Ann Wolff, *Sepia II* (open edition), kiln cast glass, 2007-8, 50 x 33 x 13 cm, Photo by Ludger Paffrath
Scott Benefield, *Spook*, blown glass, constructed, 2010, 13 x 5”

Scott Benefield, *Isola*, blown glass, 2010, 12 x 7 x 4”
Scott Benefield, Pinwheel, blown glass, 2010, 15 x 5.5"
Vanessa Cutler, *Intertwine*, glass waterjet cut, 2010, 160 x 160 x 380 mm, Photo by Simon Bruntnell

David Schnuckel, *My Burden Had Advanced Upon Me Untied That Day and I Killed It Like the Fiend It Was* (and detail), blown glass, spray paint, sharpie, crayola markers, 2009, 36 x 7”. Photo by Elizabeth Lamark
David Schnuckel, *My Burden Had Advanced Upon Me Until That Day and I Killed It Like the Fiend It Was* (and detail), blown glass, spray paint, sharpie, crayola markers, 2009, 36 x 7”. Photo by Elizabeth Lamark
Susan Stinsmuhlen-Amend, *Fluid & Dynamic*, kiln-fired paint on glass, metal support, 2011, 35 x 20 x 2"
Deborah Horrell, *Infolding I*, *pâte de verre*, 2008, 9 x 16 x 10 inches, Photo by Paul Foster

Ana Thiel, *Contemplation*, glass, metal, gold foil, 1999, 83 x 47 x 18”, Photo by Enrique Bostelmann

Deborah Horrell, *Infolding I*, *pâte de verre*, 2008, 9 x 16 x 10 inches, Photo by Paul Foster
I had the pleasure of demonstrating with the Corning Museum of Glass Roadshow during the G.A.S. Conference in Seattle. For this demo, we constructed a camper trailer inspired by the classic aluminum relics of the 1940s and 1950s. I was assisted by two great friends, Gabe Feenan and Courtney Branam.

My sketchbook had been filling up with campers for several years. I am drawn to the variety of forms of campers in that era. From streamlined Airstream trailers to canned ham style miniature Scotty campers, they have a beautiful and functional simplicity. My work has always been more decorative and technically oriented, so the campers were something very new for me. In the spring of 2010, I was given a residency at the Museum of Glass in Tacoma, and the help of a talented team of glassmakers. So, I took this opportunity to explore this idea. After assisting my buddy Rik Allen to create his beautiful sci-fi spaceships, I figured out a process for putting the campers together.

The trailers are created in a very simple and crude way, very non-technical. I wanted the simple line drawings in my sketchbook to translate to the glass pieces in an almost cartoon-like way. The trailers are started by hot-sculpting small parts such as the wheels, propane tank, and hitch with black frit. The parts are then stored in the garage or oven while the body of the camper is made. The body is made with an overlay of black color bar. After shaping the final form of the camper body, I start to carve in the lines of the windows, door, lights, etc. with a hot torch. Then comes the silver foil. The silver goes on hot and then is burnished to form a shiny and smooth texture. The silver does not stick to the line indentions, therefore the black underneath shows up as graphic lines similar to my sketches. Lastly, the wheels, propane tank, hitch, and other details are added.

I am very familiar with the procedure of doing demonstrations in front of the public at the Museum of Glass, although, the crowd is usually not a bunch of glass nerds like at the conference. I worked at the Museum of Glass as one of the glassblowers from 2002 until 2010. Since then, I’ve had a bit of career change. I loaded up my wife Lisa and our little boy Avery, to move back to our seventh-generation family farm in central Illinois. I am now a fulltime farmer, part-time glassblower. It has been a big transition moving across the country and back home, but I am really enjoying the farm lifestyle again. I have managed to keep myself busy with my glass work as well. Benjamin Cobb and myself just returned from teaching our first glass workshop at Pittsburgh Glass Center. The first group of campers I made last year now have a beautiful tarnished patina. They look as though they have endured the elements in the backyard for decades...

Thank you for the opportunity of sharing my enthusiasm with others who have the same passion for the material of glass.

**Alex Stisser**

Alex Stisser has been working with hot glass for 18 years. After earning a BFA in glass in 1996 from Illinois State University, he worked in many studios from New England to Seattle. He began working as one of the gaffers in the Museum of Glass’s hotshop when the Tacoma, WA museum opened in 2002. MOG’s artist-in-residence program provided the opportunity to work with artists from all over the world. In 2010, he and his family moved back to central Illinois to work on his family farm. He continues to pursue a career in glass.
REALITY – a simple way of defining it might be a specific space, a specific moment experienced in a collective and/or individual way. What we see and understand in most situations is not what is actually present, but what we have been taught to see or habitually experience, understanding the world through conventions and tendencies. Reality is a social construction, although there is space for individual subjectivity. Sometimes we may not analyze what we see and do because we’ve been taught how to handle situations in advance to live our lives more conveniently. Many times, as individuals or as part of a group we don't agree with the tendencies and constructs of a particular reality. Even if we do not share the same ideals we might benefit by being aware of the arguments that give them strength, structure, and why they are accepted. I think the process of understanding what surrounds us is crucial as we are faced with inevitable self-created suffering as our environment declines and becomes unable to support itself.

In order to create a meaningful transformation, we should reconsider old paradigms, the conventions that we have, the tendencies that we follow, and compare them with our currently perceived reality and see if these paradigms are coherent with a holistic, sustainable approach. Meaningful transformations can be pretty basic, using elements that are present within the environment. Usually these kinds of transformations are the ones that work best because they feel natural and make a lot of sense to the people within the structure.

Formulating glass, recuperating equipment, efficiency through design, all are various solutions to resolve immediate issues but it seems to me that it may be the same type of mechanical thinking that led us to this unsustainable model we struggle with. Does utilizing one or more of these practices change the fact that it is based on a dysfunctional model?

I am often faced with questions like, what are your formulas, and why not just give them away? But what of the investments made? How does my business exist in a competitive market with the requirements to provide for retirement, health, children, and family – all of the considerations that force us into decisions about our living behaviors. For now, we currently offer workshops and three types of mixture through distributors in order to help pay for the project to continue. Ultimately there would be funding from other sources such as grants to help with our operating expenses.

When rewriting our new mission and vision statements in 2010, I started to focus attention on the term “sustainability” and what that really means. We had been following the criteria set forth in what we had thought a sustainable business should look like: recycling local waste, recuperation of heat, innovative design, availability of local markets, empowering local economy, etc. But what about the lives of those involved, what about owner-operators and their sustainability? Is it sustainable to work 100 hours a week trying to do the “right” thing, or to just survive the next round of expenses?
When presenting our studio, we often cite the writings of Fritjof Capra and his concept of living systems, as well as other philosophies that are based on the fluid boundaries of cells, the idea being that these states of existence are the basic structure for functional or sustainable life. How can these principles be applied to a glass studio struggling with all of the issues at hand. Is it possible to exist within these parameters while nurturing a sustainable structure in our immediate lives, and within a consumerist society? My personal understanding at this time is that flowing within a perceived reality does not mean cooperating with its actual form. If viewing this from the perspective of a living systems approach, I can lay out the various processes with their consumptions and byproducts and decide what may not be functional or justifiable. In this way, I can build a functional web that will become my working model. And since it is a fluid structure, it can morph and grow into what it may need to become.

I have found for myself that returning to the simple practice of being mindful and honest in a given situation has helped me to find the next step when faced with the challenges of doing “business” in the current societal structure. When I can find clarity I am able to imagine, understand, and use my imagination to create concrete things or concepts. Honesty is equally important, because you can give yourself the opportunity to admit that some of your creations are harmful or not proper. Being able to say “I am wrong about this one,” is crucial. Many institutions end up investing millions of dollars trying to give credibility to technologies or things that since their very inception were not viable or even possibly harmful.

Our focus in the glass community becomes a duality of sorts, compatibility instead of incompatibility in our process and our final product. I am not sure there is an “answer” in what I have stated, but I find I do my best and my company does its best when we are, in the end, mindful of our environment and the impact we are having.

Christian Thornton, Ventana, silk screen, grail technique, blown glass, 2010, 65 x 36 x 15 cm

Christian Thornton has worked with glass for 30 years. His career began in Washington where he studied at a graphic art center. His continued to practice art in New York from 1990 to 2000. In 2000, he began to experiment with recycled glass, innovative designs, and alternative energy sources. By the end of that year, he relocated to Oaxaca, Mexico, where he designed and built Studio Xaquixe. Years of labor and innovation have yielded the creation of the “Enviroglassart” concept, the combination of the necessary componentsthat constitute a sustainable art glass center.
I would like to thank GAS, the CMOG Mobile Shop for hosting us, and my assistants Ben Wright, Jason Johnson, and Alex Hayden. Billed as a nontechnical approach to hot glass, our emphasis was not on how to make something but what to do with it after it is made. So this was a bit of an investigation into functional glass/art—not function as we normally encounter it, but glass designed to investigate and refer to other areas of interest. In much of my own work I seek a purpose, a function, a utility that extends beyond the technical requirements of making the glass itself. Another interest is exploring the change of state that occurs when glass transitions from liquid to solid. I like to retain some of the liquid qualities of hot glass when it cools into its solid state. The material’s plasticity is endlessly fascinating to me. It is goozy, stretchy, clear stuff that is really hot and then not.

What do we make and what do we do with it once it’s made? Much of glass art is intended to sit on display and be appreciated for the skill required to make it. My approach has been to use the molten glass to create forms that become part of a larger system performing some specific function. My work is often involved with water, systems of flow, siphon action, and sound generation, etc. The glass is not designed or created following technical or historical precedents, but rather to have specific functional capabilities. Our demonstration sought to illustrate a few ways in which this could happen.

Four Demonstrations

Humpback Hoedown was the creation of a simple glass form. Take three gathers, drop it out of a tube, and blow a bulb on the end. Open up the bulb, knock it off the pipe, and we have a lovely horn shape. Using some wax or clay, I affix a saxophone mouthpiece to the horn and can encourage/entice/extract=summon some quite impressive sonic musical emanations from this glass form. It’s quite a versatile range of sounds. Demonstrating where one might go with this piece of glass, I brought in a beautiful recording of a singing humpback whale. I made it clear to the audience that I did not speak humpback and had no idea what the song was actually communicating. I offered my apologies to those who speak humpback, before I played in complete ignorance of what I was actually saying. However my educated assistant Ben Wright, who has a degree in evolutionary biology, assured me their songs were all about hooking up. From the glass tube I was able to eke out a fair approximation of what the humpbacks were singing. Although this was a fairly safe environment to perform the duet, I urge caution to anyone trying this on the open seas by uttering the wrong thing and having to contend with an amorous 60,000 lbs leviathan seeking your attentions.

My second demonstration used a simple wooden pegboard with 24 holes and about ten 1” dowels that could be positioned in any configuration. The arrangement of the pegs served as an adjustable mold to which one could deliver hot glass. The possibilities are numerous since the pegs can be arranged in any order and the glass can be set up as one chooses—solid, inflated, one gather or eight, collapsed, stretched, etc. In addition, the glass can be introduced into the mold in any number of ways. In my case, I wanted a lot of heat so the glass would fall with gravity. I wanted significant inflation of this tubular form and had in mind an intestinal, biomorphic, udder-like form. Perhaps most importantly, I wanted the final solid form to retain some of its former liquid qualities. An attractive aspect to this approach is the unknown nature of the final effect, which is the result of many factors, some within our control and others beyond. This experiment allows for the convergence between the two quite different forms of matter: one liquid, one solid. The mold is rigid, like a boulder in a river, adjustable to suit one’s purpose, but it is the form against which the liquid glass must flow. As the glass solidifies, the mold disintegrates from the heated interaction. They meet in the middle. The glass provides a record of this encounter, like a fossil recording a moment in time.

Sex Machine, the third demo used heat, containment, a rubber bladder (condom), a voice (female coyote scream), pressure, and water. We sought to demonstrate how a simple device made of glass and latex, and a few other odds and ends could approximate the human sexual response. This may sound farfetched, however, once you accept the concept that art (and the materials from which
it is made) derives power from its ability to refer to things beyond itself, then many possibilities reveal themselves. Duchamp convinced us that materials and objects have numerous properties and associations that enable them to communicate beyond their normal frame of reference. For example, if you look at two 2 x 4's you might think of them as commercially cut wood, however, if you form them into a cross they are drenched with all sorts of other meanings. Back to the sex machine, this collection of materials was organized in a fashion that would allow a small bit of water inside the vessel to vaporize with the application of heat, producing pressure inside the vessel. As long as heat is supplied to the vessel (body) the internal pressure will increase. As pressure builds, release becomes imperative. The degree of pressure brewing inside the vessel is indicated by a condom placed at the orifice protruding from the body. As the pressure increases, the condom's flaccidity increases (the angle of dangle, if you will). A portion of this internal pressure is released when routed to the voice (coyote call), which wails in delight. This utterance, however, is not enough to prevent the internal pressure from building and the pressure indicator (condom) becomes inflated to its maximum size and launches out into the audience. The glass demonstration is the smaller exploration of the exercise, as it's dwarfed by the idea that the materials and process have the potential to speak and to supply meaning. They have histories and can be easily associated with other phenomena depending on the points of interest in our world. For me, this approach offers an alternative to dedicating years to mastering a particular set of historical glass techniques. I'm also interested in having some fun and making people laugh.

Goblet Races was our last demonstration and focused on goblet making, a practice demanding consummate glassblowing skills, teamwork, timing, and touch. It follows a long tradition of vessel making and can be the ultimate test of any glassblower's mettle. We thought we would skip all that and go for speed. How fast can a goblet be made? The criteria for this exercise was a blown foot, a blown stem, it must stand, and hold liquid. Only one assistant was allowed. The quest for speed eliminates all the froufrou normally associated with goblet making as an avolo, lip wraps, decorative artifice that all take time. Aesthetics become expendable. This is the drag races, you can’t pack a cooler. It was thought the four-minute mile was a human impossibility, now high school students do it. The clock starts at the first gather. Ready, set, go!

Our research indicated that part of the answer was how fast you can cool the glass. We studied a number of ways to accelerate this process. Success (the time elapsed) is largely dependent on cooling the bubble quickly to receive the stem and foot. We researched the use of cold pipes, iced block water, marvering on dry ice, etc. Our biggest advance, however, was the “anti-torch,” aka a CO₂ fire extinguisher. Its ability to “rigidize” a bubble is impressive. No more sitting around waiting for glass to cool, simply pull the trigger and it is done. Here comes the blown stem, and the foot immediately after. I mean immediately. The gaffer is pushed to the limit, taking parts as fast as they can be pulled from the furnace. It is a dance, played at 78 rpm. To be competitive, one has to achieve times of between three to four minutes.
COOKING WITH NEON
Sarah Blood

Makes one 12” Cake

- 1 lb butter, room temperature
- 1 lb granulated sugar
- 8 eggs, whisked well
- 1 lb self raising flour*
- 1 teaspoon sea salt
- 11 inch neon circle, electrodes at 90˚
- 2kv electric transformer
- 2 silicon electrode boots

Preheat kiln to 180˚C (350˚F). Butter and flour a 12” spring-form cake pan and set aside. Place butter and sugar in a large mixing bowl and beat with an electric mixer on medium speed for 2-3 minutes until light and creamy.

My work marries the fragility of glass and light, with the density of mixed media such as found objects, wood, concrete, and clay. I am interested in materials for their physical qualities rather than any traditional associations or affiliations, and how by changing the materials you can change the context of the piece. For the demonstration, I used a recent body of work, Luna Fossils to demonstrate this.

Crack the eggs into a small bowl and whisk well to combine the whites and yolks. With the mixer on medium, add a small amount of eggs at a time to the butter and sugar. Let each addition fully incorporate before adding more.

Luna Fossils are large cast concrete circular pieces with sections chipped away exposing a delicate circle of light encased in its dense and heavy form. Concrete is used for its associations to the industrial and urban landscape, for its permanent and unforgiving nature, contrasting against the fragile optimistic blue argon light.

Combine the flour and salt in a medium bowl and sift to remove any lumps. Fold the flour into the butter mixture by hand, a little at a time.

For GAS, I wanted to make the same piece but in a different material. And so concrete was replaced with cake.

Once all the flour is incorporated, pour the batter into the pan. Smooth the surface and place the neon tube on top. Press the tube into the batter so it bulges up almost covering the glass. Bake the cake for 35-40 minutes or until a toothpick, inserted into the center of the cake, comes out clean.

Cake is about as far removed from concrete as a material can get, but still shares basic properties that enabled me to encase the neon circle into the body of the piece. It is strongly associated with the home. It brings people together in conversation, in celebration. It is welcoming, hopefully not heavy or unforgiving, but delicious and makes us feel good. It is temporary.

Let the cake cool for 15 minutes and remove the sides of the pan. Once the cake is cool, remove the bottom of the pan and attach electrodes to the transformer. Position the cake for serving either on a platter or standing on its edge.

The viewers at the demo were invited to eat the cake, to tear pieces away with their hands, revealing the light inside and controlling how the piece evolved and eventually ceased to be.

*For a chocolate cake, replace 2oz of flour with unsweetened cocoa powder. You may also try argon filled tube in place of the neon.

Note: To change the context of the piece, substitute cake batter for concrete.

Sarah Blood mixing the cake batter
Photo by David Peterman

Inserting the neon tube into the cake pan
Photo by David Peterman

The neon tube in place
Photo by David Peterman

The cake “baking”
Photo by David Peterman
Sarah Blood (www.sarahblood.com) is a mixed-media artist based in Northeast England. She earned a BA with honours in 3-D design (glass, architectural glass, and ceramics) in 1999, and an MA in glass in 2003 from the University of Sunderland. She has exhibited throughout the UK, Europe, and the US, as well as in Hong Kong and the United Arab Emirates.
First, I’d like to thank GAS and the conference organizers for the honor of demonstrating my craft in Seattle!

I have found a niche for my work as a result of my attention to detail and my love of nature. Early in my flameworking career, I had an opportunity to study with Vittorio Costantini. One of the most important things he told me was to focus on one subject. I took this to heart and spent the next two years making glass beetles almost exclusively, which really honed my techniques for fine detail.

For my demonstration, I obviously wanted to showcase the intricacy of my work, but I also wanted to make something bigger and showier than what I normally make. The reason is that the larger parts of my work (the bodies) often take a quarter to a third of the time to add the small details. It is not unusual for me to spend hours on the smallest features of a single piece! Long-story-short, I wanted to make something that would be more entertaining to watch.

After thinking about this for a long time and discussing ideas with a number of friends, I found inspiration from Bandhu Dunham’s quest for kinetic glass. In the past year, I have begun making vignettes from nature in which my glass insects interrelate. I thought, “How fun would it be to have the bugs actually interacting kinetically!” By attaching a glass dragonfly by a long, thin, and therefore flexible strand of glass on a larger sculpture, the dragonfly would subtly vibrate with movement and appear to hover just like a live insect!

I practiced a number of times to see what I could get away with and what corners needed cutting to fit this into the allotted 1½ hour demonstration time. After several practice runs, I was fairly confident that I could pull this off, and knew that regardless of the end result, it would be an informative and entertaining demonstration.

I had a wonderful time at this conference, I enjoyed meeting many new people, and certainly learned lots of new things about glassworking from the demonstrations I watched. I was inspired with new ideas for my own work. Happily, my demonstration on the final day went smoothly and I had fun as well!

Wesley Fleming (www.wesleyfleming.com) began working glass at the furnace in 2001 and switched to flameworking in 2003. His work is included in the collections of Racine Art Museum and Kobe Lampwork Museum. Information about his teaching schedule, exhibits, and the galleries carrying his work is available on his website.
Using a mid-sized oxygen torch, I pull fine stringers out of the borosilicate glass rods. By welding the straight stringers, I can construct three dimensional objects. At times while I'm working with a small hand torch putting them together, my thoughts wonder to imaginary scenes of weaving baskets with silk from a cocoon, or of mother birds building nests from delicate twigs.

Putting the stringers together to form a large structure is what I enjoy most about working with glass. When completed, it is my utmost pleasure observing the transparency of the glass. This is one of its signature characteristics of the work, seeing through to the core of the finished structures. The theme of my work is always related to the things I have cherished since childhood, that is, elements of the sky, a cloud, rain, or birds gliding through the air. Often I cannot refrain from inserting a rainbow somewhere in the work. These rainbows always change their shape and form.

The pieces, similar to the one I made at the GAS conference, generally take between four to six weeks to complete. Since the allotted time for my demo was only 90 minutes, I did it in a series just like a TV cooking program. I prepared the critical phases beforehand so participants could see a condensed version of my typical process and each step shown in sequence.

