Shaped Together

Process Document

April 2023

Jennifer Rodger Mediratta

Bachelor of Craft & Design: Glass
Sheridan College
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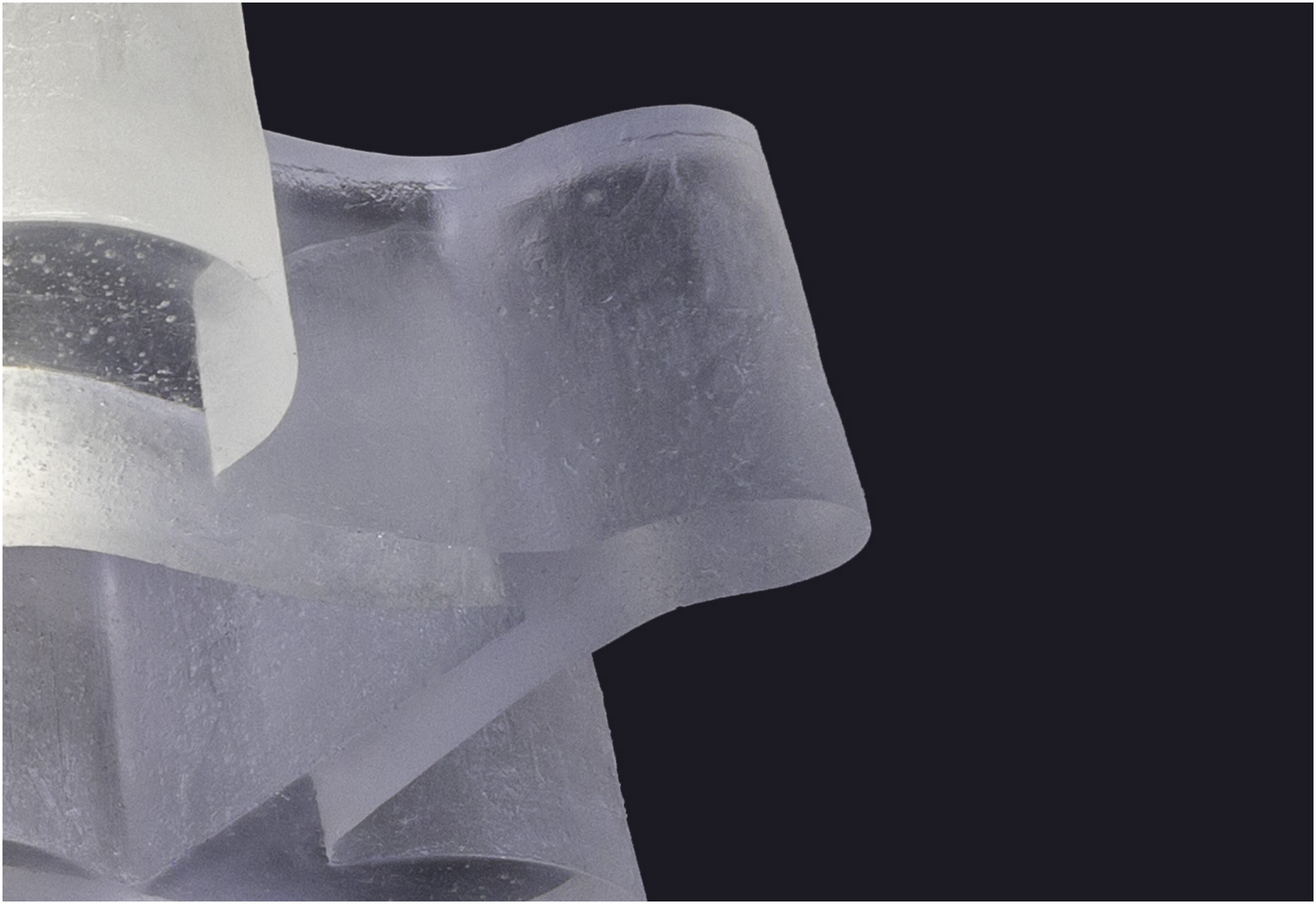

