagon become spectators and whole works are treated as performer (3) viewers who interact with the
hung piece(s) become performers and the rest of the viewers become spectators. (Diagram 3)

Diagram 3: interactions within the panorama

- Solid lines: five panels of the pentagon
- Solid dots: Viewers serve as spectators and performers at the same time while they observe within or around the pentagon
- Dotted lines with arrows: direction of viewers’ stare, which can be interactive or one-way
- Outlined circles: four wearable pieces

- Solid lines: pentagon
- Outlined circles: works as performer, or subjects of observation
- Solid dots: viewers as spectators
- Dotted lines with arrows: viewers’ watch

- Solid lines: pentagon
- Solid dots: viewers
- Outlined circles: works that become performers when they interact with their viewers
- Dotted lines with arrows: viewers’ watch
However, these roles would be sometimes fluid. In the case (1), viewers inside of the panoramic space could see people on the other side who played a role as a performer, or vice versa. Depending on where they stood, one group became a performer and the other became a spectator through the panels. Even though they were not aware of taking a specific role, they perceived each other, which would give them a different impression of the whole view from when they interacted with the artwork by themselves. With number (2), viewers on both sides of the pentagon would interact with the work as a whole or individually. This might be a common and traditional relationship between the viewer and artwork, controlling the work as the subject of observation and interpretation. In number (3), viewers who interacted with wearable pieces inside became performers while viewers at different positions within the pentagon could be spectators. This time, the relationships in the pentagon were on the assumption that certain viewers acted as models of each piece or a part of the landscape created around the piece. People could be observed with objects as artwork. Because panorama in this series was interpreted as a shape or boundary of a personal world and perception, this work had been designed to encompass a human figure—whether it was abstract or realistic.

Throughout this series of artistic objects, I had examined different interactions among the three players above through visual representations of panorama. These works were my interpretation of how people perceived a world in their own panoramic space as well as how they interacted with that space. Panorama was materialized as symbolic shapes of the boundaries between their individual world and the rest of the world. People inside and outside of the panorama perceived each other exchanging the roles of spectators and performers even when they did not realize it.
Panoramic Vision

After starting from and being inspired by the question, how do people’s perceptions come out when they are materialized in solid shapes? I realized that people have created different dimensions of the world as technology improved. Whether people are aware or not, we encounter multiple visions on a regular basis. We can connect to the gigantic web network that is stretched over the world and we can reach somebody whose face and identity are behind this web. It is a flat invisible dimension of information. Technology lets us see the shape of the universe and the minimum elements to construct the world through macro and micro visions. In other words, it gives us a more high-quantity lens to observe the universe. The more dimensions we can see, the more deeply we can understand and interpret the world around us.

One of my attempts to interpret the world was to break it down and reconstruct or just simplify the universe into minimum elements such as dots and lines. My imaginary bird’s eye or lens were set at various angles and dimensions during my inner transition from perceptions to abstractions (or vise versa). In this transition, I visualized or heard how elements influenced each other and echoed in space. A color, shape and sound intertwined and resonated across the world changing its level in shade, tint, and pitch.

As the components of the universe were revealed in simplification, I saw numerous dots and lines which shimmered and echoed in space and then were absorbed somewhere. This image, which was not always a visual perception sometimes reminded me of the sky filled with stars and tones from music notes, which were also illustrated in dots and lines. Simplified lines and dots
represented or connected minimally to the massive universe. If I pulled up one dot from the mass in air, the rest of the universe would be pulled up following that dot, creating a shape like a suspension bridge; or like fabric having gathers around where I pinched up.

Therefore, my work at this exhibit focused on how lines and dots created a solid or implied surface that viewers could follow from any point to an outer area. If technology interprets the phenomena in this world in the shape of logic, art is an attempt to interpret the world in artificial ideas and objects. Through objects (materials) I emphasized lines and dots to create a panoramic space where simplified forms reverberated. People’s perceptions, which proceeded information coming from micro and macro (and between), shaped their personal worlds in dimensions. When I visualized these dimensions as layers, they covered a 360-degree space in the form of white iridescent fabric: the pentagon with five panels. Reflecting on the panoramic vision though my bird’s-eye and lens, the work tried to display interpretations of (or possible answers) to the primary question, how to materialize an individual’s world.