I majored in sculpture during my art university years. Before graduating, I wanted to make something impressive. That prompted me to make a number of glass boxes out of 5 mm thick glass plates to form a gigantic intersected structure. That was the moment I fell in love with glass. After school, I worked as a glassware designer, then as a glass artist and the years flew past quickly. But I have never lost my enthusiasm for working with glass. Glass looks fragile, yet is actually very strong inside, and reflects sunlight as nothing else will. Every time I work with glass, the form is the one thing I always think most important. I like forms which give a look of stability. That might come from my core education in the university courses I took as a freshman.

Throughout my projects, one objective has been to create works that could be made not only with glass, but with any medium. My ten year flameworking career has grown from roots that took hold in classes with Robert Mickelsen, Susan Plum, and Anna Skibska, all in three consecutive years at Pilchuck. I was totally impressed and appreciated their openness and generous manner of teaching. What I learned from them certainly is the basis of my current art. It is true that I was particularly influenced by Anna Skibska in how to express the inner self.

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There were a number of pivotal moments in my glass career while I worked as a glassware designer, as an artist who specialized in cold working, and now as a hot glass artist using a torch. All three approaches are different in how they materialize subjects, but the underlining ideas and thoughts are the same throughout.

While maintaining the continuity of my fundamental values and conceptual process, I continually strive to expand and evolve my forms of expression, without compromising the esthetic beauty and sensitivity as new work evolves.

Kazuyo Hashimoto, *Cloud from Rainbow*, flameworked borosilicate glass, 2009, 19 x 12 x 12", Photo by Seisi Toyonaga

Kazuyo Hashimoto graduated from Kyoto City University of Fine Arts with a major in sculpture. She worked as a glassware designer for two Japanese glass companies during the next eight years. In 1982, she started her career as a glass artist. She studied flameworking at Pilchuck Glass School (1994-1996), and has focused it on for nearly 20 years. Her work has been shown in many solo and group exhibitions in Japan. A number of Japanese museums and libraries exhibit her works.
It was just over 11 years ago that I stumbled onto the compression technique and made my first flower, a rose, in a marble. I thought it would be the appropriate flower to make during my demonstration.

I did all the prep work in my studio at home, which included thin white stringers coated with red that became the petals, and others coated with green that became the leaves. I started with about 2½” of 28 mm clear rod for the marble, which was welded to a piece of 11 mm rod that was about 14” in length for the handle. I gathered the large rod in the flame and then flattened it out into a merese (“maria”) with the handle completely centered on top. After pulling a small center point on the bottom of the merese as a frame of reference, I began applying the petals (using red/white stringers) in a pattern spiraling out from the center point. There were six layers of petals, each added at different intervals. By inverting the glass at different angles using gravity to strategically heat the glass, and compress the bottom of the merese on the graphite pad. After the last layer of petals was embedded, I began applying the leaves (green/white stringers). After embedding those, I pulled the petals and leaves to a termination point and added a green dot that became the stem. With proper timing and just the right amount of pressure when compressing, I was able to get the petals and leaves to bloom and fill the body of the marble. To finish the marble, I went through a series of punties to change the axis and to round it out in my graphite marble molds. I burned off the final punty mark on the bottom of the marble (where the stem is). The demonstration went without a hitch. I finished with about 30 minutes left, which I used to answer questions.

The marble that is photographed is a replica of the one I demonstrated at the conference and donated to the GAS Auction. To see all the styles of marbles I make with the compression technique and my teaching schedule, please visit my web page.

John Kobuki, Rose Marble (three views), flameworked borosilicate glass, 2011, 1.6”

John Kobuki (www.kobukiglass.com) has been flameworking with borosilicate glass since 1995, and has been making marbles exclusively since 2000. He is best known for his floral designs created with the compression technique. He teaches classes and gives demonstrations in the US, Europe, and Japan.
HANDS-ON NEON
James R. White

My portable neon plant looked small and insignificant compared to the expansive Corning equipment next to my site at the GAS Conference demonstration area, but in fact, that was what my neon art workshop was all about. As a university faculty member of sculpture at Arizona State University (ASU), I must reassure students that the magnitude of the equipment used to make their work does not make their art any more or less significant.

Over the years, I've noticed that the day after commencement, these just-graduated artists find themselves standing in an empty garage studio wondering how to work without the expensive university equipment they used while in school. To help quell their anxieties about making art in the “real world,” I built my Traveling Light neon equipment, which I also use as a traveling workshop to present at universities and other venues around the country. This same equipment, packed in my Traveling Light camping trailer, traveled 4,000 miles to Seattle.

It was built inexpensively using available materials, often from used parts and those found locally. Industrious artists can easily fabricate similar neon equipment. One torch (burner) is made from easily obtainable copper plumbing parts that are powered by an old airbrush compressor, sitting atop a propane bottle from my barbecue. The other torch is similar to the first, but is powered by a small squirrel-cage fan. The processing equipment is fabricated to fit on a single rolling cart 2 x 3 x 3'. The cart contains a large transformer from a power pole, a vacuum pump, a manifold drilled out of a ¾ x ¾ x 6” bar of mild steel, with multiple vacuum switches to control the flow of argon and neon gasses into fabricated glass tubes.

This equipment is pretty straightforward and is all an artist needs to make neon art. In fact, most art students can fabricate it themselves. This same approach is also being demonstrated in our foundry program at ASU where we have built iron foundry cupolas with vacuum cleaners, and modified propane barbecues for lost wax casting.

Contemporary artists find themselves in a predicament after graduating from today’s art schools. They have had access to incredible equipment through their universities, and upon graduation must contend with their own personal tools in whatever studio space they can find. In my sculpture classes at ASU, one of the largest public universities in the USA, the students have access to almost any piece of high-tech fabrication equipment imaginable. They can scan a three-dimensional object with a laser and create a replica with our rapid prototype equipment at reduced or enlarged sizes. They can develop a pattern on their laptop to be cut in metal on a CNC plasma cutter, or use a laser cutter, or a computer-guided router, or water-jet cutter, to fabricate glass, stone, metal, wood, plastic, and other materials. With access to this equipment, the finished components can be ready in minutes.

Our technically rich curriculum, while inspirational, can also sometimes be problematic for a 21st-century art school. Each year the art student must master increasing numbers of techniques. While we add new technologies to our curriculum, we continue to preserve traditional techniques such as stone carving, blacksmithing, stone lithography, letterpress printing, wet photography, ceramics, woodcarving, traditional weaving, and now neon.

Neon fabrication and sign making is becoming one of the next “traditional arts,” one no longer being taught in
industry, but relegated to art schools around the world. In my hometown of Phoenix, there were as many as 25 neon shops. In recent years that number has dwindled to six, with only one operating fulltime. Most neon is being replaced by LEDs (Light Emitting Diodes). An LED sign can be made without a skilled glass tube bender.

As operational neon signs break and it becomes more difficult to find someone to repair them, the remaining signs will become more valuable. New neon signs will become exclusive “art signs.” The future for neon can be nothing but positive for the artist who incorporates neon in his or her work. Although neon glass art never benefited by its connection to beer signs or the seedy girly depictions, the arena is now free to explore more artistic endeavors. And so, neon art worldwide is coming full circle. It originated with luminous tubes created by Heinrich Geissler in the 1850s. His pieces were created as scientific demonstrations to show the different properties of plasma discharge and the florescent effects. Yet, they were really much more than that. They were art. They swooped, curled, and twisted in the Victorian style of the day. They were mounted on fancy turned wooden bases and became smart, modern Victorian parlor decor. It was a Frenchman, Georges Claude, who developed commercial electrodes and cheep neon and argon gas, and this allowed for the fabrication of luminous tubes that could be used as an advertising medium.

As the neon sign industry winds down and shop after shop closes its doors, a window of opportunity is opening for artists to acquire neon equipment. This equipment hasn’t changed in nearly 100 years, so even very old equipment continues to be suitable for crafting contemporary neon art. Only the vacuum pump is subject to wear. Crossfires and ribbon burners never wear out, and transformer-bombardiers are only coils of copper wire. Ironically, as the industry wanes and the only neon being made comes from art schools and studios of glass artists and sculptors, the medium and the term “rare and noble gasses” will again become appropriate.

James R. White (James.white@asu.edu) earned his BFA and MFA in art at Ohio University. He teaches sculpture at Arizona State University in the Herberger Institute for Design and the Arts. He is the founder of ASU’s Neon Workshop, which teaches BFA and MA sculpture students to use neon in their art. He exhibits his sculpture and neon art nationally and in England, Scotland, Japan, and China.
My presentation began with an overview of my kiln-formed glass practice and how I came to the work I am making today. I feel like everything that happens, happens for a reason and it influences or inspires the next piece. Commissions in particular can be a good way to push you out of the comfort zone and allow you to work on a scale that wouldn't normally be possible. Also, kiln disasters along the way have taught me so much about the material, and they have on many occasions inspired new work.

So for over ten years now I have been in the studio exploring this amazing material. I have mostly worked with kiln-forming. My earliest work was a series of contrasting coloured slumped dishes. Working on this scale allowed me to explore the medium and get to know my kiln. I started using Bullseye glass from the beginning because of the wide range of colours and accessories, as well as their strong focus on education and technical development. I was also fortunate to win a competition that included a residency at the Bullseye Glass Factory. This was an incredible experience for me. Having just finished university, I was able to gain invaluable experience with the medium that gave me the confidence and knowledge to set up my own kiln-forming studio.

The title of my presentation, “Through the Layers, Finding Your Own Language” was inspired not just by my recent move to France, but also on many years of travelling and living in different countries, mainly Australia and Denmark, my mother's homeland.

In my early panel work, I used layers of glass powders and frits to create landscape-inspired images. To add more texture and depth to these works I layered fine threads of glass (called stringers) that were pulled in the hotshop. These stringers were crushed and fused to create patterns resembling birds’ nests and then fused onto the panels. I also carved through these layers and added more layers of powders. Some of the works could take up to six firings in the kiln to achieve the desired effect.

My earliest works were very black and white or no more than three colours. I found this created a dramatic abstracted image that achieved a stylised idea of landscape. After using this opaque for several years I started to explore more transparent works. At this time I had set up a studio in a large warehouse at the bottom of a hill in a semi-industrial area. In the afternoon, the sun would set behind this hill and the old warehouses around it would glow in the fading light. This inspired a series entitled Afternoon Hues that was almost completely transparent in shades of plums, greens, and greys.

In 2004, I moved to Sydney to take up the position of studio and technical supervisor at the Sydney College of the Arts. The road between Melbourne and Sydney is very long and barren with about ten hours drive of not much but farmland and bush. If you veer off towards Canberra, three hours before reaching Sydney, you will pass Lake George. In 2004, this area was in severe drought and the lake had become a wheat coloured flat plane. Having grown up in this area, my memories of the drive being very lush and green, and the scene struck a strong chord in me and inspired a series of works with the title Dry.
They were fused panels of wheat-coloured opaque glass with a band of transparent blue through the middle to emulate the hills in the distance. The surface was cold-worked on a lathe to mimic the heat rising from land parched dry. Light and landscape continued to inform my work. I was also interested in exploring the more translucent qualities of glass. A new body of work, which culminated in a solo exhibition at Sobia Gallery in Sydney, was the beginning of my exploration in carving through the sheets and sculpting the glass. Fusing layers of different hues of blues and greens, and then carving through them to reveal the intensity of colour beneath, created a graduation of colour. I began this work by hand-carving on a grinding wheel (a lathe with a diamond wheel). Later, for larger areas on larger panels that I could no longer hold against the wheel, which also required a more gradual carving, I transferred to a handheld disc grinder to carve away the initial layers and then polish to a smooth surface.

I have been developing this body of work for several years now. This year I was commissioned to make a work from the Becloud Series for the flagship store for Tiffany & Co in Melbourne. I completed the work at the Canberra Glassworks just prior to attending the GAS conference and was able to show detailed images of the process. First fusing the flat panels, I then carve through the top layer of white glass to reveal the blue beneath. Once the image had taken shape, the work was polished till smooth and then fire-polished to achieve a satin finish. My panels hang vertically on the wall and are attached by an industrial adhesive to a stainless steel or aluminium backing plate. I discussed the use of glues and the importance of talking to the technical department of the manufacturer about individual needs. For my wall works, I use glue that is specifically made for glass to metal and one that sets in a few minutes and cures in 24 hours. This works well for me as I am able to glue my fixings on by holding them in place for a minute or so and then leave them to cure overnight. I have found silicones awkward as I don’t have the spare space in the studio to leave them out for seven days.

I have used several glues for different applications. The largest work was a 300 kilo Australian Coat of Arms, which included a life-size kangaroo weighing approximately 80 kilos that was glued to a stainless steel backing plate. For this project I employed a structural engineer to help design the backing plates and ascertain which adhesives to use. I also researched the adhesives and received written guarantees from the manufacturers that the product was the right product for my project.

Some things to consider when researching an adhesive:
- material being attaching to the glass
- lifespan of the product (Will it break down over time?)
- interior/exterior conditions for which the product is made
- discolouration over time
  (Where will the fixing be attached? Will it be noticeable?)
- weight of the glass
- surface area of the fixture
- surface texture of both materials
  (some are better on rough surfaces, others on smooth ones)
- curing time
- check the expiry date of the product

I also discussed a large (43 sq meter) public artwork that I was commissioned to make for a three-storey internal void of a commercial building in Sydney. Having just completed a large commission that was too heavy to lift by one person, I wanted to design a work that could be completed in my own studio by myself. I came up with a design consisting of 1,260 individual glass panels that together form a pixelated landscape. Each piece is slumped to take on the shape of crumpled paper and come away from the wall emulating paper blowing in the wind. I wanted the work to appear to move as the viewer moves past the work. The fragility of glass combined with the impermanence of paper is intended to encourage the viewer to stop for a moment of reflection and consider the transitory nature of human existence.

Lisa Cahill (www.lisacahill.com) completed a bachelor’s with honours in Melbourne, Australia (2000). She has worked as an independent studio artist for over ten years. She served as board member and newsletter editor of Ausglass (the Australian Glass Artist’s Society) since 2009 and as Ausglass’ vice president in 2010. Her numerous grants, prizes, and residencies include Australia Council for the Arts New Work Grants in 2002, 2007, and 2010. Her public art and architectural commissions can be seen in Sydney and in collections around the world. She regularly exhibits internationally.
My 37 year career has generated a progression and continuity of visual vocabulary. I choose the word evolution as a suggestion of “unfolding” and gradual development within art work as a body of expression. My voice and imagery have shifted as a result of experience, opportunity, and material investigation. Each element has provided impetus for progression and growth. A continuous stream of birds, bones, and vessels has appeared in my work. The morphing of images from realism to surrealism to abstraction to formalism has occurred simultaneous with change of medium. The bird is a symbol of beauty and transformative potential. The bone and skeleton are sobering suggestions of mortality, a parallel celebration of support of life, as well as that which is left after death. In contrast, the vessel is a metaphor of generative life and comfort in protection. Life/death, beauty/despair, the dichotomy has been a constant in the content of my work.

I was reared in ceramics where I investigated the tradition of vessels, and sculpting techniques. Early ceramic sculptures focused on a geisha-duck hybrid in a search for escape from the human condition. An ultimate stripping down of the geisha duck appeared in Question of Identity; a 3-D form embellished with drawings of both human and duck skeletons. The details reflect her duplicity of being and confusion. As one series of images completes its narrative potential, a shift takes place. As the geisha duck found its conclusion, the image of a nest became a metaphor of nurturing and growth. The shift appeared as the nest, built initially with porcelain twigs were later built of bones. Mortality appears again.

Opportunity has played an important role in my growth as an artist. A residency at the Kohler Company in Kohler, WI, allowed me to construct a 60” nest of human-scale bones of porcelain. Hope for a safe and transcendent home appear in this large nest, Flesh and Bones, with its shadow of a winged figure cast on the nest by a standing silhouette. Passages built in 1985, embraced the confrontational nature of architectural scale and dramatic imagery on doorways, which I produced at Otsuka Ohmi Chemical Company in Shigaraki, Japan.

A change from surrealism to abstraction occurred next with a commission for a series of sculptures for a hospital lobby. A change of imagery and material resulted as I moved from sculpting ceramics to wood. My work in wood and abstraction was interrupted by two pivotal opportunities, an artist-in-residence at Pilchuck Glass School in 1995, and a residency at the Bullseye factory in 1996. The residencies precipitated my ultimate transition to glass. I learned casting techniques while at Bullseye.

A group firing and physical failure of open-faced molds, forced the shutting down of the kiln, and an incomplete firing. The lacy edge captured the moment of transition from solid-liquid-solid. Inspired, I enrolled in a workshop with Australian artist Judith Bohm Parr to learn her pâte de verre technique. As I developed my skills in this form of frit casting, my interest lay in arrangements of glass forms in space. Giorgio Morandi’s still life paintings inspired both clarity of form, relationships amongst forms, and the negative space created in their proximity. The Unfolding series followed, exploring nested vessels, taking the arrangement of form from the horizontal to the vertical. This new approach became one of suggesting connectivity and intimate interaction.

Color was an immediate choice when I began working in glass. Recognizing the ease, and perhaps trap, of making dramatically colored compositions, I shifted to no color. Clear, white, and black glass became my palette in many still lives including Still Life of 8, Lineage of White, and Lineage of Black. This approach forced a careful study of individual form, rhythm, and breadth between forms within arrangements. Visual variables occurred as a result of translucence, opacity, and form.

Like residencies, commissions can provoke significant change. In 2006, I returned to abstract imagery and learned how to mold-blow forms rather than using solid casting. Color tests changed dramatically when taking 3” forms to 18” ones. The beautiful golden amber shifted to an unfortunate root beer brown, forcing me to consider hollow, blown forms. The form’s asymmetry pushed me further to make and use two-part blow molds for reproducing desired form. Enlarging scale in any medium necessitates relearning processes. Increasing a modestly
sized form to a larger dimension came with numerous failures as I learned new variations for my process. Making the molds, packing them with glass, the packing tools, and firing schedules all needed adjustments for the 3” to 20” transition. These structural challenges led to engineering cast horizontal planes to stabilize the six nested vessels within a stacked 3’ sculpture. While viewing one of the vessels with the horizontal supports alone, I observed the gradation of color resulting from light being cast inside the translucent form. This effect led to a new body of work that focused on light penetration within a singular form. The Infolding series emphasizes the impact of light projected through parallel planes of glass that are secured inside a vessel. Infolding VIII speaks of the drama when clear glass and light pass through its oval orifices.

A mentor’s illness and death provoked a new direction as I sought an alternate form of expression. How would I create a work that addressed his importance to my life? My exploration began with Exhale, a wall installation composed of multiple 3” clear glass ovals, conceived as cells making up a structure. Each cell, a discrete element, assembled on a wall to become a bigger totality. Since building Exhale, I have continued to work in this mode as meditations on loss, remembrance, and reverence. Threshold was part of the development of contemplative wall pieces adding drawing to the dynamic. Birds in a procreative act offered a suggestion of life’s continuum. Desire for color and celebration in these works led to Red Wing, which emerged as a continuum of colorful feather forms. In 2008 I returned to drawing birds, revisitng the life-death dichotomy by juxtaposing birds with their underlying skulls. My desire to integrate the paintings with the slumped pâte de verre canvases led to painting and drawing with fired enamels. Celebrating Beauty is a currently evolving wall installation of painted bird skulls. The series of beautiful, yet sobering, images of bird skulls returns me to an early fascination with the underlying structure of life, apparent only upon death.

Deborah Horrell worked with ceramics and wood before glass. She has taken residencies at Pilchuck Glass School and Bullseye Factory, which influenced her work and career. She taught at Ohio State University for ten years before assuming a fulltime studio practice, but continues to teach workshops at schools such as Pilchuck Glass School, Penland School of Crafts, Oatka School of Glass, The Glass Studio, Warm Glass, North Lands Creative Glass, Canberra Glassworks, Vetroricerca, and Crisform. She is represented by the Elizabeth Leach Gallery in Portland, OR, where she lives.