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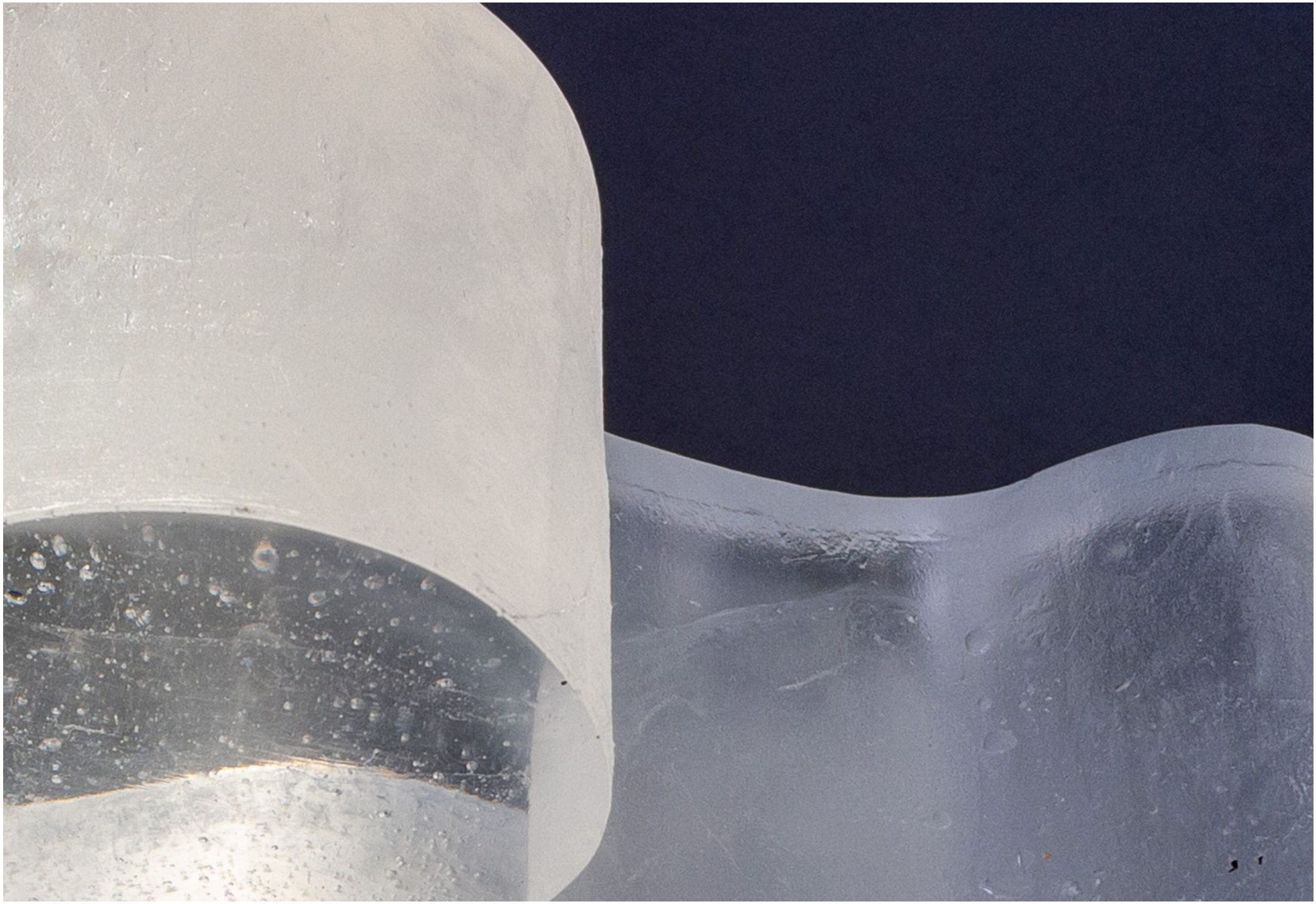
Introduction

Jenn Mediratta is an emerging glass artist living in Oakville. She was born and raised in Ottawa and is a proud mother of three. After several rewarding years as a homemaker, Jenn came to study Craft & Design at Sheridan College to explore glass as a medium and quickly gravitated to kiln casting. Jenn creates decorative and inspirational glass art with a focus on capturing emotion in compelling forms. Inspired by playfulness and the complex relationship between parent and child, she hopes to reinforce the emotional connection of the shared moments represented in her work.



Abstract

The relationships we hold and the impact of our shared experiences, shape who we become as individuals. Inspired by playfulness and the complex relationships between generations that nurtures our growth. Using cast and fused glass processes, I have created forms centered around memories, connections and preserving precious, natural moments. I strive to reinforce the emotional connection and the personal impressions of those moments with both colour and pattern in a collection of unique sculptural pieces and fused glass pieces.

I am inspired by glass as a material. Its inherent contradictions lend itself well to this context. When we are truly able to appreciate the weight and importance of the shared experience, there is a common clarity in the material. As it is both modern and timeless and the impressions formed and left in glass capture a feeling.

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As a continued path in learning and exploration of the material and narrative, this project is structured as a collection of figurative, kiln formed sculptural figures. In addition, complementary fused and cast pieces use repetition of those same silhouettes to create visually intriguing patterns.

Each form is based on a moment of connection between generations, often relatable, however natural in the moment. Sketched by hand and then translated digitally into simple and abstract expressions of those moments, the forms are then used to create both three dimensional sculptural pieces and used in repetition to create patterns on wall mounted panels and functional pieces. I make use of CNC cutting for mold making as well as cutting patterns in sheet glass with a water jet. These techniques allow for emphasis on precision, clean lines and balance of form that are important to my aesthetic.

I am excited to have begun developing a body of work that reveals itself to the viewer through subtle forms which grow in context on further discovery and with new perspective.