Where the Panorama Is

Idea

The central idea throughout this series was the 360 (or less) degree encompassing surface. In the process of investigating what to be in, out, or on this surface/space, I had kept reshaping spheres and changing the level and angle of my imaginary bird’s-eye views and lens.

Meanwhile I saw how other artists perceived the world and applied their interpretations
or images into their artworks. This study also reflected on different treatments of space in two and three dimensions.

For example, the attempt to visualize the world in minimum elements is made in *Tradition in Pixel* by Faig Ahmed (Zilber 2015, 41). Through Ahmed’s lens, the world is composed of colorful squares in rough, vague, intense, and clear values. This work recalls to viewers the sense of adjusting the level of a microscope when the object is becoming vague to clear. This work asks viewers how clearly they perceive the world and what are their minimum units to construct their own worlds. This attempt of reconstruction of one’s world also displays the world and perceptions as one flat dimension where all elements are treated in the same way.

Ceramic artist Brie Ruais gives an illusion as if the world is trapped in a never-ending circle in *Circle Game* (99). She effectively uses texture, color, and composition to imply a force that comes from the boundary between our physical visible world and the external space beyond it. Her robust works with a similar impression to a volcano, tears space off. Unlike ordinary circle shapes found in the natural world such as bubbles, water drops, and light from stars; her circles are rough, reminding the viewer of power and speed. She gives us a moment that time becomes frozen and the world holds its breath; the circles are scars on our world.

Charlotte Potter’s *Charlotte’s Web* displays how the world is constructed in relationships between the self (private) and others (public) (112). Cameos with realistic portraits or images are connected in chains and placed to represent the distance among life events and people in a community. This is an attempt to visualize and possibly define someone’s world or life through human interactions and their influences. Her works cause viewers to wonder about the width and depth of their worlds and societies to which they belong. This question links with the quality of oneself and where oneself is located in society, too.
Henrique Oliveira gives a rebirth to an interior space in *Baitogogo* (137) by letting wood invade an ordinary artificial room. The intertwined wood trunks destroy the boundary between human-made quality and nature; they dance and push each other in air, reminding viewers of the senses of eternity and growing. This installation reminded me of Michael Ende’s *The Neverending Story* when the main character sees the repetition of birth, death and rebirth through a desert shaped with colorful sand grains which transform into tropical forests at night time. *Baitogogo* reveals the link or boundary of two separate worlds, destruction and rebirth through chaos with the impression of abyss to somewhere else. Oliveira morphed the white pillars into bold wood trunks, which viewers can relate to various paintings and animations that depict a transition from one to another (whether they are classical or modern). Yet, Oliveira has tried to capture the dramatic change among three dimensions and his work creates its own solid space within the interior.

**Shape and Material**

*Magnus Celestii* by Joseph Walsh creates a heavenly atmosphere in a large spiral of wood (152). Leaving the surface natural and without excessive fabrication, the work has a soft harmonious impression with warmth. The smooth transition within its spiral and wave-like patterns of the grains lead viewers to a peaceful world which some people may call “zen.” Walsh has given his work a balanced organic quality which makes viewers want to touch its surfaces. He did not exaggerate or decrease the quality that wood possessed. He transformed the wood as a material into artwork by preserving its own value and giving it aesthetics. The work through his hands and mind became a bridge between the natural beauty of the material and artistic value or aesthetic beliefs. By connecting the heaven and our world in spiral, the work can imply the
delicacy and meaning of beauty coming from the balance of the material itself and the artistic
uniqueness from its artist.