Deborah Horrell, Exhale, pâte de verre, copper nails, 2008, 55 x 28 x 1 inch, Photo by Paul Foster

Deborah Horrell, Infolding VII, pâte de verre, 2009, 9 x 16 x 10 inches, Photo by Paul Foster

Life is cyclic, as is the art and imagery provoked by living it. My art has followed, interpreted, and processed my life with all of its bruises and bliss. I did not intentionally begin working in a therapeutic fashion. It was simply a response to my reality and an internal need. This need and the resulting imagery, whether captured in ceramics or glass, defines the circular stream of my work.
I have been focusing on the figure throughout my career of about 30 years. Most recently I've been casting half-life size figures. My lecture traced the process of casting a figure from the original clay model to the glass sculpture. The concept driving my work is that a story can be told through the figure's subtle gestures and stance. The figures are usually between actions, hanging out, waiting, solitary, or interacting through posture and gaze.

Creating the Clay-Wax Figure

The figures are originally sculpted from a live nude model in a 12” scale. The enlarged sculpture, based on the 12” figure, is built on an armature of aluminum wire and styrofoam. It is bulked out with sulphur-free Plasteline. The process is essentially additive using traditional clay tools, loops, rakes, wood scrapers and knives. It can take a month or two adding clothes and refining details to complete the clay model.

The completed figure is given to a mold maker who creates a rubber mold over the plasteline model. The rubber is supported by a plaster exoskeleton to hold the rubber in place. It is held together with bolts, washers, and wing nuts. This mold will be used to make a duplicate of the original in wax. The mold is opened into parts. Vaseline is painted on the plaster in the areas where the rubber and plaster meet to keep the wax from permanently adhering to the plaster. The rubber is warmed with a heat gun and hot wax is daubed, (not brushed, which would create surface bubbles) into the mold, until no rubber shows and the wax is about 1/16” thick.

The wax is trimmed of all excess, and a very thin connector layer is painted onto the lip of the rubber. This prevents the wax from shrinking away from the rubber. The rubber mold is reassembled, and hot wax (190° F) is poured into and out of the mold to create an even coating, and to join the separate parts. A number of successive pours at 180° F are made until the wax is 1/4” thick. Once the wax is fully set, usually the next day, it is taken out of the mold and dressed.

The seam lines are trimmed and smoothed into the wax body using a heated spoon. Any holes are filled with hot wax and smoothed. Any part that broke off is reattached following the rule that both parts need to be molten in order to stick. Then you must wait until the joint is cool, at least 20 minutes, before further dressing. The whole piece is sanded first with drywall screen and Ke-Solve, a petroleum distillate-free, wax solvent. Second and third sandings are done with scotch brite pads, coarse and fine.

A pour cup gate is made out of wax. This will be where the glass enters the mold. The piece needs to be securely attached to the surface on which the mold will be built. Vents for air to escape are made. At the highest point a cap is made to catch plaster bits that may fall off as the glass is going into the mold.

To determine the volume of glass needed, we filled the rubber...
mold with water and measured how many liters of water it held (1 liter of water = 1000 cubic cm). In this case the mold held 13 liters of water; therefore the volume of the mold is 13,000 cubic cm. The density of gaffer casting crystal is 3.6 g per cubic cm (13,000 cubic cm x 3.6 g = 46,800 grams of glass or 46.8 kilos) The simple equation is total weight of glass = mold’s volume x glass’ density.

The building of the investment mold is based on a method taught by Pilchuck instructor and master caster Ann Robinson. The mold for a piece this size should be 3” thick and built up in successive layers. A 3” line is drawn around the perimeter of the piece, and a note is made of how tall the mold should be. The wax is sprayed with Murphy's oil soap to reduce the surface tension of the wax and prevent the plaster from beading up. The board is coated with Vaseline. The first layer is called a print coat. I generally do two or three print coats. The print coat proportions are 1 kilo pottery plaster: 1 kilo 320 mesh silica: 1 dixie cup paper fiber.

The number of kilos depends on the size of your wax. After the wax is fully covered with the print coats, structural coats of plaster are applied. The structural coat proportions are 1 kilo pottery plaster: 1 kilo 320 mesh silica: 1 dixie cup paper pulp: 1 kilo mulcoa 47 8 x 20: 1 handful chopped fiberglass. About seven structural coats of investment are applied. The first five are successively larger as the size of the mold increases. Before the sixth coat is applied, the mold is wrapped in strands of fiberglass. At this point, the mold is so large that a six kilo coat is required using the formula: 6K plaster: 6K silica flour: 6 cups of paper: 6 handfuls of fiberglass: and 6 kilos of mulcoa. The mold is then wrapped in lathing mesh (thick chicken wire), and the final coat is applied, which is usually a 9 kilo coat.

The day after the investment mold is made the wax is steamed out. With the help of a chain hoist and a rolling hydraulic cart, the mold is placed over a vat of boiling water. It is covered with aluminum foil to keep the steam in. The steam melts the wax. It takes four to five hours for all the wax to be removed.

**Kiln and Casting**

Using muscle, the rolling cart, and a chain hoist, the investment mold is lowered into the kiln, leveled, and propped in place using bricks and sand. Sand is used to support the mold, buffer the heat, and catch leaks. (We loaded billets of the casting crystal into the mold before turning the kiln on, but I would not do it again. I believe there was a bit of wax left in the mold and when it burned off, it left carbon deposits on the billet surfaces. As a result there are some carbon deposits in the casting.) A flowerpot on stilts was placed over the pour cup, and a few billets placed in it. The flowerpot acts as a reservoir to funnel glass into the mold. The billets that would not fit into the mold were placed in an adjacent kiln. The kiln holding the mold was heated slowly up to 1562° F over a five-day span. The kiln holding the billets was heated to 900° F overnight and held. When everything was hot we began transferring the 900° F billets to the flowerpot. Once the body of the mold was full, it was necessary to move the flowerpot over each arm to insure that the arms were full. The flowerpot was removed. I let the kiln sit at 1562° for eight hours to reduce the bubbles and then started the annealing program.

Refer to the Bullseye and Gaffer Glass websites for extensive information on annealing. Be sure to read the transcript of Dan Watson’s lecture, “Practical Annealing,” on the Gaffer website.

The piece was annealed for 21 days. I like to wait until the kiln is cool to take the piece out. The investment mold is removed wearing bike gloves and using old screwdrivers. It will come off in the layers as they went on. I let it rest and do not get the piece wet or grind it for at least a day.
The piece came out of the kiln whole and relatively bubble free. We did not have time to finish it before the conference. The tools used to finish the piece include diamond cut off wheels to remove the pour cup, etc., water fed angle grinders with diamond pads to flatten large areas, and a Foredom flex shaft grinder with a roloc diamond disc system to smooth the entire surface. We have also used silicone carbide grit, a plate for final flattening, and various diamond bits, pads, and files to deal with certain nooks and crannies.

Lucy Lyon, Sun, cast glass, 17.5 x 12.5 x 30.5”, 2011, Photo by Addison Doty

Lucy Lyon has been working in glass for 30 years. Her work is in a number of private collections. She has a BA in philosophy from Antioch College. Her glass education consisted of a number of workshops with various masters and attending Pilchuck Glass School.
Art making is hard work, time, and money. Art making is also an invaluable human expression that can be, among many things, forward-thinking and healing. In my lecture I not only wanted to share my process of lost-wax glass casting, but also how anyone can do it inexpensively in their own backyard.

I acknowledge that lost-wax casting is a labor-intensive process. However, in the wax-working stage, I begin simplifying the process by utilizing rubber molds. When I pour from a mold, I can create and work with many types of miniature fish sculptures of the same design. This permits me to piece together the small sculptures into a larger body that can be formed around a found object like a basic kitchen bowl. After the wax model is complete, I prepare the wax for the investment. This involves adding wax channels called sprues to aid the flow of the honey-like glass, vents that allow air bubbles to pass through the mold and metal stilts used to support the wax form. Additionally, the wax piece is placed on a 2-3 cm thick clay bed that is centered inside a leak-free wooden box. The clay bed is an important element. Its purpose is as a reservoir for the glass to completely flow and form at the foot of the piece.

The investment mixture I use for a 30 lb bucket is: 1.5 kg Hydro-Stone, 3.0 kg Mullite, 10.5 kg Pottery Plaster, and 15.0 kg silica. It is critical that all the ingredients are properly measured and added in the listed order. The investment is poured into the box and the piece is covered by 2-3” of the investment. Once the plaster is set, it is time to melt out the wax. This can be done at home simply by using a pressure cooker with a hose attached. The hose is placed under the mold pointed directly at the wax, which will then drip out into a melt pan beneath the mold.

I use leaded crystal for casting. I must grind it down to a fine frit in order to properly pack it into the plaster mold. I do this by using an industrial-sized garbage disposal unit. I attach the end of the disposal to a section of PVC piping that is securely connected to a lidded bucket. While the bucket catches most of the glass parts and dust, it is important to note that I always grind the glass in a well-ventilated space. The glass dust is hazardous to breathe. Another method of catching glass is to cover the bottom of the disposal with a simple trash bag.

Once I’ve chosen my colors, ground, and cleaned the glass, and then determined the amount of glass required for the casting, I disassemble the kiln walls for loading. I am always thinking about how to engineer ways of making my workload a little easier. Glass-filled plaster molds can be extremely heavy, especially if it needs to be lifted up and into a 4’ kiln. This is why I’ve cut all my kilns into significantly lighter half sections that can be lifted up and around a mold.
After the kiln is placed around the mold, it is important not to jam it tight, but to place the fire brick around the mold to insure no movement.

Firing temperatures and times varies with the thickness and types of glass. Temperatures for my art works peaks at approximately 1400° F and can require up to two months of annealing depending on the size. I highly recommend that you chart and monitor the temperature increases and decreases of your work closely. I’ve been casting glass in the lost-wax method for eighteen years and I am still learning and refining my annealing. It takes practice to develop your own formulas.

After the firing, when the piece is cool, I will saw away the plaster. The plaster is specifically designed to be soft and crumble off the glass. However, you can still chip off parts of the glass if you aren’t careful, so proceed with caution.

Removing glass drippings, sprues, unwanted marks, and the reservoir at the foot is the next step. This is all done cold both using diamond cut-off wheels and core bits with an electric foredom and a larger scale diamond saw. Diamond pads of different grades are also applied to create a glossy polish. I typically polish the lip of bowls with the pads, finishing it off with a growingly precious polishing compound called cerium oxide. All these materials can be found at your local jewelry or hardware stores.

The patina is the final step. I apply dried and wet pigments into the cracks around my designs to achieve an earthy effect. I am particularly attracted to the contrast between the icy polish and rustic detail. I like how it highlights the different themes in my pieces.

The possibilities of lost-wax casting are nearly limitless. If you need more in-depth information please contact me.

Charlie Miner, Basket Frogs, lost-wax technique, cast glass, 2009, 12 x 20”, Photo by Wendy McEachern

Charlie Miner (tesuqueglassworks@gmail.com) started his glass career in 1973. Two years later, he opened Tesuque Glassworks, a lost-wax casting and blown-glass studio gallery. His work is included in numerous prestigious private and public collections, including the Corning Museum of Glass and the Renwick Museum of the Smithsonian Institution.
Ossify (2009) is a kiln-formed glass work whose form resembles a Maori paddle. It was waterjet cut, carved, and polished to reveal the embedded text and a portrait of a man, which was fused within printed layers of opal white Bullseye glass. This description might be used to identify the object and to describe how it was made, which is indeed a complex process. Equally complex is the question of why such an object was made. By addressing both the conceptual and technical aspects behind this work, this essay is a case study to illuminate meaningful making in glass art.

An “Ethno/graphic” Approach to Glass Art Practice

My “ethno/graphic” approach navigates the development and fabrication of an artwork through observation, translation, and encapsulation. As a loose adaptation of ethnographic fieldwork, the “ethno” strand involves immersion into the foreign contexts and using the experience to create an interpretation of that culture. In the “graphic” strand, this interpretation is translated visually through a focus on text, mark-making and the manipulation of the graphic image, encapsulated within the glass form. The context of a Victorian-era ethnographic collection in Northeast England provides a point of departure for this body of work.

Observation

For inside him there are spirits, or at least little genii, which have seen to it that for a collector... ownership is the most intimate relationship one can have to objects. Not that they come alive in him; it is he who lives in them. Walter Benjamin

In 2008, I was commissioned by Sunderland Museum and Winter Gardens to make a glass artwork for Collected Fragments, an exhibition of international artists working in taxonomy and collections. Having been granted access to the museum’s holdings, I chose to work with their ethno/graphy store. While one might search for a foreign origin of individual artifacts, an alternative perspective gives them a local link. I viewed the ethnographic objects instead through their owner, Edward Backhouse, Jr. (1808–1879), a well-known Sunderland philanthropist who left his collection to the city museum.

Texts written on the objects were critical for establishing their “English” identity. Some details were gleaned from accession records, tags on the objects, and a handwritten “Rough List of Objects from Australia and New Zealand in the Museum” dating from 1909–11. Backhouse’s obituary and his Quaker-influenced writings on early Christian history provided clues on his civic-minded bequest. The most influential documentation was, in fact, directly inscribed on several objects. Texts in Edward Backhouse’s own hand were written in ink and varnished, or in the case of a pair of narwhal tusk bedposts, physically carved into the objects’ surfaces. They describe the objects, their native origin, how, and when he received them. In the careful handling standards of current museum practice, this marking might be seen today as transgressive and would be prohibited. At the same time, such marks provide key information about Backhouse and his collection. The histories of unmarked objects within the store are less definitive. This indelible handwriting ties the objects to Edward Backhouse, Jr. and his collection, now owned by Sunderland Museum.

Translation

Shifting the focus on this collection from a point of origin to its ongoing usage establishes a local history. Active work with the museum objects links people, place, past, and present. This could be seen as an example of “object biography,” a concept that anthropologist Igor Kopytoff uses to consider an object’s cultural significance and value. Of an object’s “career,” he asks, “What are the recognized ‘ages’ or periods of a thing’s ‘life’ and what are the cultural markers for them? How does the thing’s use change with its age, and what happens to it when it
reaches the end of its usefulness?” (Kopytoff, 67) It was therefore possible to consider the English biography of foreign objects in Backhouse’s collection in Sunderland.

One object confirmed to be in Backhouse’s collection, a Maori paddle, was studied intensely by Les Jessop, former Keeper of Biology at Sunderland Museum. He was trying to establish its connection to Captain Cook’s 18th-century Endeavour voyage to New Zealand. In search of Backhouse’s handwriting, he scanned the surface of the paddle using infrared camera, ultraviolet light, and light filtered through colored cellophane films. He did find text, but not what he was expecting. The words “Zealand” and “paddle” were written repeatedly along the paddle’s blade on both sides, along with one instance of the name “Roberts” (which Jessop speculates was a servant on the Endeavour voyage). Jessop’s search for clues written on the Maori paddle is part of a complex object biography, and his interaction adds another layer to its local narrative.

**Encapsulation**

The Maori paddle is currently displayed in the Sunderland Museum’s world art case. Clearly its story extends beyond what one can see on a typical visit, and it would be impossible to fill in all the details based on the accompanying signage. In response to my interaction with the ethnographic objects, I endeavored to create an object biography in the form of an artwork. Glass added a metaphoric dimension to the work. First, glass plays a role in the museum as vitrine, both in display and protection of the objects within. In my work, the graphic image is permanently embedded within the glass. Second, my choice of opal white glass gave the artwork the look of bone, a reference to the “ossification” of museum collections and the removal of artifacts from playing a role in daily life.

A complex combination of processes was utilized in the fabrication, but the extension of printing and kilnforming techniques distinguish this body of work. The transparency of screen-printed sheets of clear glass allowed for the viewing of multiple images encapsulated within a fused block. However, the use of opal white glass in this case mostly obscured the printed image. Two examples of glass artwork show how this quality was exploited to particular effect. In the preparatory work *Comb* (2009), the handwritten text from the above mentioned “Rough List” was screen-printed onto opaline glass sheets and then fired. This glass was then cut into strips, laid on edge, and fused together. Once the object was waterjet cut, ground, and polished into its final shape, the text was legible when viewed from various angles. The brown ceramic enamels appeared from the layers of glass to form what I call a “graphic grain.”

The final work *Ossify* is shaped like the original Maori paddle, but its biography has been encapsulated into the material from which it was made. Text extracted from the *Newcastle Courant* article on Backhouse’s bequest to Sunderland Museum was embedded as a grain on the handle. A portrait of Edward Backhouse was printed to multiple sheets of opal white glass. The identical sheets were stacked and fused into a single block, an image-infused piece of glass from which the final form could be cut, carved and polished. Grinding through layers removed the portrait on the surface, but exposed the next image underneath. In this way a “carved” image was created within the three-dimensional glass form.

**Conclusion: An Ode**

My essay title alludes to Keats’ *Ode on a Grecian Urn* (1884), which activates the painted imagery on an imagined vase, transforming it into a container for a narrative. In my artwork, the glass literally contains a
narrative made of layered images. Acknowledging the evolving role of an ethnographic object, from functional tool, to trade item, to private collectible, and eventually to museum artifact, Ossify functions as a metaphor for post-colonial ethnicity. Its migrations over time and place are marked by contact with foreign people, eventually settling and integrating into a new cultural context. At the same time its form, a glass object achieved through refined craft, is equally as important as its content. It is hoped that during its own career, this glass artwork is displayed, admired, interpreted, and debated.

References

Jeffrey Sarmiento (www.jeffreysarmiento.co.uk) was recently appointed Reader in Glass at the National Glass Centre at the University of Sunderland, UK. A Filipino-American artist, his work is centered on constructed ethnicities and combining the printed image in glass sculptures. He has also been awarded fellowships and residencies at UrbanGlass, Pilchuck, and a Fulbright to Denmark. His work is in the collections of Sunderland Museum, Glastmuseet Ebeltoft, and the Speed Art Museum. His latest work, a 600 kg glass map, was recently installed in the Museum of Liverpool, UK. He teaches master classes throughout the US and Europe. He is represented by Bullseye Gallery.
Having battled at the forefront of abrasive blasting techniques for a couple of decades, it felt like redemption when Jeremy Lepisto requested me as a presenter at this year’s GAS Conference. It seems that abrasive blasting is still viewed by the glass community as an add-on or byproduct of other glass working techniques. Nothing could be further from the truth, and it was my hope to show there is a whole world out there when given a closer look.

Being a stickler for details, I briefly covered the false terminology being used for this line of work: glass etching, sandblasting, and sand carving. Glass etching implies the use of acid, sandblasting the use of sand as a medium, and sand carving combines the use of sand and the technique of carving as if it were the only technique existing. Needless to say all of these terms are wrong! We use other media, such as silicon carbide or aluminum oxide, for blasting — hence the term abrasive blasting.

The basic process for abrasive blasting requires that the glass is covered with a material (called a resist) that is both self-adhesive and thick enough to withstand the abuse of continued blasting. Several types of resists are available, most are sold on a roll in various widths and are vinyl or rubber. The choice depends on the technique being used. These materials have various thicknesses, generally ranging from 6 mils to 25 mils. We hardly use anything thicker even though they are available. For those of you who started years ago, the resist usually referred to as “Buttercut” is a 3M Company’s proprietary resist and is a whopping 45 mils thick since it was developed for fabricating granite and marble gravestones. Even though the name implies that it would cut like butter, well that was not the case. For most glass work it is simply overkill.

After the glass is covered with resist, the image is transferred to the resist by tracing or directly drawing on the resist. All the design elements are cut with a stencil knife. That’s the old fashioned way and still works. We employ Adobe Illustrator to create designs on the computer, which are cut by the plotter on the resist materials. To apply the resist, the cut design is covered with a low-tack masking tape-like layer that holds it together while the backing paper is removed from the adhesive side. This process enables us to reproduce identical designs in multiples. We offer this service to other glass artists as well.

Adding to the family of resists, are a completely different category – the photo resists. These resists are emulsion-coated, light-sensitive sheets that are processed under yellow light conditions in a darkroom-like setting. The artist produces art work on special materials made for either laser or ink jet printers. But they can also draw or paint on it directly with India ink. The main objective is to create a black and white transparent image that is then put together with the light-sensitive film and exposed to a UV light source. The film is exposed and then washed out with water to develop the image. After the film has dried, it is ready to be applied to the glass since the material is self-adhesive.

For a few years, a completely new photo resist has been available, which uses a dry process film that only requires exposure to the UV light. With this material, it is possible to create halftone images and blast them, which we find very exciting. It does, however, take a bit of experience to make photographic halftones work.

I’d like to give a brief overview of the three basic blasting techniques. First, there is surface etching, in which all design elements are exposed at the same time. This requires a block design for art work, meaning that all individual design elements are separated from each other by a narrow space. All exposed elements are then blasted uniformly white. The resist is removed and the project is complete.