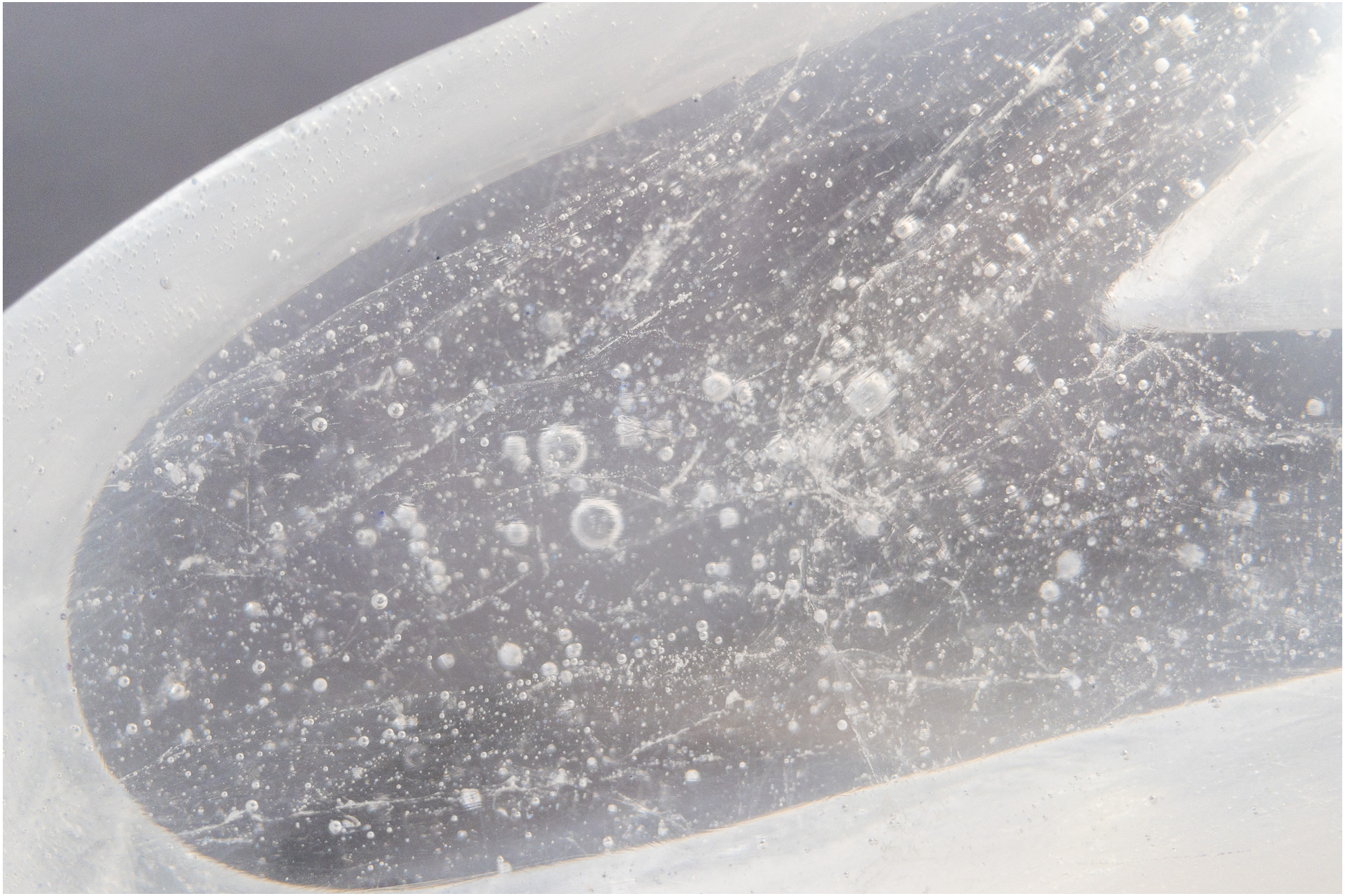
Soar

The silhouette, which I have entitled Soar, is based on both personal experience and positive ambition. Depicting a mother and child, playing airplane together, it is a dynamic shape that when recognized, has an emotional response universal to many. This “people game”, a form of social play where no physical toys are required, is one of many that offer important social, physical, and developmental benefits. Improving balance, concentration, and communication, this common style of interaction not only allows family members to learn from each other but is also tied to higher levels of the vasopressin, a hormone linked to human bonding (Ginsburg, 2007).

On a personal level, I have strong memories of playing the part of both the child and the adult in this scenario. In each experience the balance of the strength, focus and communication was directly related to the individuality of the family member involved. These underlying benefits are secondary to the often-spontaneous moments shared between generations that create memories and bonds.

Reflection as to why this shape is important to me stirs themes of support and trust. As a parent of now young adults, Soar is symbolic of my wishes and aspirations for each of them in the years ahead. In Soar, a balance exists between supporting the tiny humans and allowing them the freedom to fly. An unspoken balance is shared from both individuals. Through repetition and practice, both the foundation and assisted grow more responsive and stronger. The afore mentioned trust and support changes, hands are released and balance shifts. This moment captured within Soar reflects the change as children come of age. The physicality of support may no longer even be possible however the underlying thread of love and support created by the bond remains.

Physically and emotionally each of my own three children came the activity in their own unique way. A blend of attitude, approach and balance was as different as their own personality would allow. All welcomed the opportunity, however personality traits that are unchanged today were apparent in how they navigated and experienced “flight”. The intention was always the same, only the journey was curiously different and positive.



Objective

I wish to continue to explore other silhouettes that capture a similar and positive spirit between generations. They should evoke memories of bonds made and it is important that both the adult and child have the capacity to remember the moment captured in time. The dynamic between family members is unique in these shared moments. There is a chance to connect and learn about each other. I believe that when children feel connected, they are often motivated to follow guidance and share life experiences on a greater extent, thereby gaining higher level of trust. These moments are often few and far between and I would like to highlight the shared power, love and nostalgia shaped in those times.

Silhouettes, as a dark shape on a bright background, have a classic and elegant appeal that cannot be denied. However, the darkness of there “shadowgraphs” can also be heavy and ominous. As shadows change, evolve and can be fleeting, so are the relationships and connections that I hope to demonstrate in my work.

Darkness and shadows can however imply negativity. Therefore, I believe that exploring silhouettes through glass would be ideal to capture the positive nature of the sculptural form. Its transparency and fragility are pure as the moments themselves. The clarity of glass lends a classic elegance and luminosity that can allow for visually striking forms. By extruding and revolving the silhouettes into the three-dimensional sculptures, I hope to imply flow and depth within the held experiences.

History of Silhouettes

Simple forms have been used to represent horses and bison, wolves, and deer in the extraordinary Stone age cave murals of Lascaux in Southwestern France dates the roots of the silhouette up to 20,000 years old. Outline and shadow painting continued by most ancient civilizations including Egyptians who decorated tombs and pottery.