In the jewelry field, Silvia Beccaria uses linear materials to expand the contours of the
faces and bodies of wearers in Giada and Mal d’Africa (Estrada 2016, 127). She pushes the
boundary of organic outlines around a human figure in repetitive colors and forms. Whether the
body line of a wearer is visible or covered, viewers can imagine how the body and the fashion
piece are touching each other and create an extraordinary, yet personal space. In addition, Jesse
Mathes shows the implied supernatural force of a body in Rebato and Elizabethan Collar II
(Ramljak 2014, 56). Unlike Beccaria’s fashion pieces with expressions of a personal space
around the body and oneself, viewers can feel something powerful behind Mathes’ wearable
pieces. The former seems to heavily concentrate on a private space and self-identity with a naked
body; repeated arcs following the body line imply a steady flow of start, continuation, and end.
These lines reflect light and cast shadows on skin: an implied circulation within a personal closed
area. The latter, expanding lines on the models in black tight wear, keep opening the invisible
surface that they occupy. The artist is pushing the limitation of a human body and controlling
more space by force. Viewers can tell Mathes is aware of the distance to others and his intention
to invade into more space or to expand his territory.

Equally important, textile artists view fabric as an instrument of wearable or non-
wearable art by becoming familiar “…with “self,” advocating a “wholeness”…” and “adoring it
[their body] with richly embellished expressions of personal identity” (Dale 1986, 14). Wearing
something on a body can evoke the sense of transformation and fabric has been one of the
essential elements to cover a human body throughout history. Fabric can be treated as a solid
boundary between an individual’s physical existence and the rest of the world. Therefore, fabric
directly and closely relates to its wearer’s self expression and becomes a visual sign showing who the wearer is and how he or she wants to be seen in public. This tendency of representing oneself with or in fabric allows a body to be an instrument of the inquiry about self and wholeness, as we see in Issey Miyake’s *Shari Belafonte* and *Claudia Summers* (Leong 1993, 58).

What these two works imply is the fusion of functionality and individuality in wearable art. Fashion or wearable pieces usually serve the primary purpose of a body protection for warmth; supplemental values such as decoration and more precious materials are added. However, with human instinct and interest in beauty, the elaborated aspects of wearable pieces have been important and people have kept producing various styles in new media. A body holds a potential quality to become a focal point in a wearable piece and an essential part of self expression. Both *Shari Belafonte* and *Claudia Summers* provide body protection, yet show their own unique aesthetics through experimental treatment of materials. The symmetry or asymmetry on different surfaces creates a soft or sharp impression on and around wearers who transform these wearable objects into artworks. Moreover, these works were produced from the artist’s continuous quest in forms and textures, which adorn the wearers’ physical and/or inner beauty. The pieces do not only display the wearers’ personalities, but also help its artist to demonstrate the interaction between bodies and artificial surfaces through artistic self-expression.

Following the significance of wearable art, one of Sonia Delaunay’s designs, *Dancer in ‘Endless rhythm’ dress* shows her emphasis on simple and playful colors and forms on a human body with its movements (Damase 1991, 63). Her designs and sketches often show how she translated human bodies into visuals with geometric shapes and vivid colors. Human figures were reconstructed in her mind and became abstract forms. They no longer hold human shapes, but they are assembled with other elements and are arranged in a certain manner or rhythm. As a
result, viewers cannot separately recognize a body and wearable piece, but get a sense of playful and joyful interaction of the body and wearable piece. Delaunay’s illustration, treating the body and wearable item at the same dimension exhibits the strong bond between a body and fabric as well as a different value of body in an artistic expression. A body is a surface to put fabric or other wearable materials on. At the same time, it can be treated as a central element in or with fabric, but its representations are not limited if the body serves as an individual medium in personal and artistic expressions.

Treatment of Space

In the above artists’ work, artists display their expanded view from an artistic and/or self expression. They create their own world which viewers can interact with and interpret; they share the same space standing at two distinct positions as artists and audience. The treatment of space can be varied from two to three dimensional, and it shows what degree or which dimension the artists perceive the image or value they try to express. In this study, I also saw how an artwork could imply its artist’s feelings as well as the atmosphere or space around the work itself. Usually, the space directly created in or on a two or three dimensional work can be physically perceived by viewers. However, an implied atmosphere from the work is a more imaginary aspect that viewers capture or feel by directly or indirectly experiencing the work.

Therefore, with the concept of panorama, I was careful to balance the actual space created by the art forms and the implied space where different elements could interact with each other or with viewers. Because panorama is about perception of the world, it is important to make viewers experience a different sight within the space created in this series.
Panorama as Objects

Pentagon and Wearable Pieces

With the sketches from the process described in *Shapes of Panorama: From a Dot to a Sphere* and ideas about materials and space treatment in *Where the Panorama Is*, I started working on the panels of a pentagon. It would be a larger scale and primarily provide the space where viewers could walk in and around. Moreover, the space needed to be reflective and/or transparent to some degree because I pictured it as a boundary between oneself and the world, or a personal perception and reality.