Ruth Dobbins, The Corn Maiden, surface blasted on ¼” thick tempered glass on 2 full-size door inserts, 22” x 64”, Photo by Dobbins Studios.
The other two techniques have multiple stage techniques, that is, the design elements are peeled out of the cut resist at different stages. Both of these techniques require line drawings. In the carving technique, the whole design is analyzed prior to blasting, because the sequence is based on spatial representation. Whatever is in the foreground gets blasted first, the receding elements next, but depend on the sequence of overlap. All elements are numbered so that when you begin blasting you can focus on how you want to do the blasting, not the sequence. To put it simply, wherever two areas touch, one has to be blasted deeper than the other. By following these steps, a three-dimensional image is created. This technique requires good eye-hand coordination and the ability to see where the abrasive is hitting the glass. Without that, you cannot shape a specific element. Beginners are often confused, because blasting is done on one side and then viewed from the other side. You have to think backwards all the time. Areas you are blasting deeply into the glass will protrude and come forward as you look at it from the other side. We have created a whole system for analyzing designs for the blasting sequences, which we teach in our workshops and also have available on DVDs and in print. Surely you can imagine there is more to this technique than can be covered in this short article. (The photographs illustrate the results.)

Ruth Dobbins (ruth@etchmaster.com, or 888-EtchPro) earned a MA in printmaking and art history from Marshall University in 1976. She has been involved in the glass industry for over 35 years, as an artist, a supplier, and a teacher. She has worked in fusing since 1974, added casting to her repertoire, and for the last 20 years has developed abrasive blasting techniques. She works collaboratively. She and her husband Norm Dobbins spent five years translating the work of Judy Chicago into glass. Norm passed away in 2008. Ruth lives, works, and teaches in Santa Fe, NM.

During the lecture, I showed examples of blasting on flashed glass, which offers a two-color effect in the image without having to paint anything. You can buy commercially made flashed glass, work on a flashed-blown piece, or fuse your own layers of colors and blast through them. The blaster is also an excellent cutting tool. Rather than using a saw to shape glass I often prefer the blaster because it not only cuts through thick layers of glass, but I can angle the nozzle while blasting and shape the edge of my piece as I desire.

Well, I hope to have whetted your appetite so you will give abrasive blasting a try. It really offers a lot of variety, and is also a great asset in combination with other glass-working techniques from blowing to casting. It’s not just a way of cleaning off shelf primer or giving a satin finish to a vessel.

Last, but not least, there is the multi-stage shading technique. To execute this technique, a line drawing is also used. But rather than analyzing the drawing according to the sequence of overlap, you actually shade the drawing with a pencil to create lights and darks. Where two elements touch, one area has to be lighter in value then the other or the shapes would blend together. After shading the design, it is analyzed and numbered according to each individual design element, but this time it’s determined by which area is lighter than the one it touches. Again, this process is too long to describe, but is better conveyed in our workshops, books, and DVDs. Shading is kind of like airbrushing with your blaster. You envision the un-blasted glass as your darker “canvas” and you blast that image very lightly onto the glass surface, trying to achieve many tonal values. This is the hardest technique to master since it does not allow for mistakes. Blast a little too long, and the whole project is ruined. You can shade one whole area for one tonal value, or you can create transitions within one area. By understanding a bit about shading now, you may appreciate the work involved in the image of the bear. Both of the multi-stage techniques can get quite involved. We have blasted images with hundreds of stages. Carving takes by far the longest since you are actually removing substantial amounts of glass from the surface. Shading takes less time, but requires utter concentration in the execution.
In this article, I would like to discuss my ideas, aesthetics (such as inspiration, imagination, and philosophy of my work), and my eighteen years of cold-working experience with glass. In 1997 when I was in the graduate program at RIT, I had struggled with my identity. One night I was inspired by the ancient Korean geometrical spiral pattern and instantly drew several mental sketches. My work is about the invisible energy in the universe that includes the galaxy, a tornado, hurricane, whirlpool, water, and even the extremities of the human body. I think these forms have similar spiral shapes to magnify their energy. In the traditional Korean house or the royal family’s homes, there are spiral patterns on the wall. The Gyeongbokgung Palace, the main palace, was built after King Taejo the founder of the Joseon Kingdom moved the capital to Hanyang (now Seoul) in his third year (1394). Here the spiral pattern represents the strength of nature as the authority to rule the country. The spiral form contains not only physical energy but also spiritual power. I continually discover the energetic movement in my works, and this fascinates me as I compose the diverse elements that create the unexpected illusions and optical reflections in the piece.

At the demonstration, I discussed the basic principles and rules of coldworking, the preparation of the materials, handling the glass on the equipment, using a jig for bonding, and the aesthetics of my sculpture. To help explain the depth of coldworking in the allotted demo time, I showed a video of my working methods.

Few glass artists take interest in the finer points of coldworking because it requires a specific attitude and much thought. The processes of coldworking are cautious and logical. Many glass artists may have experienced their work chipping or breaking on the flat grinder. Or the impurities (such as tiny bubbles, dust, or marks in the adhesive on the surface of the glass) may bother some artists where others don’t mind these defects. Even if you are a glassblower or kiln-former you may have to deal with some coldworking, so I would like to offer some tips for handling the glass and gluing. An important consideration is how the flat grinder affects the piece. The basic principles of the wheel’s grinding motion and the tendency of it to grind unevenly, depends on three factors: where you placed the parts, the speed of the wheel, and how long the glass is held in one place on the wheel.

Figure 1 illustrates the direction of wheel’s rotation depending on your dominant hand. For example, if you are right handed it is much easier if the wheel rotates counterclockwise. This allows you to secure the piece and control it more conveniently, while you feed the slurry of abrasive material and water from the left side. However, this does cause the left side, the leading edge of the glass, to be removed faster than the right hand side, which is the trailing edge. To grind the surface evenly, you must count to yourself and turn the piece around at even intervals, grinding the glass for the same amount of time in each position. Keep your eyes on the thickness of the glass and carefully observe what the machine does to your glass. Also remember that the inner part of the wheel grinds...
than the outer side because there is an increased surface speed farther from the axis. If you understand this, your results will be more successful.

This two-part epoxy adhesive has optical qualities and superior strength. I have used Hxtal NYL-1 since 1997 and have had diverse experiences. It has solved major issues of de-lamination and clarity for coldworking artists, which other adhesives cannot. To use it, a vacuum pump and a clean room are required. The preparatory steps for gluing are the following. (See fig. 2)

1. Clean glass with 100% isopropyl alcohol and warm the glass if the room temperature is below 77°F. Temperature influences the viscosity of the epoxy making it thicker if it's cold. To avoid thermal shock, do not heat the glass directly, but rather warm the room with a heater. If you want to bond thick plate glass such as ½” or thicker, only glue six layers or fewer at a time. The weight of the layers will squeeze glue from the lower joints and result in thinner glue joints that may de-laminate when you begin grinding the bonded glass later.

2. Prepare your work surface. Make sure the table is stable and the surface is level so the glass doesn't move after you apply the glue. Then set two layers of wax paper on the table where you will be working. You can use clean cardboard to collect the glue overflow. Precut plastic tape for securing the glass parts to keep them in position while drying.

3. Use an accurate electric scale and tare (“zero”) it for the transparent plastic cup that will be used to mix the epoxy’s two components. The ratio of Hxtal part A to B is 3:1 by the weight. Mix the glue stirring well for a few minutes, then put this cup into the vacuum chamber to completely release the air bubbles in the mixture (about 20 minutes, but depends on the volume of glue).

4. Apply the adhesive to the glass surface. The pattern of the glue will depend on the shape of the glass. For example, if you have a circular shaped glass, place a big glue dot in the center of the glass. If the glass is rectangularly shaped, apply the glue in a dog bone shape. Hold the cup down close to the glass when you apply the glue to the surface and pour in a continuous, even stream. This creates an even distribution and helps avoid trapping bubbles.

5. When finished applying the glue, hold the next layer of glass by placing one side gently down and drag the top layer of glass slowly toward you. You may see that all the glue will follow depending on your movement. You want it evenly distributed along the area being touched. After dragging half of the bottom glass, carefully slide down the top glass and then slowly move the top glass into the position where you started. (See fig. 2)

6. Let go of the glass. Gravity will even out the distribution of glue. Do not push the top layer; it may cause it to settle unevenly. If there are air bubbles between the layers, slowly move the top layer of glass to the closest side in order to release the air bubble. After adding more layers of glass, use plastic tape to secure the layers in place. When the glass is bonded completely, collect the overflowed excess glue with a dust-free piece of cardboard. The rest can be removed with an exacto-knife.

Seal excess glue well in a cup with a piece of plastic wrap. The recovered glue can be frozen for a maximum of four days. The glue may be too far cured after that. It may need to be re-vacuumed before using it again. However, I would not reuse the mixture for light-weight parts, because the glue may be too thick.

The most popular shaping and grinding equipment is the flat grinder. For an even grinding in preparation to gluing, you must understand what the flat wheel does to the glass. The outer edge of the wheel grinds faster than the center, so move the piece from the center outward then turn it around and grind the same amount of time in the new position. This should be done every 5 to 10 seconds. When grinding, think about your dominant hand. If you are left-handed, the direction of the wheel should be set for a clockwise spin and vice versa. Uneven glass removal is determined by the amount of silicon carbide slurry, centrifugal force, downward force of one of your hands, and the length of grinding time. Figure 1 illustrates the fundamental theory of grinding.

When assembling irregular glass elements, a wooden jig securing the main body of the element is helpful when bonding additional layers, which is shown in figure 3. Moreover, it would be better to use a plastic clamp to

![Figure 3. Using a Jig](image-url)
secure the glass parts on the jig. A plastic clamp would avoid marks or scars on the surface of the glass. When cold-working glass, always protect the piece while you are working. It is a very exacting job, but is worth the results that can be obtained. I hope this article helps artists with these techniques to achieve successful in their work.

I would like to thank all the Board Members, all the glass artists, and other people I met. The whole 41st GAS Conference was full of extraordinary experiences sharing cultures, ideas, and diverse topics of conversation for all of my students. Before the conference, we focused on a five-day workshop at the Educational Resource Center at Bullseye Glass in Portland, OR. The 16 day trip in the US was an invaluable and unforgettable time for my students, including the hospitality of the members of GAS. It was also great to meet my old friends during the conference.

Jong Pil Pyun is the chairman of the Department of Environmental Art & Design at Namseoul University in Chonan, Korea. He received his MFA from the Rochester Institute of Technology in 1999, and recently authored the book, Glass: Knocking at the Door of Art, one of the first glass texts written in Korean.
Carvings are among the oldest manifestations in art. And engraving is a traditional method that has been used for centuries to decorate or depict stories onto the surface of glass. Europe, particularly Bohemia, and the United Kingdom are well-known for their engraved glass. Most of the engraved objects were high-end functional wares, glasses, vases, bowls, etc. More often than not, traditional engravings in the folk and decorative arts depicted local folklore, portraits, or animal scenes.

As innovations in technology and art movements were expanding in the mid 20th century, young people lost interest in traditional crafts often tied to years of apprenticeship. As a result, today many European glass engraving schools are suffering (or closing) due to the lack of students and funding. Despite the Studio Glass movement and a surge of people making glass art in the States over the last several decades, engraving on glass continued to stay mostly in the glass factories. It was not as widely explored as blown glass, for example, and engraving still remains a bit of a mystery to many artists working with glass.

When I was fifteen, I took my first glassblowing class at a local hotshop in Seattle. I was completely enamored with the material and process. I had absolutely no idea there were other ways of working with glass. After several years working in different open-access shops in Seattle, I learned there were in fact, many other ways of using glass to make art. I was interested in learning more about the material and decided to go to art school. Glass was my major. I spent one year at the College for Creative Studies in Detroit studying under Herb Babcock, and continued for another four years at the Australian National University’s School of Art in Canberra, Australia. In Australia, Jane Bruce, Deb Jones, and Richard Whiteley taught many techniques, from casting to flameworking, and of course cold-working. I gravitated towards the cold shop and started to decorate the surfaces of the glass I blew. In 2003, I had the good fortune and opportunity to take a class at Pilchuck Glass School with master Czech engraver Jiří Harcuba. To make a long story short, that class completely changed the course of my life. I had a sudden epiphany that you could put an image onto glass. You could draw onto and into the surface of the glass and make a picture! I was inspired. After that course, I stopped blowing glass and

April Surgent, Into The Surface (and detail), cameo engraved glass, metal, and wood, 2010, 7 x 14 x 4', Photo by Canh Nguyen
have become a full-fledged cold worker. Jiří has become my mentor and teaching partner, and I have joined him on his mission to make glass engraving more contemporary, accessible, and practiced.

My demonstration at Pratt was a simple portrait. The demo was geared to show people the process of engraving and the steps it takes to make an engraving. I worked on my engraving lathe and had a display of wheels for people to see. Before the demonstration, I prepared three glass panels with the same engraving, but in different stages. One panel showed the rough-cut portrait, the first stage of roughing in the composition. The second panel was an example of the process a little further on. It was the panel that I actually engraved on during the demonstration to show more detailed engraving. The third example was the completed portrait. The demo setup invited questions and became an interactive tutorial.

By giving demonstrations, teaching, engraving glass, and putting our art out there, engravers around the world are seeing resurgence in the technique. This time around, the traditional craft is stirring in artist's studios rather than in factories. People are discovering new things about engraving and making innovative work. It is an exciting interchange that is slowly bringing glass engraving into the Studio Glass movement and contemporary art world. So, if you haven't tried engraving yet, what are you waiting for?

April Surgent started working with glass in 1997. She earned a BFA with honors in 2004 from the Australian National University in Canberra. After changing her focus from blown glass to cameo engraved glass, she returned to Seattle and set up a studio where she makes art fulltime. She exhibits, teaches, and lectures internationally. In 2008, she taught a series of short courses with Jiří Harcuba. She received a Neddy Fellowship and UrbanGlass’ New Talent award. In 2010, she had her first solo museum show at the Bellevue Arts Museum, Bellevue, WA.
We, the three of us, are not only close friends and fans of each other’s work, but also collaborators for 25 years. We enjoy working together, and we were excited at the prospect of doing a vitreography demonstration.

What is vitreography? It’s printing images on paper from marked glass plates. The markings are made on the plate glass by carving, engraving, or etching the surface. Then an etching press is used to print from the plate. There are advantages to working on glass plates. You can see what you are doing, both when making marks and when working with inks. You can lay the plate over a drawing to use as a guide, although the print will be the reverse of your image. Because the plate doesn’t degrade with use, large consistent editions are possible. The disadvantages are the difficulty of correcting mistakes in the plates and the glass plates can break.

Developing the Plate
The plate is made of 3/8” thick plate glass. Order the size you want and have the edges seamed. Make a template. This is a piece of plexiglas or masonite that is the same thickness, with a hole cut out of the center that is 1/8” larger than your glass plate in width and length.

The marks on the glass surface can be made in different ways: sandblasting, acid etching, engraving with a dremel, a diamond point, etc. Really, any way you can cut into the glass will create a mark that will print. Here are a few of the things we have tried:

Dremel tool or diamond tip: Simply engrave into the plate with these tools. Deeper grooves will produce a stronger line.

Rayzist: This is a process turning a black and white image into a sandblasting mask. First, convert your drawing into a black on clear image, for instance, India ink on a piece of acetate. Then take that acetate and use it to expose Rayzist film (or another brand). This produces a stick-on sandblasting mask of your image. You can do this yourself or send your image to a commercial service. For a more complete description of the process, see their website at http://www.rayzist.com/Education/EducationCenter.php.

White Litho Ink: Using a brayer, roll a uniform coat of the ink onto the plate. Place the plate over black paper, then you can scratch into the ink with various tools, sticks, bristle brushes, q-tips, etc. Wherever the ink is scraped away will be printed as a mark. If you draw into the ink with a wooden stick, it will appear as a line on your print. After you finish your drawing and while the ink is still wet, take it to a sandblaster.

Use a fine abrasive at the lowest pressure possible and lightly coat the ink with the abrasive. At this point you are not trying to blast the design, but are coating the ink with abrasive to form the mask. Once it’s fully coated, turn the pressure up slowly to a fairly low pressure, just enough to start engraving your design. Patience is a virtue in this case! If you blast it too hard, you can damage your drawing. It will take a while. Stop when the most delicate part is starting to degrade slightly. Clean your plate thoroughly and you are ready to ink your plate.

Inking and Printing the Plate
We used etching inks. Stiffer inks seem to work better, and we use them without modifiers such as plate oil. A glass tabletop is very useful surface as an inking area. Spread a little ink with an ink knife onto the table. Use a stiff plastic card, such as an old credit card or hotel room keycard, to squeegee the ink into the grooves of the plate. Use a tarlatan (starched cheesecloth folded into a loose ball) to wipe the excess ink from the plate. Be careful not to wipe the ink from the grooves. The final wiping can be done with small squares of telephone book pages under slight pressure from the heel of your palm.

As with etching, printing is done in the traditional manner. The press produces enormous pressure. Any debris or unevenness underneath the plate can cause it to break. So clean the back of the plate very carefully and place it into the template on the press bed. We favor the method that features multiple impressions. After the first print is pulled, all subsequent pulls are called ghosts. We frequently pull five or six ghosts from one inking. The next step is to re-ink the plate, and print...
again either on fresh paper or over one of the ghosts. Colored inks give an infinite number of variations. For us, the magic of the process resides in the serendipitous interaction between the various plate impressions.

Now some tips: We used dampened paper. Clean inks with vegetable oil as a solvent and soap for the final wash. When printing ghosts, start with light pressure and increase slightly with each pull. Most of all, print with partners and be very nice to them.

“Clobber-ation”
In making vitreographs, partners bring different strengths to the table. Printing itself is a very manual process where the division of labor is useful. But working with others is more than that. It is both challenging and enlivening. Robbie Miller coined the term “clobber-ation” to describe his collaborations with John Drury. Collaboration can relieve you of the responsibility of being right (or wrong). Perhaps most importantly, it brings energy and courage to try new things.

Walter Lieberman is an internationally known glass painter and lecturer on the history of glass. His work is in museum collections such as the Corning Museum of Glass and the Museum of Glass in Tacoma. He has taught glass painting at Pilchuck Glass School and Penland School of Crafts, as well as workshops in England, Mexico, and Sweden.

Cappy Thompson is an internationally acclaimed Seattle artist known for her mytho-poetic narratives on glass using the grisaille (gray-tonal) painting technique. Her pieces are included in museum, corporate, and private collections worldwide. Her public commissions include large-scale installations at the Seattle-Tacoma International Airport, the Museum of Glass in Tacoma, the Montgomery Museum of Fine Arts, and Evergreen State College in Olympia, WA. She serves on the Bellevue Arts Museum Advisory Council and Pilchuck Glass School’s Artistic Program Advisory Committee.

Dick Weiss is a widely acclaimed artist who was born in Everett, WA, in 1946. He took a stained glass class in 1971 and as he says, “basically just couldn’t stop.” Weiss also loves paint and has been known to decorate both clay and glass. He notes that he has “been inordinately lucky in his friends.” His work is in the collections of the Corning Museum of Glass, Glasmuseum in Frauenau, Germany, and the Victoria and Albert Museum, among others.
This panel discussion was a continuation of a conversation that started in the summer of 2009. Several prominent organizations from Seattle’s glass art community came together the following year to present The Brychtová Forum – Women Artists Working in Glass: Celebrating Innovation and Vision across Generations. This 2010 forum included a four-day series of free lectures, panel discussions, and events. The Brychtová Forum was conceived to celebrate the rich tradition of women working in glass by recognizing the life and work of one of the Studio Glass movement’s most important artists, Jaroslava Brychtová. She and her late husband Stanislav Libenský have had a profound influence on artists, collectors, and organizations in this region since their first residency at Pilchuck in 1982. Their inspiration gave impetus to the growth of an extraordinary glass community here and continues to provide momentum. Their sculpture shows an unmistakable mastering of the material and an impeccable artistic creativity that reflects work outside any restrictions of boundary or time.

The inspiration for The Brychtová Forum at GAS developed after last summer’s intensive workshop in the Czech Republic, which was offered by Pratt Fine Arts Center and led by the glass artist Charlie Parriott. He arranged for Ms. Brychtová to meet the group at her family home and studio in Zelezny Brod in the hills of North Bohemia. The entire group was awestruck by the grounding effect of being in her presence, a legendary Master. On his next visit with Ms. Brychtová (November, 2009), he asked her if she would like to return to the United States to introduce the Libenský-Brychtová Museum to the arts community in the Pacific Northwest and share her experiences as a sculptor with yet another generation of young artists. In addition, Pratt Fine Arts Center also supported a film about the life of Jaroslava Brychtová, The Space for Light, produced by Jiří Málek, and a summary film about the The Brychtová Forum produced and edited by Peter West.