We generally associate silhouettes with the India Ink paintings or paper-cut profile portraits that were popularized in the 18th century. The elaborately mounted, collectable the captured detail was a realistic and affordable means to by which a portrait could be made. Cut paper shadow portraits were so called, for France's finance minister under Louis XV, Etienne de Silhouette, known for his frugality and his pastime. After his death, the word "silhouette" became synonymous with the hobby in addition to being cheap.

Silhouettes gained popularity as a form of portraiture in the eighteenth and nineteenth centuries. August Edouart was a French born artist known for his silhouette art. He served as an officer under Napoleon and as a new refugee in Britain, struggling to make a living, he discovered his talent for cutting silhouettes. Edouart cut from folded paper, always keeping a duplicate of each profile and became known as the "King of Silhouette Artists" creating portraits of notable figures such as Queen Victoria as well as ordinary persons.

Image 1: Stone Age Cave Murals of Lascaux Southern France

Particularly popular in the United States, they were a less expensive alternative to painted portraits. Black paper profile portrait mounted on light background, became common decorations in homes and memorialized both individuals and special events. The art form that began with heads grew to include full length silhouettes and incorporated hobbies and pets. As a simple and effective way of capturing a person's likeness, silhouettes were also used for identification documents. Understandably, the popularity of hand-crafted silhouettes declined with the rise of photography.

Those who sought silhouettes in the nineteenth century would have appreciated the human details and documented growth and change. Without the connections to the people in the silhouettes of days past, context has changed for these pieces. Still appreciated, we might note similarities in the profile or intricate details such as eyelashes and find the work endearing. Hairstyles, or fashion help date the antique silhouettes and have become features that collectors are often drawn to. Condition, age, detail, and provenance all contribute to its current value however the context in which traditional silhouettes are received has very much changed. With a contemporary context, they are used to create a striking and distinctive visual effect. Whether as portraiture or abstract, silhouettes emphasize contrast, form, and composition. Silhouettes are the suggestion of the shape with which there is an often an immediate recognition. The viewer's interpretation is of that rapid identification.

Image 2: Shadow Protraits as made by Etienne de Sihouette

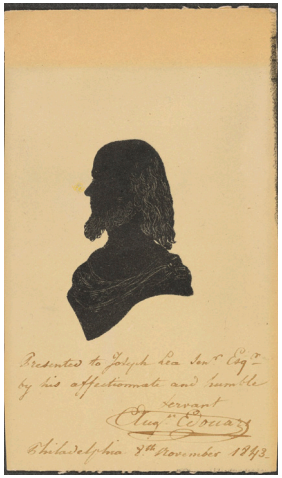


Image 3:Paper-cut Self Potrait of August Edouart

Contemporary Context

Kara Walker holds international recognition for her large scale, intricately cut paper silhouettes. Her humorously dark narratives explore gender, identity, and the challenge racial and historical representation in American history. Walker's life-size silhouettes blend fact and fiction as a metaphor. The ambiguity of the silhouette allows the viewer to interpret the work and challenge misconceptions and what they know for sure, while detailed features emphasize stereotypes in the pseudoscience and how society remains complicit.

Image 4: Kara Walker, Slaughter of the Innocents,2016

Image 5: Krsiti Malakoff, Maibaum, 2009

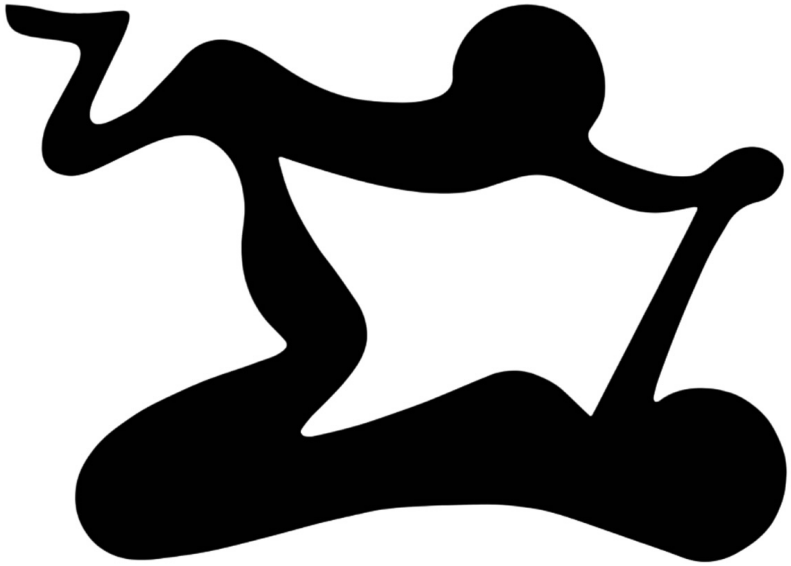
In contrast to the angst and aggression communicated in Kara Walker's subject matter, Canadian artist Kristi Malakoff captures a sense playfulness using silhouettes in her life size, paper art installation, Maibaum. Holding ribbons and suspended in dance, the silhouettes capture the spirit of school age children engaged in a Maypole scene. Details of the traditional folk attire successfully connect tradition, movement, and a high level of festivity, frozen in time.

Both artists use the detailed silhouettes as a means to establish a sense of time and I admire the way the silhouettes can transport the viewer to the past. My intention is to depict to timeless silhouettes with less detail in order to create a deeper meaning through simplicity. I am inspired by the poignant interactions between individuals that Walker represents as well as the playfulness that Malakoff is able to convey. By stripping away the aspects of clothing and facial features in the abstracted silhouettes, I hope a personal connection is made through the interaction depicted that is both timeless and meaningful. By their very nature, silhouettes are able to communicate a great deal with limited information. The silhouettes I have chosen to create are a suggestion of a message, a universal interaction experienced by so many, that to me also represents a specific aspiration. I hope the viewer finds themselves represented in the imagery and that the forms encourage a feeling of joy and evoke memories of precious moments.