For its structure, a series of free-standing square frames were made in three sections after several technical and material problems. I purchased 20 square rods of mild steel after I did experiments with scraps that included hand-shaping with heat to check the stability and cleanness of the shape. In the meantime, using the same method, I started forming a wearable piece which looked like spirals encompassing a wearer’s body. This process gave me a difficult time because I had to support the entire wire to shape it into smooth circles, heat specific spots, and bend it at the same time. Even though the vise held it, the wire bounced and created kinks instead of a clean transition, which I could not fix with hammering afterwards. This result led me to the conclusion to use a different form of the same material for a wear piece, and thus I changed the structure of the pentagon.

By the time, I completed several shapes of the square without a bottom side or a reserved L shape, I was not sure about its strength to hold the frame in position. The committee advised me to make parts to connect the sides of the square rather than to make a whole shape with one
long wire or two. Also, I had been using only a square or round rod, but a tube was more stable with four walls and lighter weight, perhaps requiring less energy and time to fabricate. In addition to these benefits, a tube was less expensive than a solid rod. Therefore, I started sketching a new structure with parts made out of tubes and stands to support a panel. This stand would be an H shape. The idea occurred from a sample somebody left in a welding area in the studio. My plan was to get all of the materials for the pentagon before I came back a couple of weeks earlier than the school officially opened, but it did not work. Still, the plan for the structure and its parts was helpful to visualize in a technical way. (Photo 1)

Photo 1:
- The sketches of a mechanism and structure of the free-standing steel frames
- Blueprints of different sections such as a foot, connection part, and securing spot on a corner

In brief, I spent fall semester having peer discussions, sketching and refining ideas, reading, experimenting and working on actual pieces, and planning based on the work done. During several weeks in January 2017, I cut stands, tubes for connecting parts, and steel rods in about 7 1/2 ft. in length for the structure, made a hole in each tube where a bolt and nut would be positioned, ground and beveled tubes that were to be welded, and made a wood welding station
for securing tubes in the right position while welding. With the huge help of a welding professional (benefit of thesis committee), I started to understand steel welding because I had only done practices before. Tungsten inert gas (TIG) welding is a technique to generate heat to melt metal through electrical energy and gas. After surfaces to be welded were ready, I set square tubes in a reversed L shape and supported them with flush wooden strips and clamps. Seeing the surface from multiple sides during welding was very important. A welder needs to pay attention to the pressure and control of a welding machine by seeing how the metal is reacting to the heat and how a welding rod (filler material) flows onto or between where it should. After making the L shape, the next weld was to attach a nut to fit a hole where a screw would go. This part was to hold two square rods at a 90-degree angle. One panel had four connections, two of which were attached to stands on both bottom sides. With this structure, I could tighten and loosen screws to build and take the rods apart. At this point, there was no extra space in my studio and nobody could step in because of the parts on the floor, desks, and locker. (Photo 2)

Photo 2:
- The materials on my studio floor
- Solid steel rods were cut in length, ground to fit in tubes and numbered (a hack saw and grinder on left)
- L shape connections were welded: connecting two tubes and nuts on holes
- A foot of H shape was designed to hold the frame in a position and its weight (on steel rods)
In February, I started to build panels, look for a material to put inside them, and work on wearable pieces. Grinding square rods before inserting them into tube connections was laborious as well as grinding welded H shape stands to be flush before welding L connections on them. I learned grinding with rolled sleeves gave my skin a look and feel similar to a burn plus graze. After developing more muscles from grinding, rods were placed in position and secured with screws. Only a few rods could be inserted smoothly with a slight grinding. Most of the rods did not fit because I did not notice one corner of the square tube was not 90 degrees and several of the solid rods were warped. Finally, five panels stood in the hallway by the forging room, requiring the day to assemble for each. (Photo 6: p. 29) At that point, I saw the scale of the work and how much material I had to purchase for the fabrication. Since I sometimes visualized one’s panorama as a mirror to reflect themselves or their worlds, I was looking for a reflective and/or transparent layer. Through searching for that kind of material, cost, and how to attach it to the panel, I decided to use a iridescent thin fabric that the quilting instructor advised. A technical requirement I considered was nylon’s stretchy quality. The iridescent tulle was more flexible than other tulles which I bought as test pieces. Its pattern looked like lines were dancing and connecting to each other, so it represented the theme well. Also, this tulle had an impression of grains of light and color. It would be a layer like a cocoon between a person inside and the world outside.