Many Important discussions were initiated during the forum and the Seattle GAS panel gave us an opportunity to share those conversations with a broader audience. The panel discussion was framed around several objectives: to share a summary of the original four-day forum, to discuss the three main themes of that forum, and to expand the conversation with the audience’s insight and knowledge.

Peter West opened the GAS panel with his film, which provided a framework for the discussion and an overview of the forum and central issues that arose during the summer of 2010. The three main issues that resurfaced

The panelists (from left to right) Rebecca Chernow, Flora Mace, Jenny Pohlman, Michelle Bufano (moderator), and Shelley Muzykowski Allen
during our intergenerational conversation included the influences and inspiration in personal work, gender issues in the glass community, support structures (and the differences between each generation of artists), and the sustainability of working in the medium of glass. Each panelist addressed questions related to the inspiration and influences in their life and reflective in their work. Most discussed influences that came from individual life experiences. But when panelists used the word “inspiration,” these references described individuals who had come before them. Most found Jaroslava to be an inspiration.

Although many of our panelists would have preferred not to have been chosen based on gender, it became evident that being a woman and working as a glass artist does include some issues of equability. Most of the panelists had a story about working in the male-dominated medium. The trend, however, of a male-dominated world is shifting more and more as woman lead teams of male and female artists in hotshops across the country. However, there are still concerns about recognition, from galleries, publications, exhibitions, valuation of art, etc. It was suggested that this conversation could be continued as another panel that would offer both male and female perspectives.

The most graphic part of the discussion, and the one that most blatantly showed the generational differences, was the conversation around support structures. The differences have been derived by increased choices in equipment, glass, tools, and supplies, as well as organizations that now span several generations. From Flora Mace’s perspective from the 1970s to Becca Chernow’s experiences as a relatively recent graduate, the changes are staggering. The analogy of a horse and buggy versus a Ferrari was given to describe the advances. The older generation really paved the way for young women in a magnitude of ways.

The common ground across generations and genders is everyone’s concern about his/her carbon footprint and the sustainability of glass as a medium in the future. All the panelists have taken steps to ensure they are doing their part to make a difference in the environment.
Panel: COUPLES COLLECT: A CONVERSATION
Moderator: Margery Aronson
Panelists: Chap Alvord, Steve and Dianne Loeb, John and Joyce Price

In a wide ranging conversation focusing on passions, philosophies and practices, Northwest collectors shared their ideas and approaches to collecting, with an emphasis on including glass sculpture among the artworks that they love and live with everyday. Chap and Eve Alvord have been involved with the arts in Seattle for more than 30 years, both as generous supporters of numerous arts groups and as collectors who are passionate about works by Northwest masters, mid-career and emerging artists, and especially about contemporary studio glass. Steve and Dianne Loeb started collecting art in the 1980s and still consider their collection to be in the “building” stage with an interest in contemporary glass and emerging artists. They are both active in the Seattle art community and Steve is currently the Chair of the Museum of Glass Board. John and Joyce Price have been collecting art for the past 45 years. Their diverse collections include Toulouse-Lautrec, Native art (Inuit and Northwest Coast), contemporary glass, clay, and books. Five solo exhibitions from their collections have been created, and they have loaned art to more than 100 museums for exhibitions.

In discussing when and what each person began to collect, we found communality among the panelists’ experiences. Chap Alvord, John Price, and Dianne Loeb had amassed collections of seashells at an early age. After seeing the film Moulin Rouge, John Price decided as an 11 year old that his objective was to acquire a Toulouse-Lautrec, and he bought one at an auction in 1966. (It turned out to be a fake and it took him 40 years to buy that image again.) Although he didn’t start out to be a collector, Chap Alvord became interested in art because of his parents, Buster and Nancy, who acquired works from European sources when they traveled abroad. Chap and Eve bought their first piece in 1970 from the local gallery, PNACA. The Loebs went to Europe in 1984 when the dollar was strong, and there they purchased some small pieces, which they show alongside their daughters’ “lopsided” early craft works.

As a rule, the panelists typically concurred as couples in their acquisition decisions. Chap Alvord said that he and Eve operate as a team. They usually have an instantaneous response, selecting the same artwork even if they look independently at an exhibition. Dianne and Steve need to agree to acquire a work, “except for auctions, where other issues, such as support for a favored institution, may be in play.” For them, “something snaps” and they have to have the work. “It’s an emotional process to look for and at these artworks. Sleepless nights often result.” Joyce Price indicated that John is frequently the selector, adding, “You have to be born with the collecting gene.” As for presentation of artworks in their homes, the Alvords prefer to live with as much of their collection as space allows, while the Prices continually have so much on view, that visitors often comment that they can’t see individual works. Consequently, John and Joyce often rotate artworks either for their own enjoyment or while selecting work for an exhibition. They noted that the collection they have is way beyond any and all initial concepts they had of what they might own. Joyce said, “We have five bedrooms for art storage and only one for us!” Espousing the concept of “less is more,” the Loebs prefer a “minimalist aesthetic.” They do not intend to create a scenario in their home where art turns to “stuff.” They also acknowledge that they do not have as many artworks as the Alvords or the Prices.

When talking about what made collecting contemporary glass especially compelling, all the panelists pointed to their fascination with the material, the collaborative creative process, the intensive experience that is glassmaking, with its choreography and performing arts aspects, and the excitement of participating as observers of artists working together, utilizing their skills and abilities in a “team sport.” Everyone loved having opportunities to meet artists and to learn about how they make their work. They also found that these rewarding relationships have informed their collecting decisions. The panelists continually follow artists they like and galleries they respect. As time allows, they attend art fairs like SOFA and Native Art fairs. John Price noted that he and Joyce have had great advisors over the years as well as collaborations with experts in the fields they collect, including artists, gallery owners, and curators. Everyone agreed that a profound level of trust in those from whom they acquire work is an absolute requirement.

In responding to a question about artworks that “got away,” the panelists felt that they were extraordinarily fortunate to have an abundance of art they love so much in their lives, and noted that the occasional “escape” sometimes led to the acquisition of a better work than the one that was lost. Often, the result of a “lost artwork” was a decision to commission an artist to create a similar piece.

The panel also addressed the concept of de-accessioning, acknowledging that every serious collector will eventually face decisions about what to do with the artworks he or she acquired. Chap Alvord said that he and Eve have not yet reached that place, but he expects they will be ready in the near future. Together they will utilize a variety of approaches, including donations to museums, other institutions, and auctions benefiting organizations they support. John Price said that they gave much thought to this issue and will have their “art of the past” available in the future for sale and for donations to museums and other appropriate organizations. They are thankful that the artworks they loved can go to other collectors who will love them too.

In discussing how each couple handles collection documentation, everyone agreed that it should be a
key consideration for all who have the privilege and responsibility of being the guardian of any work of art. The Prices have “saved everything” in bankers’ boxes and files, although the files are only “organized up to 1999.” The Alvords have always kept files for their art acquisitions along with three sets of photographs of each work, one for a collection notebook, one for the master file, and one for insurance kept in the safe. The Loebs have always kept files about their acquisitions. They feel they are now ready to undertake a more comprehensive approach to documentation of their collection.

Responding to a query from the audience, the panel concluded with a conversation about collectors and their responsibilities to artists and the art world. John Price said, “We absolutely have a responsibility, and as long as Joyce and I can do it, we feel we must do it. We collectors have an economic impact in so many ways, on artists, and on their communities, as well as on the health of museums and cultural institutions. We need to give back and be supportive.” Chap Alvord agreed. “Our collections are part of the historical and cultural repository of the world today. Knowing about art and creativity makes for better students and citizens, and there is a significant negative impact when arts education is curtailed or missing.” Steve and Dianne Loeb concurred, saying “We have an opportunity and an obligation, and we take both very seriously. We are compelled to actively engage and to give back to our art communities.”

In summation, the panel stated, “As collectors, we are all part of It, the Big Picture! Artists, museums, charitable institutions which support the arts, the Seattle Art Museum, the Bellevue Arts Museum, the Museum of Glass, Pilchuck Glass School, Pratt Fine Arts Center, the Glass Art Society, and so many more. We are honored to be custodians of extraordinary objects made by the most remarkable creators who are active today, as well as those artists from the past. We are all dedicated to working together in a truly symbiotic endeavor.” The panel concluded with well deserved and enthusiastic sustained applause from the audience.

Margery Aronson is an independent curator, a member of the Association of Professional Art Advisors, and has been based in Seattle since 1976. She worked for The Museum of Modern Art, NY; the National Endowment for the Arts; and the Seattle Art Museum. She has curated exhibitions at SAM, the Museum of Glass, and numerous venues nationwide. She is curator of The Pilchuck Glass Collection at City Centre and the Sheraton Seattle Hotel collection of Pacific Northwest art. She has written extensively about the American Studio Glass movement and Pacific Northwest artists, lectures, and leads tours. She provides guidance on art collections for corporations and collectors.

Chap and Eve Alvord have been involved with the arts in Seattle for more three decades as generous supporters and as collectors. They served as board members of Pilchuck Glass School, Seattle Art Museum, PONCHO, Cornish College of the Arts, the Seattle Repertory Theatre, and Seattle Children’s Theatre, for which they chaired endowment campaigns. The Alvord family received PONCHO’s Founders Award in 2008 in recognition of their distinguished contributions to the arts community.

Steve and Dianne Loeb started collecting art in the 1980s. They have been active in the Seattle art community since 1985. When Dianne began working at Seattle Art Museum, they became involved as community volunteers with Pilchuck Glass School, Cornish College of the Arts, and the Museum of Glass, where Steve is currently vice-chair of the board. Their love of art is shared by both of their daughters who are actively involved in arts-related endeavors.

John and Joyce Price have collected art for over four decades. Their diverse collections include paintings, clay, books, and contemporary glass. Five solo museum exhibitions from their collections have been staged, the latest being Eyes for Glass - The Price Collection, curated by Michael Monroe at Bellevue Arts Museum in 2010. In addition, they have loaned art to many museums for exhibitions. John is treasurer of the board of Pilchuck Glass School and serves on the advisory boards at Bellevue Arts Museum and Burke Museum.
Panel: COMMUNITY GLASS RESOURCES
Moderator: Eddie Bernard
Panelists: Chuck Lopez, Chris Clarke, and Scott Graham
Sponsored by Steve Funk

This panel is part of an ongoing GAS conference, Environmentally Green Panel series. Previous titles have been “Fueling the Habit” (2006), “Alternative Energy” (2007), “Energy Usage” (2008), “Energy and Atmosphere” (2009), and “Glass Studio as Energy Source” (2010). While there are countless approaches to reduce the environmental impact of operating a glass studio, this discussion focuses on the advantages of sharing a studio with a group, where money can be pooled to afford high-efficiency technologies, reduce individual risk, and provide outreach programs for the local community and students of all ages. Funds may also be used to attract visiting artists who can provide educational opportunities for studio members and the community-at-large. For additional information, access the discussion forum at www.bioglass.org (info@bioglass.org) for these and other topics concerning green resources and tactics.

Pratt Fine Arts Center (www.pratt.org) is a Seattle institution founded in 1976 with the mission statement: Pratt Fine Arts Center makes art accessible to everyone, offering a place for spirited exchange, self expression and personal transformation through creativity. Pratt is dedicated to fostering artistic development and engagement locally, nationally, and internationally. A unique multidisciplinary visual arts resource, Pratt provides education and instruction, community programs and professionally equipped art making facilities.

Pittsburgh Glass Center (www.pittsburghglasscenter.org) was founded in 2001 to bring art into an economically depressed neighborhood in Pittsburgh. The following is a snippet from their website: Pittsburgh Glass Center is a public access school, gallery, and state-of-the-art glass studio dedicated to teaching, creating, and promoting glass art. World-renowned glass artists come here to make studio glass art. People interested in learning more about glass come here to take a class, explore the contemporary glass gallery and watch live hot glass demonstrations. As one of the top glass art centers in the world, we pride ourselves on providing exceptional resources and instruction to expand the skills and knowledge of our students and artists. We strive to foster a new generation of glass artists and enthusiasts here in the Pittsburgh region.

Viscosity Glass (www.viscosityglass.com) was founded by Scott Graham and Cristy Aloysi in Seattle, WA. By creating a community-access studio, they have been able to offset their expenses by bringing in rental revenue.

Pittsburgh Glass Center (PGC) began among hundreds of rundown buildings in a post-steel city. Funding was obtained to renovate the structure into a LEED certified building, one of the first. By reusing materials, the natural lighting, and heat reclamation systems, PGC became a model for Pittsburgh and the glass community. One of the first projects was a heat reclamation system in the ceiling of the hotshop hood. Pumps circulate a glycol/water solution through heat exchangers to pick up heat from the glass equipment. The water is moved to the boiler for any additional heating required before passing through space heating equipment in other parts of the building. In recent years upgrades to the glass-melting furnaces considerably reduced energy consumption and operating expenses. Other approaches to energy reduction are continually being entertained. Chris Clarke, Director of Studios and Technology at PGC, set up a furnace monitoring system that can be accessed by iPhone.

The facility boasts a hot-glass studio with two furnaces and nine glory holes. The cold shop is equally well-equipped with flat wheels, lathes, belt sanders, and drilling equipment. There is also a sizable flame shop with 12 workstations at street level so passersby can see what’s going on inside. A gallery rotates exhibitions. Programming includes many youth workshops, events that are open to the public, and intensive workshops with internationally acclaimed artists who attract students from around the world. The neighborhood has since become safer as renovation continues in the neighboring blocks. Because of the local and global nature of PGC’s outreach programs, in conjunction with ongoing efforts towards sustainability, funding has continued to flow from both private and public sectors, including the Heinz Endowments for the Arts, for pursuing green building...
methods (as new, efficient, replacement furnaces), and the high school program, Sio2.

Scott Graham and Cristy Aloysi of Viscosity Glass have been able to run their privately owned, public-access studio without grant funding whatsoever. The main ingredients in their success are their own product line, rental income, showroom sales, and the reduction of overhead expenses by reinvesting funds in maintenance and equipment upgrades. When the studio was moved from a commercial space to their home, they switched from their original, deteriorating gas furnace to a new home-built electric furnace with silicon carbide heating elements. The result was a drop in utility expenses and a studio with lower ventilation requirements.

Viscosity Glass switched from gas to electric. Scott Graham said there were no incentives available, but they realized savings from the investment.

Viscosity Glass, a community access studio founded by Scott Graham and Cristy Aloysi in Seattle, WA.

Chuck Lopez discussed the process he went through with Puget Sound Energy (PSE) for Pratt to capture and provide PSE with energy and the natural gas consumption figures. The project was to collect data over several months tracking use of their deteriorating, non-recuperating, rectangle-style day tank, and then compare those figures against data collected when using a new recuperated cylindrical day tank. He was able to show fuel consumption reductions of 35%, and PSE wrote Pratt a check for $40,000 for their efforts in reduction. He suggested browsing the local energy company’s website to look for any incentives to fund equipment upgrades. It is important to do this prior to installing the upgraded equipment, because controlled measurements must be taken from both old and new equipment. To measure the consumption of just one piece of equipment, it was necessary for Chuck to turn all other gas burning units off. Therefore, he measured the furnace’s consumption with glory holes turned off between 10 pm to 8 am during both idling periods and charging periods. The measurements were gathered easily by reading the natural gas meter before and after the 10 hour periods. After several idling and charging periods, the results were averaged to give a clearer picture of the consumption over time. Because data was gathered with great care and accuracy, PSE was confident that the numbers were realistic.

When an artist has sales requiring a hot-glass studio for only a few hours a day (12.5% / 3 hr/day), a community studio is much more affordable than running a private shop. If 87.5% of the time the furnace is running could be scheduled with five renters for example (one after the other for 15 hours per day), it raises the level of use to 62.5%. When a glory hole is heated up to operating temperature, it uses roughly four times the energy required to maintain that temperature. If the same glory hole is used for 15 hours as opposed to only three hours per day, the initial heat up energy is more effectively used for a longer workday. Annealing ovens are similar; heating an oven once to be filled over 15 hours is less consumptive than heating up five ovens to fill over three hours. Consider also that a furnace melting 1,000 lbs typically would use 50% less fuel than two furnaces in the 400 lbs range, so with several people sharing a furnace, there is savings in fuel. Or compare five hot glass artists each running their own small furnace of 200 lbs at 40,000 Btu/hr (depending on make and tuning, this could be much higher) to a single 1,000 lbs furnace that idles at 80,000 Btu/hr. It takes 60% less fuel to keep 1,000 lbs melted in one furnace than 200 lbs in each of five furnaces. Furthermore, the community studio typically employs a technician skilled and focused on maintaining proper tuning of the furnace’s gas and air mixture.

Let’s also consider rental expenses from the point of workspace and initial investment for equipment. If those five artists purchased their own flattening wheels, lathes, drill presses, blades, wheels, and bits for a cold shop and they each ran electricity, water supply, and drainage piping to the equipment, the expenses are easily five times those of a single community studio. And the equipment would unlikely be used continuously by an individual artist. Fusing and casting ovens are rarely in continuous use in private studios. Neither are flameworking torches. In urban settings, community-access studios clearly
reduce energy and material consumption, as well as space utilization simply by scheduling renters.

Community studios attract every age level as the public pops in from time to time and are inspired by the artists at work. Often these visitors become patrons, volunteers, assistants, close friends, mentors, employees, and/or employers. Sometimes youngsters in need of direction find a role model in artists. The benefits to the community are high.

Below is a short list of community access glass studios:
Banana Factory, Bethlehem, PA
Bay Area Glass Institute, San Jose, CA
Chicago Hot Glass, Chicago, IL
Glass Axis, Columbus, OH
Glass Furnace, Istanbul, Turkey
GoggleWorks, Reading, PA
M-Space, Tacoma, WA
New Orleans Creative Glass Institute, New Orleans, LA
New Orleans School of GlassWorks, New Orleans, LA
Penland School of Crafts, Penland, NC
Pittsburgh Glass Center, Pittsburgh, PA
Pratt Fine Art Center, Seattle, WA
Public Glass, San Francisco, CA
S12, Bergen, Norway
STARworks Glass Lab, Star, NC
Toledo Museum of Art, Glass Pavilion, Toledo, OH
The Crucible, Oakland, CA
The Studio of the Corning Museum of Glass, Corning, NY
Third Degree, St. Louis, MO
UrbanGlass, New York, NY
Viscosity, Seattle, WA

Eddie Bernard earned a BFA in glass from Rochester Institute of Technology (1996). That same year, he founded Wet Dog Glass, LLC, which designs and manufactures high-end glass-processing equipment. He has instructed numerous hot glass sculpting workshops at Penland School of Crafts, Glass Furnace in Istanbul, and the Studio of The Corning Museum of Glass. He and his wife Angela founded the New Orleans Creative Glass Institute, a nonprofit, community-access studio. They recently oversaw the creation of a second one, GlassLab, in Star, NC. He has served on the Board of Directors of GAS since 2004.

Chris Clarke has been the director of studios and technology at Pittsburgh Glass Center since it opened in 2001. He is responsible for the management, usage, maintenance, and improvements of the facility and its technology, including two 1,000 furnaces, eight glory holes, and 30+ kilns. He has also been working as an artist and metal fabricator for 15+ years, exhibiting his work at museums and galleries across the country. He received a BFA in sculpture from Massachusetts College of Art and an MFA in glass from Kent State University. In 2000 he received a Creative Glass Center of America fellowship.

Scott Graham is originally from Sacramento, CA. He started blowing glass at UrbanGlass in 1999, where he worked as a studio technician and freelance glassblowing assistant, and where he met Cristy Aloysi, his glassblowing partner and future wife. In 2001, they helped develop the Trash to Treasure program in the US Virgin Islands. In 2002, they moved to Seattle and started Viscosity, a contemporary glass line for the home. Viscosity Studio & Gallery followed soon after. Graham managed Viscosity Studio until 2010. He continues to gaff the Viscosity line, and with his wife maintains a studio in their home.