Development

Driven by the desire to explore the silhouette using pattern, colour, and scale, I approached this project with the intention of creating a cohesive series of sculptures. Shaped Together, looks to celebrate encourage and acknowledge the importance shared intergenerational moments.

Soar, the first original design, portrays a mother and child playing airplane and captures the spirit of the often-spontaneous people game. The complexities of the reciprocal effort between individuals create the bond that is enduring. The underlying spirit I wish for the form to carry is ambition. Children are full of unlimited potential. With support, persistence, and opportunity to find balance, each can soar to new heights.



Sitting atop a grown-up's shoulders carries some risks however it also offers joy and a vastly different perspective of the world to a young child. Scope, the second silhouette, depicts a child on the parents' shoulders with outstretched arms and connected hands. It comes from an aspiration to always look for new viewpoints, remain flexible in critical thinking and stay open to new ideas.

When a child dances on the feet on an adult, they move together to the music. The spirit of Sway is a reminder to feel the rhythm of the world and pay attention to

Sculpt plays on the meaning of the word grit. The imagery shows mother and child connected by the sandcastle they build together and symbolises the grit and effort required to create and build something greater out of smaller parts.

Seek, is based on our own travels. You can hardly tell from the photograph, who spotted the playful seals in the sea, however, there is discovery and a desire to share in the experience. It is a continued sense of curiosity I wish to highlight in this particular silhouette.

Serenade represents the personal growth learning from and with others a portrays a parent and child playing the guitar.

With one previously developed form, I looked to explore what elements were successful and how those could be carried into other silhouettes. I wondered how scale would influence how the form was perceived and whether pattern or repetition might be successful. The application of the two-dimensional silhouette seemed to have many opportunities. I assumed the same applications would be similarly successful with additional silhouettes making the development of a body of work easier as more silhouettes were added.

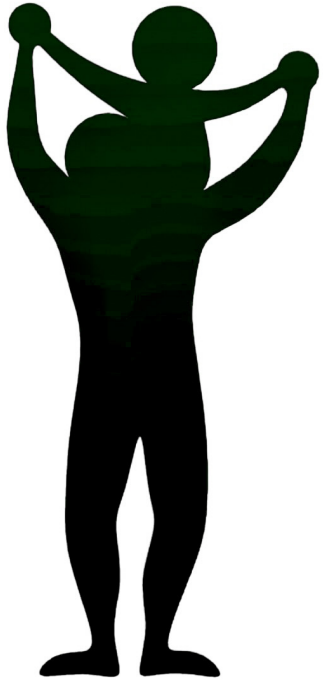


Image 6 Nothern Ireland, 2011:
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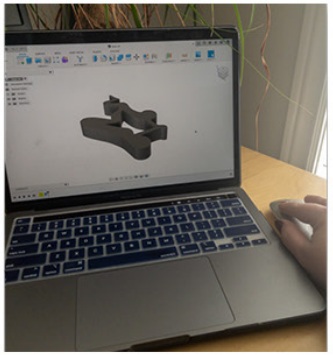










Steps in making smaller forms included didgital modeling, CNC cutting, and making a silicone mold with which to make wax positves. Plaster Silica Molds would be prepared and once steamed out to remove wax, could be filled with the appropriate amount of glass. the cooled, kilnformed glass is the coldworked using various techniques.

Process

One path in exploration was to test for colour as well as replicate the same 3-dimensional form as the original Soar. For this, I decided to scale down from 10” x 7” x 1.5” to 6” x 4.25” x 1”. This size would be ideal for producing many of the same size pieces while not sacrificing the integrity of the arms and small legs that become too thin at a size smaller to this.

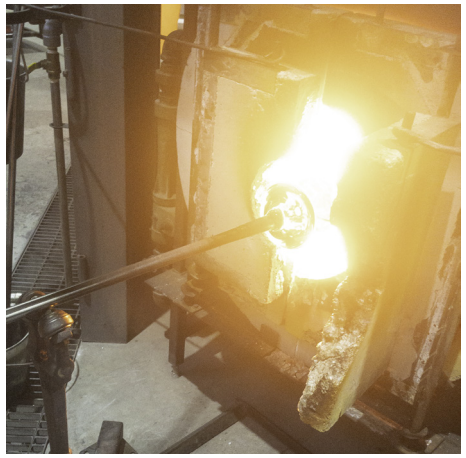
The process most conducive to this path of exploration is lost wax casting. Used for many applications from industrial manufacturing, dentistry, and artistic practice, it allows glass and other materials to be fashioned with precision, accuracy and hold intricate details.

I was able to simply scale down the original version using Fusion 360 and prepared the file for CNC cutting. The prototype was cut from rigid polystyrene foam and when satisfied with the result, the same cut foam was used to prepare a silicone mold made of multiple layers of Smooth-On Rebound 25, brushable silicone rubber. From the finished mold, wax positives were made by filling with melted wax and allowing to solidify. Lost- wax casting begins with creating a wax model, such as the 6” figures, and then a constructing a mold. I use plaster, for structure, and silica, a refractory that allows the mold to withstand the heat of the kiln. Mixed in equal parts with water to a custard-like consistency, multiple layers create a shell incasing the wax. Once the plaster has cured, the wax is melted away (“lost”) from the interior using steam and leaves a cavity in mold. In kiln casting, the dry mold is loaded into a kiln and cold glass is then placed in a reservoir. The kiln is heated to 850$_{o}$C bringing the glass to molten state to fill the mold. It is important that the temperature decrease is slow and controlled, annealing the glass to remove any internal stresses. Once the piece has reached room temperature, the plaster investment is removed leaving the glass to be cleaned and coldworked to the desired finish.