After checking the tulle to see if it could be stitched around steel frames, paints were applied to the steel surfaces. There was the base coat of white primer and the final coat was a gloss cream color paint. The second color matched the tulle perfectly. The tulle was a special order sent to a factory because of its large quantity; I picked it up almost 10 days after its
delivery to the fabric shop because of a miscommunication. Meanwhile, wearable pieces were in progress. By that time, I decided not to use the first spiral piece (round solid steel wire) that I had started by bending frames of the pentagon, yet I kept it aside. (Photo 3) I tried another form of steel, round tubes based on the same idea and design. When I collected these scraps of tubes from metal stocks and leftovers, I did not know the tubes were steel because I was told they were aluminum. This time, instead of hand shaping a long wire, I used a roller to make multiple smaller spirals and then welded them together. I also welded straight solid rods to the base spirals to make it rigid without bouncing. However in this process, the spirals were easily warped due to heat from welding. They never returned to their original straight shapes. It was a second try to be put aside. (Photo 4) The next attempt was to make spirals with shorter aluminum solid rods and weld them. It was another difficult project because of how aluminum behaves; my job throughout all aluminum pieces was to hold parts while the professor welded. In conclusion, the third attempt with sections of spirals failed as well as the forth with formed spirals in a longer wire. It was familiar to me that an idea, which came out at the very beginning stage, produced no successful work in the end after many experiments. In fact, the four pieces presented at the show were completed in shorter time periods despite more complicated designs. However, difficulties of timing and the welding machine kept me working until two days before the show.
For the pentagon, I could work only during the weekends because of people in the hallway and the space to be used. After five panels were structured one by one, I cleaned their surfaces to get them ready for paint. (Photo 5: p.29) The single white base coat was very bright, and the double layer ivory coats softened this white and gave a clean appearance. (Photo 6: p. 29) It was fun to be at a different height by working on a ladder. With repetitive movements—soaking a paint brush into a paint, making extra paint drip from the brush, seeing where to paint, and painting the surface— I felt a certain rhythm and lost a sense of time in the deep interaction with the work. In this kind of concentration, I sometimes reflected on my past or vaguely thought about what randomly came out in my mind: music, artwork, film, or people that I encountered before. It was a process of understanding the concept and questioning myself what I would see in

Photo 3, 4:
• The first and second attempts of steel spirals
• Different approaches and forms of material gave them a simple or more complicated appearance
the space within the frame. When all five panels were painted in March, I covered one frame with the white iridescent fabric to see the overall piece. By coincidence, my peer and roommate walked by exactly when I was debating whether I had to sew all edges or not; she suggested to me to use magnets to hold the fabric in position. The tiny magnetic cubes were strong enough to hold the fabric and reduced my sewing time. During the spring break (two weeks before my show), I set all panels in an empty classroom to figure out their arrangement. Transporting the panels from the forging room on the first floor to the third floor was hard because of their sizes and obstacles in the way such as narrow doors where magnets stuck and an elevator which decided to stop without warning. Afterwards, I was relieved but overwhelmed in the classroom because I had never made an artwork this size and they looked different from when they were in the first floor hallway with white lights. It was interesting how objects could change their impressions by location and light. In the next few hours, I was changing their positions and imagined how they had to be placed in the Bevier Gallery. They could stand like Richard Serra’s Torqued Ellipses of metal plates that creates an isolated yet broken maze-like space, or like Richard Harned’s God’s Eye, whose panels become two separate screens and surround a closed area. These two installations display different views of square screen structures and my panels needed to be created to a certain atmosphere or landscape. At the end, I arranged them into a pentagon and one side of each frame overlapped with another side of the next panel. There was one opening where viewers could walk in and out. After the panels were settled, I spent days sewing fabric around the frames.
Photo 5:
- Steel solid rods which were assembled with connecting parts and feet, stood in a hallway by the forging room
- They were cleaned with alcohol, ready to be painted