Chuck Lopez is originally from Denver, Colorado. He started working with glass in 1989. With a background in computer science, mathematics, and philosophy, he received a BA in philosophy from the University of Colorado in 1995, and a MFA from Alfred University in 1999. Lopez has been involved with Pilchuck Glass School since 1994, as a student, sumer staff, teaching assistant, emerging artist-in-residence, centerpiece designer, and instructor. His work was selected for inclusion in New Glass Review in 2002 and 2007. He resides in Seattle, where continues to make art, teaches, and works at Pratt Fine Arts Center.
Panel: GLASS AND YOUTH: TRANSFORMING LIVES, EDUCATION, AND COMMUNITY

Moderator: Patricia Davidson
Panelists: Jessica Hogan, Kate Dowd, and Rachel Rader

Kids and Fire, who would think that’s a good idea?
Don’t play with matches, but go for the torch!
Fire is dangerous and fascinating. Creating with it requires trust, respect, and focus. By working with glass, children gain self-confidence and learn invaluable life skills: teamwork, communication, and responsibility. They are forever transformed knowing they have the power to create beauty in their lives for their family and their community. As a teacher or parent, it’s an indescribable joy to witness this transformation of Self.

Hilltop Artists in Residence (HART) in partnership with Tacoma Public Schools Career and Technical Education Program (CTE), ARTSpark (Pratt Fine Arts Center/Youth Art Works), and GlassRoots are shining examples of successful art/glass programs that offer children a nurturing environment that fosters creative self-expression. They also develop self esteem through social skills and by promoting community involvement through glassblowing, beadmaking, kilnforming, and mosaics. The programs serve culturally diverse communities and young people dealing with high risk factors relating to poverty, neglect, homelessness, substance abuse, and violence. Each program reaches out to children who are struggling academically, socially, and behaviorally, who are searching for ways to connect and belong to their communities. All the programs work with special needs children as well.

These three nonprofit organizations rely on grants, donations, and community support for their continued operation. Increasing economic hardship for families and organizations alike has necessitated collaborative partnering and a creative approach to secure continued funding. A dynamic union between glass, education, and community has blossomed within the nonprofit youth glass programs resulting in innovative community partnerships that strengthen the commitment to the youth they serve. However, passion, commitment, and willingness for broad collaboration are crucial to the continued success of these programs.

Likewise a dedicated staff who work tirelessly to keep the programs operating is a key component. It takes creativity, flexibility, fortitude, and courage to work with youth-at-risk and with kids with mental and physical challenges. Our panelists are extraordinary women who wear many hats and openly discuss their experiences. Throughout the panel discussion, it was clear they are extremely passionate about their programs. Their determination to make a difference in kids’ lives is what pushes them to strengthen their programs. The most striking aspects of the discussion and most significant community partnerships within each organization are summarized here.

HART (www.hilltopartists.org) was founded in 1994 by Kathy Kaperick and Charlie Parriott with the help and support of Dale Chihuly and Tacoma Public School District. It has been operating in partnership with Tacoma Public Schools for the past 17 years. HART supports two fully equipped glassblowing, torch, and kilnforming programs, one at Jason Lee Middle School and another at Wilson High School. The 7th and 8th grade students at Jason Lee Middle School can take glass arts classes for elective credit.

Originally an afterschool program exclusively for youth-at-risk, HART expanded in 2001 by further partnering with the Tacoma Public Schools Career and Technical Education and Alternative Education programs, by offering daily high school classes in glassblowing, kilnforming, and beadmaking for credit. They also offer an alternative classroom program for students struggling academically, but due to downsizing and restructuring decisions the program was terminated in 2008. The HART/CTE program at Wilson High School remains strong and all classes are filled to capacity. Funding for the CTE glass classes is obtained through a combination of state and federal educational funding. HART supports the CTE classes by providing a teaching assistant in the daytime classes and offers an afterschool program that is available to students throughout the Tacoma School District. This unique partnership between a nonprofit and a public education institution has received many accolades and awards to acknowledge their excellence. The Tacoma School District is extremely supportive of arts education. While other districts are cutting budgets and the arts, in Tacoma there is a genuine investment in the arts as a transformative educational opportunity.

Jessica Hogan has been working for HART for the past seven years as an instructor and the production manager/commissions coordinator. She shared ways in which the program acknowledges issues relating to cultural diversity and racism. The conceptually driven art projects are proving to be very successful in nudging kids in new creative directions and addressing important social issues. She is also responsible for designing products for the commissions, biyearly sales, and implementing new programs that build community partnerships. They are fortunate to have her oversee the glassblowing production team on commission projects.

GlassRoots (www.glassroots.org) is a nonprofit glass arts program founded by Patricia Kettenring in 2001 on the belief that communities can be elevated through the arts in Newark, NJ. She taught arts management at Rutgers University for over 20 years. She based the GlassRoots program on the successful model of the Hilltop Artists program, and further expanded the program by adding an entrepreneurial skills component that teaches basic business practices. GlassRoots offers four types of programs: a) an academic internship that combines glass techniques with professional business skills; b) a business and entrepreneurship program (20 hrs of business classes), studio work focused on product design and marketing; c) an academic summer internship program for glass techniques and emphasis on science, math, and history; d) short-term exposure programs (2-10 hrs of studio time).
GlassRoots has been particularly innovative in their partnering within the community. They work with local museums, Rutgers University, the Boys and Girls Club, and the Girl Scouts of America to name a few. Kate Dowd is the assistant program director, commissions coordinator, and beadmaking instructor. She has been working at GlassRoots for 5 years and is deeply committed to keeping the organization moving forward in new community partnerships. This is an exciting and innovative professional partnership. Kate’s talent, vision, dedication, and enthusiasm are important to the success of the program. One of the program participants was awarded an internship at Steuben Glass.

**ARTSpark** (www.pratt.org) is part of the Youth Arts Program at Pratt Fine Arts Center in Seattle. Pratt has been part of the broader Seattle community for 35 years. They serve everyone from special education students to professional artists. It is a diverse and vibrant community of students, instructors, emerging and established artists. The grant that funded the ARTSpark program is a partnership with Washington Middle School and works with four special education classrooms during the day to provide a hands-on art experience. Students learn the basics of flameworking, glassblowing, printmaking, and sculpture.

Rachel Rader is an instructor for the ARTSpark program. Her love for the special education population is evident in her enthusiastic responses during the panel discussion. She explained how Pratt is hoping to incorporate the ARTSpark program into the curriculum at Washington Middle School. To do this would require more data gathering and tracking students’ progress. She expressed the challenge of working with teachers who already seem so overwhelmed by what is always expected of them. The ARTSpark program is grant funded. While the funding might be in question, the incredible success of the program is undeniable. It will continue to grow.

After the panel presentations, observers of other programs shared their experiences. It was evident in the Q & A session that the success of youth glass programs is a result of staff dedication and creativity, community support, and innovative programming. Through leveraging existing community resources and developing innovative partnerships, these programs will continue to grow and thrive, bringing positive change to communities while transforming young lives. A win-win for all!

### Videos about the Programs:
- ARTSpark program video: www.youtube.com/watch?v=LuAjnr9pmks
- Hilltop Artists 2010 video: www.youtube.com/watch?v=332ahcCQA
- GlassRoots video: www.youtube.com/watch?v=5ew6Qh1ZEFM&feature=related
- Americans for the Arts, Youth Arts (youth-at-risk program resource) www.artsusa.org/youtharts/
- Patricia Davidson (pdavids@tacoma.k12.wa.us) received her MFA from the University of Illinois in 1991. For 10 years she was a gaffer and member of Dale Chihuly’s glassblowing team, and worked with Flora Mace and Joey Kirkpatrick, Pino Signoretto, and Kevin Goddard at Pilchuck Glass School, where she was an emerging artist-in-residence, teacher, staff member, and scholarship recipient. Currently, she is the lead instructor at Wilson High School in Tacoma, WA, running the glass facility that serves 100 students a day. She has also exhibited her work internationally.
- Jessica Hogan (jhogan@hilltopartists.org) teaches in the afterschool glassblowing program at Jason Lee Middle School. She is the production manager at Hilltop Artists where she works with at-risk youth in the evening hours to create commission work and glass art. She also teaches in the daytime program at Jason Lee and is a teaching assistant at Pratt Fine Arts Center. Hogan has a long relationship with Hilltop where she began glassblowing at age 13. She received her BA from Evergreen State College, attended Eugene Glass School, and received scholarships to Pilchuck Glass School (2001; two in 2008.).
- Kate Dowd (Kate.dowd@gmail.com) is the assistant program director at GlassRoots. Since starting in 2005, she has worked with 500+ students to teach them glassmaking techniques. She graduated from Carnegie Mellon University School of Art, and completed intensive courses at UrbanGlass, Haystack Mountain School of Crafts, and Pilchuck Glass School. She has exhibited at The Andy Warhol Museum in Pittsburgh and at City Without Walls (cWOW) in New Jersey.
- Rachel Rader (Rachel.a.rader@gmail.com) received a BFA from Virginia Commonwealth University in Richmond in 2006. After graduating, she moved to Seattle, where she is involved in the art community through Pratt Fine Arts Center and Pilchuck Glass School. For the past four years, she has been involved in ARTSpark at Pratt teaching flameworking to Seattle students with learning disabilities or at-risk behavior. She balances teaching, production work, and making her own artwork.

Panelists (from left to right) Rachel Rader, Jessica Hogan, Kate Dowd, Patricia Davidson (moderator)
The panelists were chosen for their diverse experience in various aspects of the glass industry. Jeremy Lepisto and his partner Mel George ran Studio Ramp, a kilnforming studio specializing in commission work for artists and designers. Michael Fox worked for many studios including Chihuly, Inc. and was the studio manager for Benjamin Moore, Inc. for ten years. Alex Stisser also worked in studios and was one of the gaffers at the Tacoma Museum of Glass (MOG) from its 2002 opening. Latchezar Boyadjiev, from the Czech Republic, trained in kiln-casting and coldworking with Stanislav Libenský and is now a studio owner-operator in California. All maintain active art practices in addition to their professional careers as “hired guns.” They have experience dealing with a variety of clients and situations and I wanted to focus on that relationship and its consequences. The lively discussion is summarized here with questions that kick started the conversation.

Establishing boundaries and expectations is key for a happy client. How do you manage expectations and reality?

Much of their experience was based on the importance of effective communication with the client, that is, stating what’s possible and has a reasonable chance of success. For example, in the MOG and Pilchuck artist-in-residence programs, there were instances of exploring failure: “What would happen if I hit it with a hammer?” “It would break.” “Can we do that?” “By all means…” Making sure the client was aware of the cost and consequences ensured they all entered the process openly.

Generally clients hiring a team are acutely aware of the time and cost constraints. MOG does a lot of preliminary work before artists reach the hotshop floor so the week is used to its fullest. Pilchuck prefers to let the artist-in-residence respond to the environment when they arrive. All agreed that having a graphic representation of what will be produced is a key to success. You can draw an object a thousand times without turning on any machine and that’s always a good place to start. Jeremy had a system of stages whereby clients would approve drawings prior to execution with samples remaining the property of the studio. Latchezar’s viewpoint reflected his experiences in the Czech Republic and here, both as client and artist hiring teams. Some teams he worked with well and others not. Personalities are a huge part of the success. Michael organized specific gaffers to work with artists based on their skill set and interpersonal relationship with the client. All agreed that ego and attitude need to be left at the door for a project to run smoothly. Being honest about your abilities and what is possible helps clients envision opportunities and create within the parameters of relatively assured success.

How does making work for others affect your own practice?

Most found it enormously beneficial to be exposed to others’ work and ideas. Your own ideas are given more space to grow. Many of the panelists viewed the experiences as a way of collecting a toolbox of techniques and a deeper understanding of the material, which would enable them to move in any direction they chose. Quite often the assembled teams become part of that toolbox. So much more is possible with the ability of a good team by recognizing and playing to the strengths of the members. By removing the necessity of being a gaffer (to think about certain aspects of the process) allows the client to concentrate on aesthetic decisions in a timely fashion. That team dynamic can be utilized to produce a more personal exploration of the artistic endeavor.

What interests you about being a hired gun?

For most, it was the challenge of creating things that where outside their own aesthetic. Being presented with a different viewpoint on the material allows for expansion of any parameters. Many start working for others to fund their own work, but find that the interaction with others’ creativity feeds them in a way that exploring in a vacuum never could. Working in a team to realize a hard-fought goal is a relished experience. By pushing their abilities for others, their own practice was enhanced.

How much do you find yourself contributing to the design process for a client? How much are you willing to contribute? How does that affect your feeling about the overall project? That is, do you only address the work practically or do you also make aesthetic suggestions?

Much of the discussion centered on clients who wanted the object designed for them, which needed much guidance, but they didn’t want to pay for design services. Jeremy stressed the importance of maintaining distance and perspective on projects, not be drawn into the designing/making at the detriment of the studio because it was interesting work. They budgeted at the beginning of the year for jobs done solely for experience. There comes a point with a client when you can lose yourself in their aesthetic and begin to make creative decisions in the process without impacting negatively on the project as a whole. Generally, this is when the work can start to move forward quickly. But a balance between giving suggestions and allowing space for the client to make decisions must be maintained.

A little knowledge is a dangerous thing. Comment on clients with a limited knowledge who feel compelled to contribute to the detriment of the project.

This question was greeted with nods and sighs. Part of being a hired gun is the ability to be flexible in different situations. Many times processes had to be utilized, which were not as efficient or effective, but essential to
maintaining client relationships. Providing an accurate representation of various outcomes without insulting the client was stressed. Financially breaking down the techniques and their costs in writing before the studio expenses are incurred develops an upfront environment and understanding, rather than a battle-of-wills or surprises later on. Achieving that understanding early in the process maximizes the chances for a successful project as a whole. Trying to figure it out as you go along jeopardizes resources and good will. Managing expectations is important to healthy client relationships. No surprises, no problems.

**Do you refer your clients to other “hired guns” to complete other parts of the process? Do you stay in the loop or allow the two to work directly?**

Having a good network to farm work out is the hallmark of a good project manager. No one can do everything and sometimes it’s best to hire some guns yourself. The hands-on, hands-off approach depends on the client. Sometimes it’s better to pass a job to someone else who can work more effectively with the client for the benefit of all. Other times, depending on the aspect being subcontracted, personal involvement on the client’s part would only jeopardize the project as a whole. Everyone stressed the need to get a sense of the client and to manage their involvement.

**Do you require that your clients credit your involvement with any finished works?**

This question was hotly debated by the audience, but the viewpoint of the panel was unanimous. None felt any connection to the objects produced beyond a deep sense of pride in their execution. They saw themselves as tools used to realize another’s idea. This was stressed often. The IDEA is/was the most important part of any artwork or project. How it was produced was secondary to that spark of inspiration. Being involved in that process, however, was like being connected to the spark itself, a source of great energy and creativity that in turn feeds your own creativity.

It was a pleasure to share the stage with such a wealth of talent and knowledge. It is my hope that this discussion continues at future conferences and online. I thank all the panelists, the audience, those who participated in the discourse, and GAS for facilitating the panel.

**Jay Macdonell** worked for various Pacific Northwest studios and has been privileged to be a hired gun for many artists including Xu Bing, Mildred Howard, Angelo Filimeno, Bruce Mau, and Laura and Alessandro de Santillana. He has been an instructor at Pilchuck Glass School and Espace Verre, and has been a visiting artist at the MOG, Alberta College of Art and Design, and Berengo Studio in Murano. He received a mid-career artist grant from Canada Council of the Arts, has served as president of British Columbia Glass Arts Association, and is currently on the GAS board of directors. His work is in private and public collections.

**Latchezar Boyadjiev** was born in Sofia, Bulgaria. He studied ceramics at the Academy of Art in Sofia, then moved to the (then) Czechoslovakia and studied with Stanislav Libenský at the Academy of Applied Arts in Prague. After graduating in 1986, he defected to the US and settled in California, starting a glass studio two years later. He focused on sculptural forms in optical glass. In 1997, he returned to the Czech Republic and started casting his sculptures there. After years of successful collaboration with Czech glass craftsmen, he began casting his work in his Novato, CA studio.

**Michael Fox** holds an MFA and has worked for 20 years in professional glass studios. He has been affiliated with Pilchuck as artistic program coordinator, teacher, and craftsperson-in-residence.

**Jeremy Lepisto** is a studio artist, PhD candidate in sculpture at the Australian National University in Canberra, Australia, and the president of GAS. He received a BFA in glass and metals from Alfred University (1997). He worked at the Bullseye Glass factory and in 2001 co-founded Studio Ramp LLC with his wife Mel George in Portland, OR. He has taught kilnforming classes and workshops internationally.

**Alex Stisser** has been working with hot glass for 18 years after earning a BFA in glass from Illinois State University (1996). See his bio and article “Trailer Park” in this issue.
Panel: LATIN AMERICAN ARTISTS – DIFFERENT VOICES FOR UNIQUE REASONS

Moderator: Ana Thiel
Panelists: Ruth Moreno, Josefina Muñoz, Isabel De Obaldía, and Luisa Restrepo

With this panel discussion, artists from Latin America shared experiences as representatives born in countries with no available art glass communities, resources, galleries, schools, or collectors. What follows is a summary of each panelist's experience and ponderings as artists working with glass as a creative expression. The panel consisted of four women who represented different countries: Ruth Moreno from Costa Rica, Josefina Muñoz from Chile, Isabel de Obaldía from Panamá and Luisa Restrepo from Colombia.

Ruth Moreno (ruth@artglass-cr.com)
Born in Costa Rica, she headed a family fishing company among other endeavors. When the business had to close, she looked for a way to help the workers continue to support their families, and came up with the idea of recycling glass bottles. Glass was a material that had fascinated her for a long time. With no information available in Costa Rica, she found what she was looking for through GAS via the internet. Ruth traveled to the US where she studied in Oregon with Bullseye and at the Eugene Glass School, and later at Pilchuck. She has now opened a gallery and studio called "Art Glass Costa Rica" where she shares what she has learned. In her words, "Another challenge in my work back home has been to create awareness in Costa Ricans for them to see glass as art and as an artistic expression, not just as a material for doors and windows." One of her deep sources of inspiration is the Costa Rican artistic and archaeological heritage. She incorporates petroglyphs, pre-Hispanic symbols, stamps, and textiles. In her words her intention is "to make a call to conscience and witness the intrinsic value of our rich culture that was mutilated and forgotten with the occidental development."

Ruth adds, "However, I must admit that the opportunity to travel to the United States, Europe, and around Latin America is always rewarding. Meeting and learning from other artists enshrined in glass, has been a fascinating experience. Being able to express myself in such a versatile and magical medium has been and is forever a pleasure. Sharing and teaching others is learning twice. Along with all the difficulties of working with glass in my country, the fact that I'm a woman in an art world that was originally for men is not easy... I can only compare it with managing a fishing boat, which was one of the hardest but most fulfilling things in my life."

Josefina Muñoz (josefinamunoz@gmail.com)
Josefina was born and raised in Santiago, Chile in 1985. She received a BFA from Pontificia Universidad Católica de Chile (2006). With the support of national and international scholarships, grants, and awards, she has had an opportunity to undertake numerous specialization studies abroad. In 2007, she opened her own glass studio in Santiago and funded LineaFina, her line of design glass objects. In 2010 Josefina participated as an artist-in-residence at The North Lands Creative Glass in Scotland, and as an assistant teacher and resident staff at The Pilchuck Glass School.

Josefina has been commissioned to create several public pieces and widely shows her work nationally and internationally. Standing as the leading young glass artist of her country, Josefina will enroll in the MFA in glass program at Rhode Island School of Design (RISD) this September. She mentioned that in her own experience, it was her personal drive that took her beyond any technical or geographical limitation. Self-taught, she had gone through a long process where she began using regular float glass combined with rough metal oxides and self-collected mold materials. She highlighted how the isolation from the "glass world" gave her a distinctive approach towards the material that has now become the basis of her work. At the same time, she referred to herself as being a part of the Haystack, Penland, and Pilchuck communities as "absolutely eye-opening and necessary" experiences during these diverse summer sessions.

Luisa Restrepo (luisarpo@gmail.com)
Born in Medellín, Colombia, in 1977, Luisa later received a BFA in glass sculpture at the University of Wolverhampton, England in 2001. After travelling and working for various artists in England, the US, and Mexico, she has established herself in Mexico City and Oaxaca where she has her glass studio, which opened in 2005. Supported by different scholarships, Luisa has attended different glass schools and has been part of the Northland's and Wheaton CGCA's residency programs. Luisa shows both nationally and internationally and is an active member of the Mexican Glass Art Community. More recently, she joined a performance/action research community. For Luisa, one of the beautiful things about making glass is precisely the arts community. She mentions that being from Latin America the glass "group" is either too small or nonexistent. It is made up of those few artists who are closer to us and also make glass and those we communicate with through email. It is a different scenario and a different dynamic. There are no specialized galleries, publications, or collectors. There are very few distributors of raw materials. Equipment and tools are usually a hassle to get.