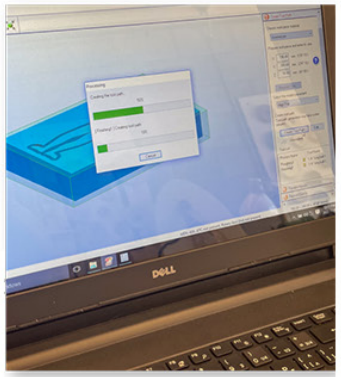
Two contrasting pieces of sheet glass are cut on a water-jet cutter using the same file. The resulting pieces are interchnaged and reassembled on another layer of sheet glass to make even 6mm thick panels. Once fused there seems to be so many possibilities to explore

A second path in exploration included a combination of waterjet cutting and fusing. I used the 2-dimensional silhouette both individually and in various patterns cut form sheet glass. Files made in Adobe Illustrator are easily imported to the waterjet manufacturer's website to generate the file for cutting. Adjustments are made for type and thickness of glass as well as scale, position and tab position and size.

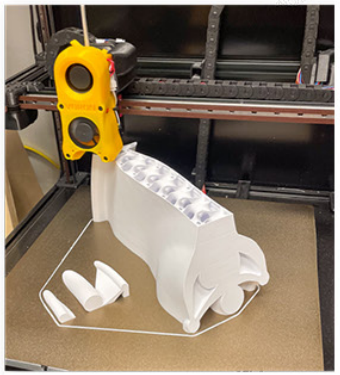
The waterjet allows for clean, complex, and intricate cuts that wouldn't otherwise be possible. By cutting two contrasting pieces of Oceanside System 96 compatible sheet glass with the same file, the silhouettes cut from one piece of sheet glass were nested into the spaces left in the opposite piece of glass. Once fused, these panels seem to have many possibilities. Slumped, rolled up into a vessel there are many further areas to explore using this method.



From a flat, fused glass panel, a "roll-up" vessel is made by heating the fused glass until hot enough to roll up on a bown glass bubble, or in the case, carefully sized post. The glass is then shapedinto the pictured bowl..









The develoment of Scope has taken time and experimentation to get to where it is today. Intially prototyped on the CNC machine, the form felt too “trophy-like” and not in line with the intention. Subsequent designs used the same silhouette revolved digitally and then 3D printed. Those prototypes were then used to make silicone molds for making wax positves so they could be molded and cast in glass for further evaluation.

I approached the second silhouette with the assumption that I would start with the same techniques used in the previous and successful form. I prototyped Scope, which portrays a child on an adult's shoulders, using the Small CNC machine in the glass studio. The cut foam stood 11" tall and made to make a silicone mold in order to make wax positives. The wax positives however had me questioning the form, however, unable to pinpoint what exactly I was unsettled about, I went ahead and made Plaster/ silica molds for the three wax positives, steamed the wax, and fired the molds with clear, olive green, and purple glass. Once divested and partially coldworked, it began to be clear why the form wasn't successful to me.

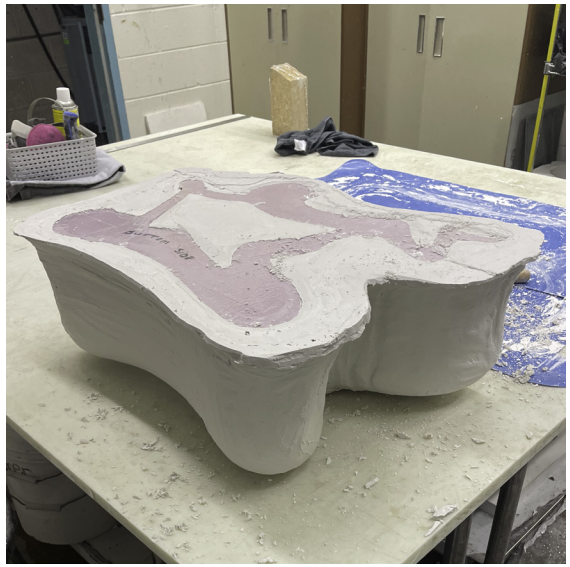
I began to digitally explore other simple ways to make sculptural form out of a 2-dimensional silhouette. I was intrigued and curved and furrowed surfaces that was create by revolving the silhouette 90 degrees at the feet. It seemed to look successful on the screen and especially in orbit. The design was prototyped- this time using a 3d printer. An important step in the process, this allowed me to evaluate the form off the screen and realize that the perception may not have the intention I was looking for. The design did offer something I wanted to work with though. When the prototype was inverted, it became kinetic and was able to gently rock on the arc created by the revolve.

Returning to digital modeling, I changed the point at which the 90-degree revolution would happen giving a silhouette that stood upright and would rock on the revolved feet. This resulted in a successful prototype with which to move forward.

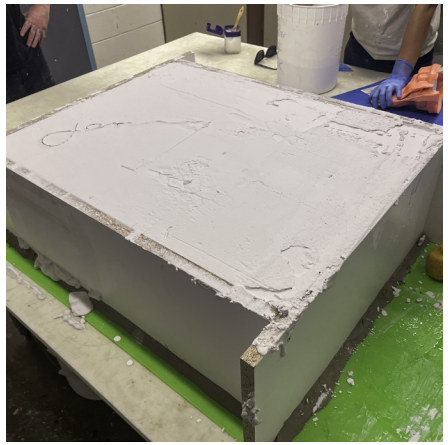
Silicone moulds were made of both 3D models, which were backed with a two-part plaster mold for su-pport, and wax positives were made of each, followed by plaster silica molds and casting in glass.
The first did not go very far in the cold working process. the feet were quite delicate and had some glass break off. It did however give me enough information to know that, in glass, the same negative perceptions came through and I should abandon that particular form.
The second form had its challenges in the molding process. And while there are areas for improvement, I am excited to see it through further development, in a slightly revised form.