Photo 6:
- The front two frames were white with a base coat
- The three behind them were ivory, dried to have fabric covered
- They were finished painting in March, 2017
After the four attempts of making spirals (with steel rods, steel pipes, and aluminum rods in shorter sections or one long wire) had failed, I worked on the other four designs all of which were exhibited at the show. Their structures were all aluminum and welded together after multiple parts were cut and formed. (Photo 7) Aluminum welding was very different from steel welding and it was a new material for me to work on. It was clear what shape each piece needed to be, but it took time until I knew how they had to be fabricated. Sometimes this difficulty came from technical issues such as what materials and techniques to be applied, and sometimes it was about timing. I could only see the core shapes, and more time was necessary to consciously or subconsciously keep thinking about the ideas and fabrication to add onto the core forms. Once I captured how the end products needed to look, the rest of the process was about working and trying to reach as close as possible to what I perceived. In this case, the first two wearable pieces were based on my perceptions in abstract simplification of the panoramic world. They displayed transparency and colors from dyed strings which started, ended, or connected to another string or metal surface. After cleaning and spraying the aluminum surfaces, I strung fishing wire and cotton threads across the metal frames and stopped each end with a clamping bead and bead cover. The piece with fishing wires showed a gradation from transparent to solid white while the gold beads added a shiny contrast. The second piece got colorful soft threads in different sizes within its symmetric and balanced frame. For these two works, I visualized solid and clear lines and dots which represented the world in symbols and simplification. (Photo 8, 9)
Photo 7:
- Solid aluminum rods which were cut and formed or vise versa
- This material was highly contaminated, so I cleaned tools used for aluminum and put them together
- Majority of shapes were circles, oval, arcs representing the form of a panoramic world

Photo 8: (I)
- Solid aluminum rods were shaped, welded, cleaned, spray painted, and fabricated with dyed fishing wire, gold beads, and resin
- Repeated fishing wire with a gradation from clear to solid white
- Gold beads visually connected each sides creating a wave-like pattern
The other two pieces were made through different approaches. Still based on my vision of panorama, they focused on the direct and implied movements more than my former two works. The piece with hung bells took over the design from the spiral piece which never came out after four attempts. In my original sketches, the spirals had colorful dots strung from their surfaces. Since this third piece had broken outlines around an oval face-like shape as well as double circles attached to the face, there were many implied lines. These lines could imply a certain form, direction, and force in a vague way unlike a solid form and unbroken lines. The spiral piece had only solid lines, but the third work showed different kinds of sphere forms in implied lines. Which meant, the third piece would carry both solid and broken/implied qualities in its structure.

- Solid aluminum rods which were shaped, welded, cleaned, spray painted, fabricated with colorful cotton threads and gold beads
- Wearable pieces I and II were like twins; piece I was about transparency (or white in various levels) in an asymmetry while piece II focused on colors in a symmetry

**Photo 9: (II)**

- Solid aluminum rods which were shaped, welded, cleaned, spray painted, fabricated with colorful cotton threads and gold beads
- Wearable pieces I and II were like twins; piece I was about transparency (or white in various levels) in an asymmetry while piece II focused on colors in a symmetry
and painted bells. Its wire structure provided boundaries to create space inside and outside of the wire frames while bells, the dots, showed another minimum element in a simplified world with lines. Same as the spiral work that failed four times and never came out, this third piece took the most time in all four works with less successful weldings. However, this time I did not want to put the work aside. In order to cover the weld, masking tape strips and acrylic gesso were applied on the surfaces, which gave the work a unique texture. It displayed an organic atmosphere with bells in colors, too. Furthermore, the last piece was covered by the fabric used for the pentagon to become a visual bridge between the panels and the four wearable pieces. Unlike the first two works whose structures were horizontal to a body, the forth piece had a vertical half-spheric shape which looked like a simple armillary sphere; the third was hybrid. Along the half sphere of the last piece, there were four sections of fabric in layers giving each part a different intensity. Therefore, its wearer’s face contour could be seen through thin layers, or only shadow would be casted onto the thick non-transparent layers. This gradation from transparency to intensity of the white iridescent fabric could imply the movement from one direction to the other while the third work took another approach to imply forms and direction through its broken and solid outlines of the structure. (Photo 10, 11)
Photo 10: (III)
- Solid aluminum rods were shaped, welded, cleaned, textured with tape, colored, and fabricated with hung bells
- This piece had direct movements with a closed solid structure and implied movements with broken lines and colored dots around it (bells)