On the other hand, she recognizes that "All of this is just the way it is. Not a downfall, but the wind that shapes us. Keep in mind, you have to be strong and be persevering (as a rock). We have each opened our own paths, finding ways and vocabularies that are quite unique and unexpected, influenced not so much by other glass art but by everything else. Belonging to a community that is not
so much determined by the material, but by the results: the craft, design, or art. And this, especially for me, has been an amazing experience, as I somehow landed myself in the middle of the visual art community, hanging out, exchanging ideas, and collaborating with photographers, video artists, and performers. The relationship to my body and my work as an artist has changed dramatically over the last few years. As a result, the experience of working with the glass has also changed and will keep changing, I can tell.

Isabel De Obaldia (ideobaldia@mac.com)
Isabel was born in Washington D.C. in 1957 of French and Panamanian parents. She studied architecture at the University of Panama and drawing at the Ecole de Beaux Arts in Paris before receiving a BFA in graphic design and cinematography from the RISD in 1979. She went on to study at the Art Students League in New York City in 1982. Since 1987, she has frequently attended Pilchuck Glass School where she studied with such masters as Jiří Harcuba and Bertil Vallien, and has served as an International Council Member. She has received many honors including the John H. Hauberg Fellowship from Pilchuck (1990), the CGCA Fellowship at Wheaton Arts (2006), and was the recipient of the Rakow Commission from the Corning Museum of Glass (2009). She was selected on several occasions to participate as a guest-artist in international glass symposia as well as survey shows of contemporary glass. She has gone back to Wheaton to create large-scale sand castings. Once a well-known painter representing her country in international exhibitions and biennales, Isabel is currently forging a strong reputation as a glass sculptor. In the US, she is represented by gallery Mary-Anne Martin/ Fine Art based in New York City. She lives in Panama with her husband and twin boys.

Isabel very aptly and succinctly states that "We are still very few artists working in glass in our countries and although this makes it more difficult in terms of acquiring raw materials and technical knowledge, in a way, I believe this makes us much stronger in developing our ideas and creativity."

Conclusion: As in any life situation, there are benefits and drawbacks. All of these artists, including myself, have had to travel outside our respective countries in order to learn the art of working with glass in sculpture. It is not easy to get the raw materials and tools that are needed, and as the panelists agreed, glass art communities are scarce in Latin America. However, the work we create is shown in art galleries. It is incorporated into the art world rather than in a more encased world of glass art. At the same time, for all of us the Glass Art Society has been a source of information, friendship, energy, sharing, learning, and helpful communication. Some of us are moved to share the information that we gain, as Ruth is doing in Costa Rica, others have expanded glass into new realms, like Isabel, and some incorporate other artistic endeavors into glass, like Josefina and Luisa. We are all completely dedicated to our art and thank GAS for the opportunity to share our vision. In fact, after the panel lecture was over, a group of us got together to talk, and a plan for an exhibition of art in glass by Latin American artists is under way.
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<td>Dina S. Baldwin</td>
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*VENDORS IN THE TECH DISPLAY*
Hot Glass Color and Supply
Cyrena Stefano
2227 5th Ave
Seattle, WA 98121
T: 866-448-1199 / 206-448-1199
cyrena@hotglasscolor.com
www.hotglasscolor.com

Hub Consolidated Inc.
John Chiles
690 Rt 73
Orwell, VT 05760
T: 802-948-2209; F: 802-948-2215
john@hubglass.com
www.hubglass.com

International Society of Glass Beadmakers (ISGB)
85 E Gay St Suite 707
Columbus, OH 43215
T: 614-222-2243; F: 614-222-2427
membership@isgb.org
www.isgb.org

Moore Tools for Glass
Jim & Liz Moore
PO Box 1151
Port Townsend, WA 98368
T: 360-379-2936
glasstools@olympus.net
www.ToolsForGlass.com

Momka's Glass
Momka Peeva
19508 23rd Ave NE
Arlington, WA 98223
T: 425-776-3417; F: 360-652-4193
www.momkasglass.com

Museum of Glass
1801 Dock St
Tacoma, WA, 98402
T: 866-468-7386; F: 253-396-1769
info@museumofglass.org
www.museumofglass.org

National Torch
Craig Hamernik
875 13th St
Hillsdale, WI 54733
T: 715-418-0053
c.hamernik@premierind.us
www.NationalTorch.com

Norwegian Association for Arts & Crafts
Radhusgaten 20
Oslo 0151 NORWAY
T:+47 2291 0260
Elisabeth.Sorheim@kunsthandverk.no
www.norwegiancrafts.no

Olympic Color Rods / Blockhead Tools
Mark Hood
818 John St
Seattle, WA, 98109
T: 206-343-7336; F: 206-343-2292
mark@glasscolor.com
www.glass-color.com

Palmer Tools
Steve Palmer
10506 Crestridge Dr
Minnetonka, MN 55305
T: 952-546-6025
starglassworks@comcast.net
www.palmentools.com

Paragon Industries, L.P.
Arnold Howard
2011 South Town East Blvd
Mesquite, TX 75149
T: 972-288-7557; F: 972-222-0646
info@paragonweb.com
www.paragonweb.com

Pilchuck Glass School
1201 316th St NW
Stanwood, WA 98292
T: 360-445-3111; F: 360-445-5515
info@pilchuck.com
www.pilchuck.com

Pittsburgh Glass Center
Heather McElwee
5472 Penn Ave
Pittsburgh, PA 15206
T: 412-365-2145; F: 412-365-2140
pgcinfo@pittsburghglasscenter.org
www.pittsburghglasscenter.org

Pratt Fine Arts Center
Katie Miller
1902 5th Main St
Seattle, WA 98114
T: 206-328-2200; F: 206-328-1260
info@pratt.org
www.pratt.org

R & R Glass-Cast™
Daniel Nixon
3535 Britfield Blvd
Maumee, OH 43537
T: 419-794-1238; F: 419-865-9997
dan.nixon@dentsply.com
www.Glass-Cast.com

Skutt Kilns
6441 SE Johnson Creek Blvd
Portland, OR 97206
T: 503-774-6000; F: 503-774-7833
mike@skutt.com
www.skutt.com

System 96® / Spectrum Glass
Randi Gray
PO Box 646
Woodinville, WA 98072
T: 800-426-3120; F: 425-483-9007
hotglass@system96.com
www.spectrumglass.com

Spiral Arts, Inc. / Carlo Donà Tools
Fred Metz
2940 Westlake Ave N, Suite 100
Seattle, WA 98109
T: 206-768-9765 / 888-369-5616
F: 206-768-9766
orders@spiralarts.com
www.spiralarts.com

Spruce Pine Batch, Inc.
Brenda Wilson
PO Box 159
Spruce Pine, NC 28777
T: 828-765-9876; F: 828-765-9888
spbatch@yahoo.com
www.sprucepinebatch.com

Steinert Industries, Inc.
John J. Steinert
1507 Franklin Ave
Kent, OH 44240
T: 330-678-0028; F: 330-678-8238
glasstools@steinertindustries.com
www.steinertindustries.com

Pilchuck Glass School
Steinert Industries, Inc.

Museum of Glass, Tacoma

Creative Crossroads • 41st Annual Conference
The Studio of
The Corning Museum of Glass
Harry Seaman
1 Museum Way
Corning, NY 14830
T: 607-48-5100; F: 607-438-5150
seamanhe@cmog.org
www.cmog.org

Studio Glass Batch LLC
Bill Glasner
7491 Modock Rd
Victor, NY 14564
T: 585-919-6553; F: 585-919-6553
studioglassbatch@yahoo.com
www.studioglassbatch.com

Sweetwater Glass Blocks and Molds
Art Reed
6411 Fall Clove Rd
Delancey, NY 13752
T: 845-676-4622
artlindareed@catskill.net

Trautman Art Glass
Paul Trautman
30756 SW Peach Cove Rd
West Linn, OR 97068
T: 503-656-9350; F: 503-722-0680
colors@taglass.com
www.taglass.com

UrbanGlass
Brian Kibler and Andrew Page
647 Fulton St
Brooklyn, NY 11217
T: 718-625-3685; F: 718-625-3889
info@urbanglass.org
www.urbanglass.org

Uroboros Glass
Bill Ward
2139 N Kerby Ave
Portland, OR 97227
T: 503-284-4900; F: 503-284-7584
sales@uroboros.com
www.uroboros.com

VICARTE, Master of Glass Art and Science
Marcia Villarigues and Robert Wiley
FCT-Universidade Nova de Lisboa
2829-516 Caparica PORTUGAL
T: +315 212 948 322
vicarte@fct.unl.pt
www.vicarte.org

Wet Dog Glass, LLC
Eddie Bernard
PO Box 96
Star, NC 27356
T: 910-428-4111; F: 910-428-4123
eddie@wetdogglass.com
www.wetdogglass.com

Vendors Unable to Attend:
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Rachel Lawrence
890 Front St
Hellertown, PA 18055
T: 610-838-7034; F: 610-838-6333
rlawrence@bethapp.com
www.bethlehemburners.com

Northwest Iron Works, LLC
Vince Thomas
PO Box 451
Veneta, OR 97487
T: 541-935-6548
info@nwironworks.com
www.nwironworks.com

KéKé Cribbs and Ross Richmond’s demo
EXHIBITIONS IN SEATTLE

Canlis Glass Gallery & Studio
3131 Western Ave, Suite 329
www.canlisglass.com
Jean-Pierre Canlis: Studies of Water and Nature

Hyperopia Projects with Center on Contemporary Art
617-619 Western Ave
www.hyperopiaprojects.com
www.cocaseattle.com
(superposition): curated by Matthew Szösz, Alexander Rosenberg, Helen Lee

City Centre
1420 Fifth Ave
The Pilchuck Glass Collection at City Centre curated by Margery Aronson.

Edge of Glass Gallery
513 N 36th St, Suite H
www.edgeofglass.com
Illuminaries curated by James Curtis

Facere Jewelry Art Gallery
1420 Fifth Ave #108
www.facerejewelryart.com
Glass Jewelry Showcase: Donald Friedlich, Karen Gilbert, Kait Rhoads & Barbara Becker Simon

Far4
1020 First Ave
www.far4.net
Edison Osorio, Josefina Muñoz, Luisa Restrepo, Hector Flores & Valeria Florescano

Foster/White
220 Third Ave S
www.fosterwhite.com
Elin Christopherson, John de Wit, Carmen Lozar
Group Glass Exhibition – Clare Belfrage, Benjamin Moore, Merrilee Moore, Gerry Newcomb & David Schwarz

Friesen Gallery
1210 Second Ave
www.friesengallery.com
The Wall: Nicole Chesney, Geoff Isles, Richard Jolley, Martin Klimas, Beth Lipman, Sibylle Peretti, Erica Rosenfeld & Pamina Traylor curated by Geoff Isles

G. Gibson Gallery
300 S Washington St
www.ggibsongallery.com
Series: Little Glass Houses by Theresa Batty

Gallery I|M|A
123 S Jackson St
www.galleryima.com
Beyond Glass: Bill Baber, Carol Milne, Michael Marcelo Roco

Glasshouse Studio
311 Occidental Ave S
www.glasshouse-studio.com
Glasshouse Late Night: Jeff Mack, Scott Chambers, Oliver Doriss, Janis Miltenberger & Paul Labrie

Lawrimore Project
117 S. Main St
www.lawrimoreproject.com
There Is One Thing I’ve Never Liked About You: Courtney Branam, Rebecca Chernow, Darin Denison, Dan Friday & Sam McMillen curated by Elias Hansen

Pacini Lubel Gallery
207 Second Ave S
www.pacinilubel.com
Anna Skibska, Steve Klein, Janis Miltenberger, Alicia Lomne, Charissa Brock, Lee Campbell, Delores Taylor & Els Vander Ende

88 Keys
315 Second Ave S
World of [Pete]Singleton Show

SPECIAL EXHIBITIONS ON THE GALLERY HOP
The GAS Conference’s Gallery Hop was planned to overlap with Seattle’s First Thursday Art Walk.
Pratt Gallery
306 S Washington St, Suite 102
www.pratt.org
Hot, Warm Cold; From Concept to Reality: Cayn Thompson, Susan Balshor, Katie Miller, Cheryl Matson, Cathy Chase, Hugh Willa, Morgan Sims, Bandhu Scott Dunham & Kait Rhoads curated by Paula Stokes

Seattle Art Museum (SAM)
SAM Gallery, Seattle Tower
1220 Third Ave
www.seattleartmuseum.org
Vitreography and Paintings on Glass: Jessica Dodge, Christopher Kroehler, Walter Lieberman, Cheri O’Brien, Paula Stokes, Cappy Thompson & Dick Weiss curated by Barbara Shaiman

Seattle Glass Gallery
Ninth & Westlake
www.seattleglassgallery.com
NEXT: Granite Calimpong, Danny White, Brent Rogers, Brad Smith, Jordan Brant, Evan Schauss, Kristine Rumman & Mikey Cozza curated by John T. Hogan

Seattle Glassblowing Studio
2227 Fifth Ave
www.seattleglassblowing.com
If ‘Eye’ Ruled the World
Solo Exhibition: Brandon Cupp

Shift Collaborative Studio/Tashiro Kaplan Arts Complex
306 S Washington St
www.shiftstudio.org
Intersection: Paula Stokes
Curious Growths: New Work by Robin Cass

Totally Blown Glassworks
5607 Corson Ave S
www.totallyblownglass.com
Dehanna Jones

Traver Gallery
110 Union St #200
www.travergallery.com
Works by Lino Tagliapietra

Vetri Glass
1404 First Ave
www.vetriglass.com
A Moment of Gesture: Chuck Lopez

Washington State Convention Center
800 Convention Place
www.wsctc.com
The Public Art Program: Sonja Blomdahl, Dale Chihuly, Dante Marioni, Benjamin Moore & Lino Tagliapietra, among others

719 S King St
www.wingluke.org
Dual Nature: Contemporary Glass and Jewelry: Eun Suh Choi, Ron Ho, Masami Koda, Vina Rust, Midori Saito, Jeff Sarmiento, Boyd Sugiki, & Cynthia Toops

Cultural Confluence (artists and filmmakers): Joy Belmont; Chenoa Egawa; Louise L. Gong; Diana Leung and Kamala Todd; Lucy Ostrander and Don Sellers; Sandy and Yasu Osawa; Lillian Pitt; Lawney Reyes; Rudi Romero; Samuella Samaniego; Sondra Segundo; Preston Singletary; Gene Tagaban, Henare and Tawera Tahuri, Gail Tremblay and Arthur Tulee; Laura Wong Whitebear

EXHIBITIONS IN SURROUNDING CITIES

Bellevue Arts Museum
520 Bellevue Way NE
Bellevue, WA
www.bellevuearts.org
Convergence Zone: Nancy Callan, Jennifer Elek, Debora Moore, Jenny Pohlman & Sabrina Knowles, Cappy Thompson, Mary Van Cline, Karen Willenbrink-Johnsen & Lisa Zerkowitz Matzke Fine Art and Design
2345 Blanche Way
Camano Island, WA
www.matzkefineart.com

Museum of Northwest Art (MONWA)
121 S First St
La Conner, WA
www.museumofnwart.org
Schack Art Center
2921 Hoyt Ave
Everett, WA
www.schack.org
The Nature of Glass: Dale Chihuly, Deborah Moore, Randy Walker, Dante Marioni, Karen Willenbrink-Johnsen, Jane Rosen, Shelly Muzylowski Allen & Preston Singletary, among others

Fulcrum Gallery
1308 Martin Luther King Jr. Way
Tacoma, WA
www.fulcrumtacoma.com
Pr3v1ews & Pr0toT yp3s: Furnace Made Neon Sculpture: Oliver Doriss & Galen McCarty Turner curated by Oliver Doriss

Museum of Glass
1801 Dock St
Tacoma, WA
www.museumofglass.org
Retrospective: Richard Craig Meitner
Chihuly Bridge of Glass by Dale Chihuly
Fertile Ground
Fluent Steps by Martin Blank
Glimmering Gone: Beth Lipman and Ingalena Klenell
Kids Design Glass
Masters of Studio Glass
Water Forest by Howard Ben Tré

Tacoma Art Museum
1701 Pacific Ave
Tacoma, WA
www.tacomaartmuseum.org
Ma Chihuly’s Floats: Dale Chihuly and Richard Rhodes
Chihuly: Gifts from the Artist
Dale Chihuly’s Northwest

Traver Gallery
1821 E Dock St #100
Tacoma, WA
www.travergallery.com
Dale Chihuly Cylinders and New Works

Vetri
1821 Dock St, Suite 101
Tacoma, WA
www.vetriglass.com

Gallery at Shift Collaborative Studio
SPECIAL EVENTS AND PROGRAMS

GAS Collectors Tour
June 1 – 4: The Glass Art Society created a special events package that included admission; VIP seating; ground transportation to visit the studios of Dante Marioni, Jim Mongrain, April Surgent and Ethan Stern, Richard Royal, Boyd Sugiki and Lisa Zerkowitz, Flora Mace and Joey Kirkpatrick, and Karen Buhler as well as to David Huchthausen’s loft; private demos by John Kiley, Jim Mongrain, and Karen Buhler; visits to the Day of Glass Tacoma and Schack Art Center in Everett; the Annual Goblet Grab and GAS Auctions; the Closing Night Party at the Seattle Art Museum; visits to several private collections; and special evenings at Ginny Ruffner’s studio and Dale Chihuly’s studio/boathouse.

Tour of Pilchuck Glass School
June 5: A visit to the glass Mecca of the Northwest founded forty years ago by Dale Chihuly for glass art education, where artists teach artists. Demos by Gene Koss, Susan Stinsmuehlen-Amend among others.

Tour of Seattle Studios
June 1: Visited the studios of Martin Blank, Boyd Sugiki and Lisa Zerkowitz, Sabrina Knowles and Jenny Pohlman, Studio Fifty Four Sixteen, Fremont Antique Glass, and glassybaby. A box lunch was served.

“Days of Glass” around the Sound
June 1: Museum of Glass, Tacoma Art Museum, and M-Space, which held a special Twisty Cup Pro/Am Competition for GAS. Sponsored by the Trustees for the Museum of Glass.
June 1: Pratt Fine Arts Center and Seattle Glassblowing Studio
June 5: Schack Art Center glassblowing demonstrations and the Nature of Glass exhibition in their new facility

Pre-Conference Reception – A Fundraiser
June 1: Sponsored by Dale and Leslie Chihuly & Chihuly Studio. The Chihuly Boathouse, which is located on Lake Union shore, has been described as “the most perfect of ‘Muranese factories,’... while at the same time being the closest that one can come in Seattle to a Grand Canal palazzo.” The fundraiser helps reduce GAS conference fees for students.

Neon Show – Green Is Beautiful:
Luminous GAS in the Emerald City
June 3 and 4: Sheraton Hotel

International Student Exhibition and Sales
June 3, 4: Sheraton Hotel. The exhibition featured work by GAS members currently enrolled full-time in an accredited, degree program. Nine companies donated a total of $5,000 toward the awards. The first-prize winner received a $1,000 from the Corning Museum of Glass. All awards were given at the Closing Night Party.
Glass Theater Film Screenings
June 3 and 4: Washington State Convention Center

A Not So Still Life: The Ginny Ruffner Story (2010, 96 minutes) by Shadow Catcher Entertainment
From an award-winning production company, the film peers into the kaleidoscopic mind of Ginny Ruffner, an artist beloved for her magnanimous spirit and her evolving "visual thought experiments."

Chihuly Fire & Light (2008, 58 minutes) filmed at San Francisco’s de Young Museum.
Exploring the collaboration of neon light into Chiluly’s vibrant pieces as his team prepares for an innovative installation in 2008 at San Francisco’s de Young Museum.

Communion with Beasts: Isabel De Obaldía (2010, 10 minutes) by Pedro Joaquin Icaza
The Panamanian artist casts large glass sculpture as a visiting artist at Wheaton Arts in the summer of 2010.

Creative Nature: William Morris (2008, 83 minutes)
From the fire of a glassblowing studio to the sky above the Cascade Mountains to the deep blue waters of Hawaii, the film takes viewers on an adventure into Morris’ rugged and daring world.

Dr. Mermaid and the Abovemarine (2009, 7 minutes) by Mark Elliott and Jack McGrath
Molten glass fuses with stop motion animation in this underwater fantasy set in Bondi, Australia. Nerida, a marine biologist who can talk to fish, learns of the trials and tribulations of life for the modern sea creature. When she discovers a World War II relic on the ocean floor, she embarks on a project to help her fish friends.