Ultimately, I have always felt the need to see Soar in a larger scale. With the limitations of kiln size in mind, I scaled the form up this time, to 22”x 16” x 6”. Once again rigid polystyrene was cut using the CNC, however this time, three cuts were made and then glued together with epoxy to create a form to the desired depth. Vaseline was used as a resist on the polystyrene before hand-building a plaster/silica mold. The mold was first cleaned of the foam using a hot wire cutter and then the plaster surfaces were cleaned with a damp sponge. The prepared mold was then loaded into the kiln and secured with kiln bricks. Sixty pounds of washed, clear, Bullseye casting cullet was loaded into giant open face mold before the kiln was programed for 500 hours. Unfortunately, scaling up is risky and casting is ruthless. When I checked the kiln at melt, The mold had cracked and most of the glass was puddled on the sand at the bottom of the kiln.

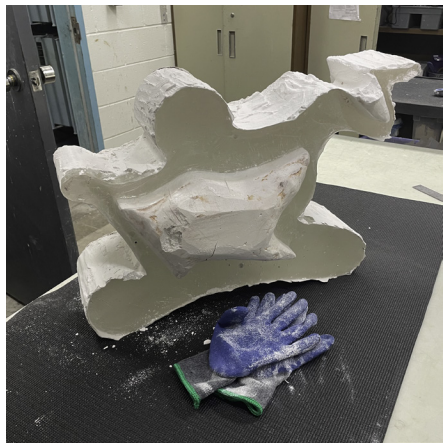
Because motivation and drive are an integral part of my practice, it took only a short time after the initial disappointment to process the emotions and realize that this form in this scale was what I wanted to achieve in this capstone project.

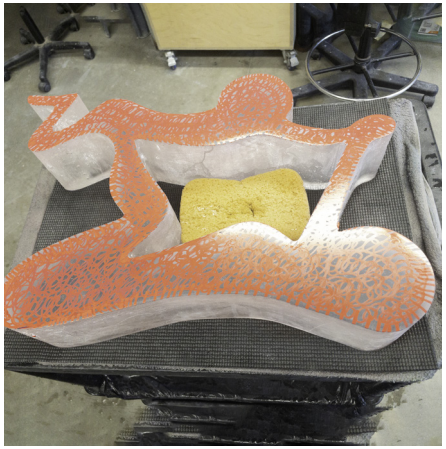


A large, handbuillt, plaster silica mold was made of many layers that directly covered the polystyrene foam shape. With some trial and error, a hot wire knife came to be the best way to remove the foam from the mold. Cleaned, secured in the kiln and filled with glass cullet, it was only at melt when the mold revealed a weak area that could not bear the amount of glass in the mold. The result was in a crack with which glass could run out of the mold. Once cool enough to examine, an area of the under contour reveleaved itself to be relatively thin compared to other areas. the information was used to make changes in making the subsequent mold.






Steps into realizing a large peice sucessfully, involved a second and much more sturdy mold. The mold was filled with glass, and I with uncertainty for what would happen. Being new to attempting anything at this scale, and with one failed mold not too far in the past, the suspense was as palpable as any material that could have been used within the process. After 500 hour kiln program was complete and the glass cooled to room temperature, the peice reveled itself as an achievement. Divested of the mold material, layer by layer, stages of marking and coldworking the glass are repeated unitl the desried finish is achieved.

And so, thanks to amazing people who rallied with me, polystyrene foam was cut, epoxied, and a giant (much sturdier) mold was made in a fraction of the time. Adjustments were made to the process. Rather than hand-building the entire mold, the first few layers were hand built and then, with a melamine particle board box built for the required dimensions (29" x 22" x 10") and a layer of chicken wire secured over the hand-built layers, plaster/ silica was then poured to fill the box. Once cured overnight, the melamine boards were removed, and the foam was removed from the mold. The new and cleaned mold was loaded and secured in the kiln, this time using kiln shelves to add even support to each side along with the kin bricks. Cleaned glass was carefully packed into the cavity of the mold. The same program was used. The kiln was checked at melt- this time with a positive examination. Several weeks later, the kiln once again revealed a positive result.

The dry mold material was divested from the finished glass, partially in the kiln and, once at a more manageable size, outside of the kiln. We are now left with only the annealed glass ready to be cold worked.

To finish this piece, there were decisions to be made regarding the cold working. I was quite happy with the surfaces that the plaster casting had left on the contoured surfaces that give the piece its depth. My intention has always to keep those surfaces rough (as a nod to the casting process) and polish the two, flat, silhouette surfaces. Those two silhouette surfaces were considered very differently. The surface that was on the open side of the mold was quite concave. A depth of close to a centimetre of material was carefully ground away from the outside of the silhouette into the middle to flatten the surface. I continued to use both hand pads on the edges and the water-fed angle grinder. I mark up and dry the glass between each stage and used 7 different levels of grinding pads (from 60 to 800 and then using a felt pad) to achieve the finished look. The second side was a flat molded surface and therefore I was able to start the grinding process at a 120 pad. As a final step, Soar was discretely signed with the Dremel.

Analysis of Final Work

While every great story has a start middle and end, Shared Together was never meant to be that. I feel that this journey has so many more paths to follow and avenues to explore. Like the relationships and connections I explore in my silhouettes, the experiences and challenges in kiln forming have begun to shape me as an aspiring artist.