Photo 11: (IV)
- Solid aluminum rods were shaped, welded, cleaned, spray painted, and covered by iridescent fabric
- Sections of fabric ranged from a see-through transparency to thick intensity along the arc
For installing my works, I started with the panels to see how they fit within the gallery. It was fortunate to bring all of them down during the spring break because I needed to ask the ceramics department to make a path from the elevator. The installation and set-up in the gallery was easy because nobody had assembled their works yet. I set up the pentagon having the entrance open to the inside and the frame across the entrance faced the windows. The gallery staff adjusted and put more lights on from the ceiling, which gave the whole scene a dramatic accent. After bringing four pieces down to the gallery, I was advised to place them at different levels; therefore, from left, the first piece with a clear to white transition, the third piece with bells, the second piece with colorful threads, and the last piece with folded fabric were hung along the panels. (Photo 12, 13) It was the first time when I saw all of my works together and they visually told me how the idea of panorama became objects.

Photo 12:
All four pieces in the pentagon
Exhibition: Panorama

The opening show was March 24, 2017, and I dropped off my last piece two days before the show, which was officially the last day of installation. However, with the gallery staff’s kindness, I could finish all assembling on the day before the show; also with a suggestion of photo display, I could finally set up everything two hours before the show started.

During the show, I realized that less people actually walked in the space within the pentagon; more people viewed the work from outside. This reaction could be interpreted that people were used to view a work as observers rather than to participate within the space created.

Photo 13: Works developed from the concept, Panorama
This kind of interaction and relationship was perhaps the most close to category (2), viewers inside and outside of the pentagon become spectators and whole works are treated as performer, as described in *Individual and Panorama: Inside and Outside of a Panorama*. Some of the viewers decided to go inside of the pentagon and get closer to the wearable works after they saw other people who stepped inside. This reaction was somewhere between categories (1) and (3): (1) viewers inside and outside of the pentagon become spectators and performer and (3) viewers who interact with the hung piece(s) become performers and the rest of the viewers become spectators. In (1) and (3), I assumed a more flexible role switch as performers and spectators, which viewers inside and outside could perceive each other at the same time. In fact, the viewers at the show started from outside and entered inside following individuals who were already there, or they only observed the outer surfaces and left. Outside viewers might treat the viewers inside as performers who interacted with the hung works, and become the next performers as they entered the inner space. This movement was one direction from outside to inside, but never vise versa; the majority of viewers who started from inside did not walk around the outside of the pentagon. This interaction gave a new perspective to the viewers’ reactions.

Moreover, this exhibit and the viewers’s interactions with my works showed me an interesting aspect of time, space, and the world. These works at the show were explored from the question about how to materialize an individual’s world. Then, the concept took different forms through my interpretation of how people perceived a world in their own panoramic space as well as how they interacted with that space. In this process, I simplified the universe in minimum elements such as dots and lines through my imaginary bird’s eye. Therefore, viewers’ interactions with the work connected reality (people who experienced in specific time and space) to the products created from the abstract simplification captured in the bird’s eye (to perceive and
reconstruct the world). This result gave me the opportunity to rethink the relationship between people and my works and potential methods to crystallize the concepts in more direct ways that would motivate them to step into the space I created.

**Conclusion**

Regarding the concept, process including materials and techniques, and exhibit, I gained a lot of new experiences because the majority of all components were not familiar to me. The series of the installation with five panels and four wearable pieces were an exploration of my creativity and improvement as an artist. They showed me the difficulties of technical and time issues, new relationship between works and viewers, and potential values of the theme and works themselves.

For the pentagon, the hardest part was the mechanism for the structures. Actual free-standing panels at a larger scale could never come out without knowledge and experiments about how metal rods and tubes behaved and how a three dimensional sculpture was composed in multiple parts to hold its weight and secure. This pentagon well represented the core idea of panorama, a 360-degree space of a personal world. With its shape, size and transparency, other wearable pieces within this pentagon helped viewers to interact with visual interpretations of panorama.
Critique and Possibilities in the Future

The noteworthy suggestions during the thesis defense can be categorized into three groups; (1) the materials, scale, and composition, (2) the setup in space, and (3) my own understanding and interpretations of the concept. The first and second types mainly imply the clarity of the concept, panorama by increasing the degree of the viewers’ participation and attention. The third class indeed helps me to perceive the work from different angles by focusing on how to effectively present them based on the installation at the gallery.

The first group, the materials, scale, and composition, heavily focuses on the artwork itself, includes possible solutions and explorations to clarify the theme, panorama. It is also to develop the relationship with viewers in the way the concept is effectively interpreted. For instance, changing the level and size of the work can give viewers different perspectives of the panorama. If I could set a smaller scale at a lower height, this would allow viewers to look down into or look straight ahead. They could then see the whole view at once and then pay close attention to details. This will show viewers the world at a micro level (micro, compared to the actual world view) through the panoramic vision. Another idea related to this category (1) is to combine movement as a part of the installation. Because the panorama has an affinity for film and camera such as visual aspects and sceneries, adding digital aspects to the theme could let this series be open to interesting visions. If certain images or sounds are projected, viewers could use other physical senses to perceive the panoramic world. Visuals and sounds can imply direction, force, and emotions, too. Projection can create an illusionary space or scenery, giving viewers a more direct impact and specific images.

Following the idea of space and placement, altering the interior will be helpful, requiring viewers to react to it directly. Category (2) encourages an involvement of viewers, whether active
or passive. If I set up multiple panels like a spiral and maze, more viewers may walk in and/or around the whole piece. The layout can force viewers into a more direct interaction with the artificial landscape. They can interpret the concept with more stimulations; their sight and hearing will help them feel a closer attachment to the work while walking and encountering the changing or unchanging images (depending on what I will display). If viewers get more physical stimuli from the presentation, it can make their sense of space clearer while they move. In this case, viewers take an active role; on the other hand, they can gain a different experience when they become passive. If I let them stay at one point and project images and/or sounds on them, they can still experience the sense of space. The projection can be modified on their individual bodies creating completely different sceneries according to who and how many people are within the panoramic space. Viewers become an essential part of the panorama, uniquely and constantly changing the whole interior space with their bodies and shadows.

The final category (3) shows me opportunities to invest, digest, interpret, and represent the concept. The work at this point will look totally different in another setting and/or with more of the same materials, such as covering the panels with more fabric. Nevertheless, I need to keep questioning myself on how to shape the panorama with clarity. This inquiry will be a similar process to the investigation of how I visualize the world and its overwhelming amount of information. Then, next step is how effectively I can apply the interpretations (based on my perceptions) into actual works in the way viewers can understand and relate. Now, observing the finished works at the show, I can start to visualize the relationships between the panoramic space created and the whole interior of the gallery. With minor changes which still maintain the similar atmosphere, this series of works can have a clearer and possibly more powerful impressions. To demonstrate a sense of expanding space, the piece can be installed at an open area without a
ceiling, which could inspire me to build a domed top cover (which represents another 360 degree surface) or make the panels taller and wider. To emphasize the coherence of both the installation panels and wear pieces, it will be necessary to change the structures and shapes of the screen from squares to arcs. This modified structure can display unified spheric shapes or lines (arcs) as smaller (wear pieces) and larger (screen) scales.

All of these ideas in the three categories propose comprehensive and easier ways to get viewers to interface with the works more directly. By using categories (1) and (2), I can increase the degree of viewers’ interaction to the panorama, which connects them and the works more at a direct and personal level. With category (3), the exhibit will show me different scenarios and space in, between, and around them, which guides me to a deeper understanding of the concept, panorama.
References