While the intention to include a larger variety of forms did not come to be in the way I imagined, I plan to continue the development of each of the afore mentioned silhouettes and hopefully add to them through ideas and experiences shared with me. I look forward to discovering what forms they will take as sculptures and incorporate elements that I have found to be effective- negative space, contours, contrast of surfaces, and the reflections of surfaces.

In all versions of Soar, from the smallest to the grandest, I have gotten to know each curve and surface. Refining the surface of wax, applying a resist to the foam, covering each surface with plaster, divesting, grinding, and polishing- each have been a tactile experience that has allowed me to connect with the piece.

I am proud that I rose to the (self-imposed) challenge to make the large Soar sculpture. It is impactful and there is so much to discover in the surfaces, reflections, and contours at this scale.

Using stylized silhouettes, I will continue to make work that celebrates those familiar moments that bond generations. I hope the work elicits an emotional response and connects with the viewer and encourages more connections with loved ones.

Image 7: Jennifer Mediratta, Soar, 2023

Image List

Image 1: Stone Age Cave Murals of Lascaux Southern France. https://archeologie.culture.gouv.fr/lascaux/en

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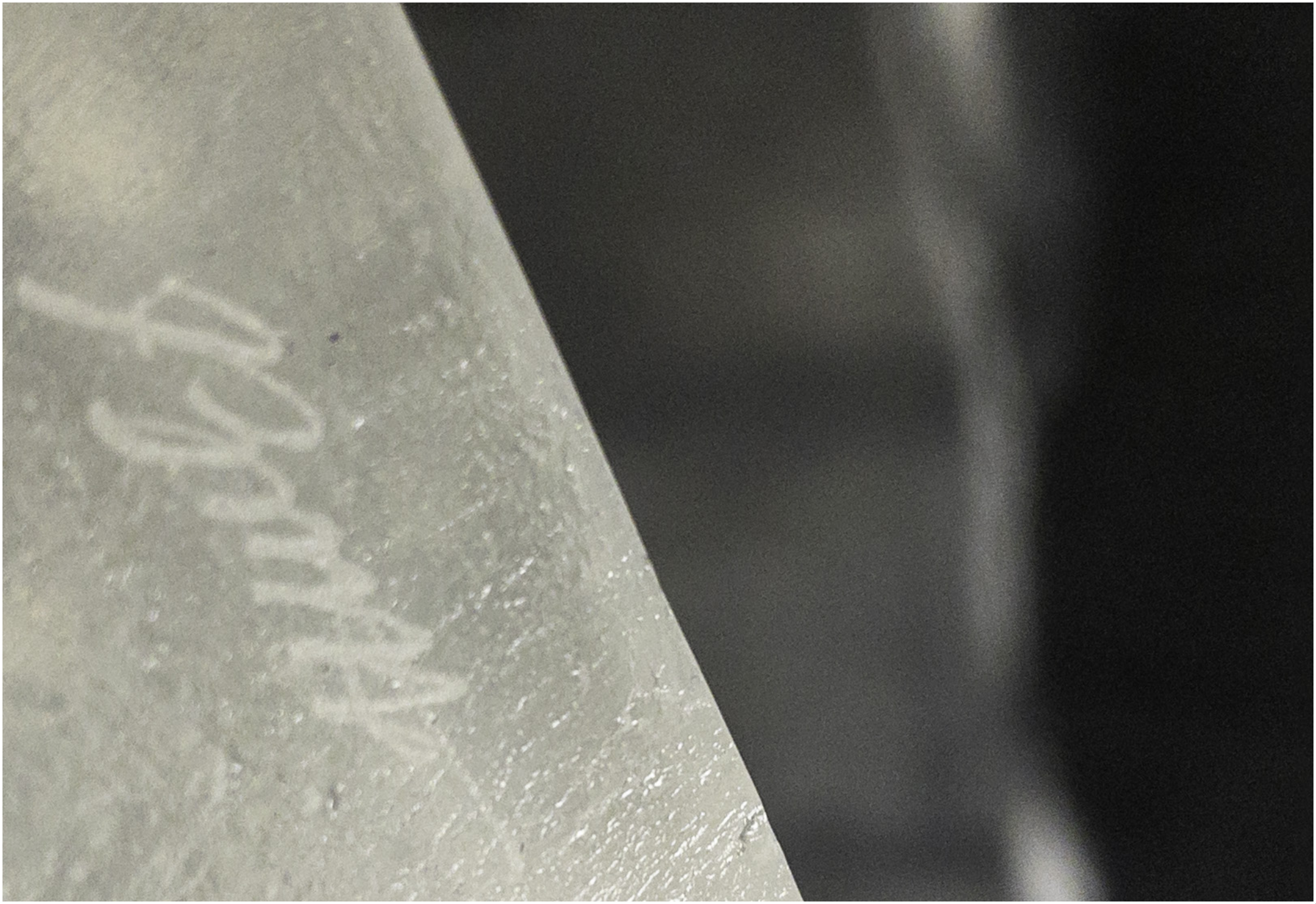
Image 3: Paper-cut Self Potrait of August Edouart. https://npg.si.edu/object/npg_NPG.80.140

Image4: Kara Walker, Slaughter of the Innocents,2016. https://emuseum.mfah.org/objects/137056

Image 5: Krsiti Malakoff, Maibaum, 2009. https://mymodernmet.com/kristi-malakoff-maibaum/

Image 6: Nothern Ireland, 2011. Photo by Jenn Mediratta

Image 7: Jenn Mediratta, Soar, 2023. Photo by Artist



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