Dreaming of Spirit Animals: The Glass Art of Cappy Thompson (2004, 33 minutes) by Sally Cloninger
Follows the artist as she creates the largest hand-painted narrative stained glass window in the United States, a 90 x 33’ high installation at the Seattle-Tacoma International Airport.

The Post Glass Video Festival 2010: How Is This Glass? (2010, 95 minutes) curated by Yuka Otani and Anjali Srinivasan
The film presents 20 works that expose specific relationships with glass (phenomenological, material, social and personal) through digital video. The festival focuses on concepts that either trace the direct and mediated experience of glass, or actively investigate common perceptions and complex notions about the media.

The Space for Light (21 minutes) Jiří Málek
The film documents the life and work of Jaroslava Brychtová, a Czech artist who has inspired glass artists worldwide, and delves into her history and partnership with Stanislav Libenský, particularly as she explores the idea of light and space through sculpture.

David Huchthausen: Echo Chambers (2001, 30 minutes) by Craig Sawchuk
The film documents the complex technical and aesthetic processes of glass artist David Huchthausen, following the evolution of several pieces over the three months required for their construction.

PRECONFERENCE AND POSTCONFERENCE WORKSHOPS

Pratt Fine Arts Center
1902 S Main Street
Seattle, WA 98144
www.pratt.org
May 26 – 30: Patty Gray, Advanced Fusing and Design Elements
May 27 – 30: Karina Guévin, More Color!
May 27 – 30: Laura Donefer, Dancing with the Diva
May 27 – 30: Morgan Sims and Elli Bemis, Introduction to Vitreography
June 6 – 8: Jeffrey Sarmiento, Screen-printing for Kilnformers
June 6 – 9: Bandhu Scott Dunham, Beyond the Usual
June 6 – 9: Jay Macdonell, Paper to Piece, Confessions of a Gentleman Gaffer

Richard La Londe Studio
Freeland, WA 98249
www.richardlalonde.com
June 6 - 9: Richard La Londe, Frit Fusing on Whidbey Island

Seattle Glassblowing Studio
2227 5th Avenue, Seattle, WA 98121
www.seattleglassblowing.com
May 27 - 30: Karen Willenbrink-Johnsen and Jasen Johnsen; Sculpture Workshop
June 5 - 8: Scott Darlington, Secrets Revealed
Ongoing Activities: 1-4 June, Registration, Information Table, T-shirt Sales; 2-4 June, Technical Display, Education Resource Center and Posters, Glass Theater Film Screenings, International Student Exhibition, Neon Show

GAS Collectors Tour: 1-4 June, Visits to the studios of Dante Marioni, Jim Mongrain, April Surgent & Ethan Stern, Richard Royal, Boyd Sugiki & Lisa Zerkowitz, Flora Mace & Joey Kirkpatrick, Karen Buhler, and David Huchthausen's loft; Private demos by John Kiley, Jim Mongrain, and Karen Buhler; Visits to the Day of Glass Tacoma and Schack Fine Arts Center in Everett; a special events at Ginny Ruffner's and Dale Chihuly's; all conference activities.

WEDNESDAY 1 JUNE 2011

Preconference Reception: Fundraiser-dinner to reduce student conference fees held at the Chihuly Boathouse

Day of Glass: Gallery and museum exhibitions in Tacoma, Seattle, and surrounding cities

THURSDAY 2 JUNE 2011

Demonstrations, Lectures, Lec-Mos, and Panels
Seattle Glassblowing Studio (SGS) Hotshop: Nickolaus Fruin (Demo: Hot) untitled; Danny White (Demo: Hot) As Seen on TV

Kilncasting) Casting a Glass Figure: From Concept to Finished Piece. WSCC /Flameworking: James White (Demo: Neon) Hands-On Neon; Margaret Zinser (Demo: Flameworking) Wearable Bugs

Corning Museum of Glass – mobile unit (CMOG) at WSCC: Rodman Miller (Demo: Hot) Copper Tube Glassblowing; (Judged Competition) Best of M-Space's Twisty Cup

Best of M-Space's Twisty Cup Competition
Pratt Fine Arts Center (Pratt): James Minson (Demo: Flameworking) Flamework Construction; Milon Townsend (Demo: Flameworking) Some Assembly Required; Mike McCain (Demo: Hot) Technique Fusion; Edward Clark (Demo: Hot) Piecing Together an Ecosystem; JP Canlis (Demo: Coldworking) Scratching the Surface

Opening Ceremony, Awards, and Presentations:
Michael McGinn, Mayor, Welcome to Seattle; Recognition of Co-Chairs Chuck Lopez, Joanna C. Sikes, Cyrena Stefano, and Paula Stokes; Fritz Dreisbach Introducing Scott Benefield; Scott Benefield, Honorary Lifetime Membership Award Recipient's Lecture - Bothering Why; Dagmar Brendstrup, Introducing Ann Wolff (who was not present); she read Ann Wolff's Lifetime Achievement Award Recipient's Lecture – untitled; Derrick Cartwright, Keynote Lecture, Don’t Touch the Glass! or The New Place of Participation in 21st-Century Art Museums

Opening Reception

Gallery Hop

FRIDAY 3 JUNE 2011

Demonstrations, Lectures, Lec-Mos, and Panels
SGS Hotshop: Einar and Jamex de la Torre (Demo: Hot) Montezuma's Avengers; Sabrina Knowles and Jenny Pohlman (Demo: Hot) Hot-Glass Assemblage: Two Minds, One Vision
WSCC: Anthony Parker (Lec-Mo: Equipment Building) Build Your Own Electric Glass Furnace; David Schnuckel (Lecture) Fictitiously Commemorating the Actual Self; Pilar Aldana-Mendez (Lecture) Glass for Gold: The Origins and Impact of Glass in Latin America; Deborah Horrell (Lec-Mo: Kilnforming) Evolution of an Image Vocabulary; Bandhu Scott Dunham (Lecture) A Moving Discussion of Kinetic Glass; Ruth King and John Reed (Lecture) Pilchuck Glass School: 40 Years of Experimentation; Richard Whiteley (Lecture) Integrated Layers; August Muth (Lecture) Holography, Glass, and the Exploration of Light-Space; Michelle Bufano, Rebecca Chernow, Flora Mace, Shelley Muzzykowski-Allen, and Jenny Pohlman (Panel) Brychtová Forum: Intergenerational Panel of North American Artists; Emerging Artist Presentations: Hiromi Takizawa (Lecture) Parallel Lives; Rachael Wong (Lecture) Shifting Moments; Edison Zapata (Lecture) Standing on the Outside. WSCC Flameworking: Carmen Lozar (Demo: Flameworking) From One State to Another; John Kobuki (Demo: Flameworking) Borosilicate Flower Marble; Kazuyo Hashimoto (Demo: Flameworking) Bird Nest Like

CMOG: Guido Gerlitz (Demo: Hot) Exploring Movement Through Glass Sculpture; Jim Mongrain (Demo: Hot) untitled; Mark Zirpel (Demo: Hot) Glass Forms for Sound, Air, and Water

Pratt: Dante Marioni (Demo: Hot) untitled; Duncan House (Demo: Coldworking) Why Work Cold?; April Surgent (Demo: Coldworking) The Maker’s Mark, An Engraving Demonstration; Karl Taylor (Demo: Flameworking) Flowers Among the Thorns; Janis Miltenberger (Demo: Flameworking) Construction Pointers and More Fun Stuff; Walter Lieberman, Cappy Thompson, and Dick Weiss (Demo: Vitreography) Printing from Glass Plates with Cappy, Dick, and Walt

Sheraton: Ana Thiel (Lecture) Layers of Being; Walter Lieberman (Lecture) Rarely Seen and Unusual Glass; Richard Meitner (Lecture) Odd Man Out; Isabel De Obaldia (Lecture) Isabel De Obaldia - Life, Work, and Adventures; Gay Outlaw (Willson Lecture) Coming to Glass from Someplace Else; Eddie Bernard, Chris Clarke, Scott Graham, and Chuck Lopez (Panel) Community Glass Resources

Goblet Grab Auction Preview Sheraton

Portfolio Review

SATURDAY 4 JUNE 2011

Demonstrations, Lectures, Lec-Mos, and Panels
SGS Hotshop: Raven Skyriver (Demo: Hot) Blowmance: For the Love of Sculpting; Karen Willenbrink-Johnsen and Jasen Johnsen (Demo: Hot) Snow Leopard Stalking


CMOG at WSCC: Alex Stisser (Demo: Hot) Trailer Park; Jen Elek (Demo: Hot) This Is a Stick Up!; Keké Cribs and Ross Richmond (Demo: Hot) Hot Printing on Glass

Martin Blank Studio: Martin Blank (Demo: Hot) Creating Crystal Skin

Pratt: Joseph Benvenuto (Demo: Coldworking) Coldworking, It’s All in the Wax Pencil!; Jong-Pil Pyun (Demo: Coldworking) Composing Energy: Exploring Precision Coldworking; Sarah Blood (Demo: Neon) Cooking With Neon; Sally Prasch (Demo: Flameworking) Jigs and More; Chuck Lopez (Demo: Hot) Woven Filigrana; John Kiley (Demo: Hot) Pushing the Bubble, Together

Informal Poster Presentations

Education Resource Center

GAS Business Meeting and Preview of 2012 GAS Conference in Toledo, OH

Silent and Live Auctions

Closing Night Party at the Seattle Art Museum (International Student Expo Awards announced)

*Sunday 5 June 2011*

*Day of Glass:* Exhibition and demonstration at Schack Art Center in Everett; tour of Pilchuck Glass School
PRESENTER ABSTRACTS

The following participants also gave demos, lec-mos, lectures, or were panelists, but did not provide articles for this issue. The abstracts are taken from the conference program-book.

Joseph Benvenuto
Demo: Coldworking - Coldworking, It’s All in the Wax Pencil!
Benvenuto will focus on proper cold-shop set-up as well the efficient use of the three basic machines: lathe, flat wheel, and belt machine. He will demonstrate how it’s really all in the wax pencil! If you can color, you can cold work! No, really!

Martin Blank
Demo: Hot - Creating Crystal Skin
Pouring, pulling, shaping hot glass, and exploration in natural form. Sponsored by Kathleen Palmer of Studio 7 Fine Art Gallery

Sabina Boehm
Demo: Flameworking - Butterfly Marble and Lady Marble Holder
Watch a butterfly come to life surrounded in glass! A lovely lady supports and entices it. Boehm will sculpt a Lady Marble Holder and a butterfly marble made out of borosilicate and formed on solid rod.

JP Canlis
Demo: Coldworking - Scratching the Surface
Canlis covers basic coldworking concepts, with an emphasis on engraving. The focus of his demonstration will be on freehand, organic, surface engraving.

KéKé Cribbs & Ross Richmond
Demo: Hot - Hot Printing on Glass
Cribbs and Richmond demonstrate various techniques for creating surface decoration on hot glass. The techniques will include picking up both intuitive drawings and more specifically prepared imagery on sheet glass from the marver and pastorale.

Einar & Jamex de la Torre
Demo: Hot - Montezuma’s Avengers
The de la Torres will produce a “santo” figure in the bloodiest of Catholic, martyr saint, sculptural traditions (Saint Sebastian-esque) to celebrate the visceral accomplishment of criminality – and collusion – in America’s cheap taco and manicured golf courses. “Technique-wise, we will elaborate the sculpture with recent refinements of our usual bag of cheap tricks.”

Jen Elek
Demo: Hot - This Is a Stick Up!
Elek constructs an object made up of multiple blown-glass components that are hot-torched individually, then together in a hot oven instead of reheating the object in the glory hole. By controlling the oven temperature, it is possible to now “hot fuse” components together in the oven.

Nickolaus Fruin
Demo: Hot (untitled)
Fruin demonstrates the glassworking style that he has become comfortable with, “hopefully hot, fast, and fun, but under control. Nothing too fancy, but a fun way for me to use the vessel form and the material for what I like about it.”

Guido Gerlitz
Demo: Hot - Exploring Movement through Glass Sculpture
In this demonstration, Gerlitz will elaborate on the intrinsic qualities and movement of furnace-worked glass in the creation of a sculptural form.

Duncan House
Demo: Coldworking - Why Work Cold?
Explore concepts and techniques for using coldworking processes to transform a piece of hot-formed glass. This demo touches on basic tools and processes, some advanced tricks, and innovative techniques that would be valuable for the more experienced cold-worker. House demonstrates cutting, grinding, and polishing of surfaces (flat and curved) and HXTAL lamination.
John Kiley
Demo: Hot - Pushing the Bubble, Together
The Bolle series of bottles, designed in 1968 by Tapio Wirkkala for Venini, provides stunning examples of the incalmo technique, where separate sections of glass are joined together hot. This demonstration utilizes a large, skilled team to push incalmo beyond its traditional boundaries.

Chuck Lopez
Demo: Hot - Woven Filigrana
Lopez demonstrates his process for producing woven visual patterns within blown-glass objects using flat cane built with multiple layers of filigrana. These flat canes are cut into geometric shapes and laid out as a murrine roll-up, making it possible to produce various woven patterns. Sponsored by MacPherson Construction & Design LLC

Carmen Lozar
Demo: Flameworking - From One State to Another
Lozar will demonstrate how she approaches working with borosilicate tubing and rod to create hollow sculpture.

Dante Marioni
Demos: Hot (no abstract provided)  
Sponsored by Jerry Udelson, DDS, Children's Dentistry (1st demo)  
Sponsored by Olympic Color Rods & Denny Park Fine Arts (2nd demo)

Janis Miltenberger
Demo: Flameworking - Construction Pointers and More Fun Stuff
Explore construction techniques for large and small work. Miltenberger has a few tricks to share and will welcome audience input and questions. Her focus: technique merely supports what our personal voice has to say.

James Minson
Demo: Flameworking - Flamework Construction
Minson will put together a sculptural piece, using the repetition of one simple component and demonstrating construction techniques on the torch.

Jim Mongrain
Demo: Hot

Sally Prasch
Demo: Flameworking - Jigs and More
Jigs and holders are often used to make larger structures out of glass and to layer glass tubing within glass tubing. In this demonstration, holders and jigs mostly designed for the fabrication of scientific glassware will be demonstrated. A PowerPoint presentation will also illustrate holders and jigs used on the glassblower's lathe.

Ginny Ruffner
Lecture - Thoughtful Looking and Look Full Thinking
Ruffner considers how thinking combined with looking makes a verdant foundation for art-making.

Raven Skyriver
Demo: Hot - Blowmance: For the Love of Sculpting
This demonstration will focus on the sculpting of soft glass and the techniques employed to create such work. The demo will include the use of the garage, bit work, the hot torch, and inside sculpting tools, at the same time emphasizing the love of process and teamwork.

Karl Taylor
Demo: Flameworking - Flowers Among the Thorns
Join Taylor for an exploration of form and function with sharp edges and smooth curves as he creates a blade nestled in vine and a flower-themed handle.

Milon Townsend
Demo: Flameworking - Some Assembly Required
Putting together complex sculptural forms in solid borosilicate glass requires...what exactly? Using complex, interlocking human figures, Townsend will explore how to approach solving the problems presented when assembling multiple elements in the flame. Learn about creating a plan, preparing parts, bridging, pre-heating and soaking components, and order of assembly.
Dave Waddell  
Lecture - Hidden Chemical Hazards in the Glass Arts  
Glass arts are varied and complex, both in terms of artistic technique and hazardous chemicals. This lecture describes recent data on heavy-metal risks to glass artists and provides clear steps to reduce your practice's risks to your health and the environment without sacrificing your creativity.

Danny White  
Demo: Hot - As Seen on TV  
This episode tells the story of a new character. Through detail, color, and teamwork, this narrative work will come to life in an action-packed scenario. Batteries sold separately.

Richard Whiteley  
Lecture - Integrated Layers  
Whitely will explore the relationships between thinking, developing work in the studio, critical positioning, and the considerations of material. How are these layers of practice interrelated? He will outline how this has informed his approach to his own work and teaching.

Karen Willenbrink-Johnsen & Jasen Johnsen  
Demo: Hot - Snow Leopard Stalking  
Along with their team, these two artists will sculpt a snow leopard on the prowl. After picking up a pattern using fused powdered glass sheet, they'll begin to sculpt a low-relief, prowling feline. The head and tail will most likely be added from the garage, along with texture and fauna for the leopard's environment.

Walter Zimmerman  
Lecture - Cause and Effect  
Zimmerman will trace the development of his non-ornamental use of blown glass, with video clips of hot-working techniques. He also will take us on a brief exploration of his newer work.

Margaret Zinser  
Demo: Flameworking - Wearable Bugs  
Zinser discusses her techniques and the inspiration for creating stylized insect wearable components, by first sculpting the bug at the torch, and then painting detail using vitreous enamels.
THE GLASS ART SOCIETY THANKS AND ACKNOWLEDGES OUR 2011 CONFERENCE COMMITTEE, DONORS, AND VOLUNTEERS

Contributions cover the period from July 1, 2010 - June 30, 2011

The GAS Journal is sponsored in part by the National Endowment for the Arts and Corning Incorporated Foundation. Without their support, this publication would not have been possible.

GAS 2011 SEATTLE CONFERENCE CO-CHAIR ACKNOWLEDGEMENTS

The success of this conference was the result of an enormous effort within the Seattle glass community. GAS unified the many entities whose primary business is glass. We, the co-chairs, would like to thank the staff at GAS, whose tireless energy and dedication have made this conference possible. Secondly, both Pratt Fine Arts Center and the Seattle Glassblowing Studio deserve a huge shout-out for hosting conference activities as well as pre- and post-conference workshops. Other organizations, including the Museum of Glass and Its Trustees, the Seattle Art Museum, the Corning Museum of Glass, Pilchuck Glass School, Martin Blank Studio, and the Schack Art Center, have opened their doors to offer an enhanced and comprehensive experience for each attendee. Finally, our sponsors’ generosity in underwriting the many aspects of the programming is greatly appreciated.

Chuck Lopez, Joanna C. Sikes, Cyrena Stefano, and Paula Stokes

The GAS Board of Directors, Pamela Koss, and GAS staff would like to thank the Co-Chairs and the following venues: Pratt Fine Arts Center, Seattle Glassblowing Studio, Corning Museum of Glass, Seattle Art Museum, Chihuly Boathouse, and Washington State Convention Center, as well as the “Days of Glass” participants: Pratt Fine Arts Center, Seattle Glassblowing Studio, Museum Of Glass, Tacoma Art Museum, M-Space, Pilchuck Glass School, Schack Art Center. A special thank you to all the volunteers, participants, and donors listed below and on the following pages.

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Clare Belfrage, Dagmar Brendstrup, Sandra Blach, Brent Cole, Carmen Lozar, Duane Reed, Jeffrey Sarmiento, and Sarah Traver

Emerging Artist Jurors:
Pike Powers, Dena Reekie, and Dr. Audrey Whitty

Student Scholarship Jurors:
Sally Prasch, David Reekie, and Kait Rhoads

International Student Exhibition Jurors:
Scott Benefield, Dagmar Brendstrup, and Andrew Page

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Auction Donors The Auction is an important source of support for the annual conference: Tisha Abrahamsen • Pilar Aldana-Mendez • Rik Allen • Guustie Alvarado • Nick Ashman • Pat Bako • Jeff Ballard • Susan Balshor • Ricky Banach • Elissa Beach • Bryan Beck • Kyle Bekkerus • Jeremy Bert • Frederick & Jeannie Birkhill • Cassandra Blackmore • Sarah Blood • Sabrina Boehm • Anna Boothe • Latcezah Boyadjiev • Vernon Brejcha • Keith Brocklehurst • Bullseye Glass Co. • Lisa Cahill • Spiral Arts, Inc. & Carlo Donà Tools • Deborah Carlson • Matt Catt • Jonathan Chappell • Chihuly Inc. • John Chiles • Edward Ted Clark • Julie Conway • Steven Cornett • The Corning Museum Hot Glass Roadshow • Justin Culina • John Cumbow • Vanessa Cutler • Loui Dare • Patricia Davidson • Kristin Deady • Jacci Delaney • Reshmi Dey • Laura Donefer • Karen Donnellan • Bandhu Dunham • Maciej Dyszkiewicz • Rachel Elliott • Matthew Eskuche • Shane Fero • Wesley Fleming • Sharon Frankel • Charles Friedman • Lance Friedman • Jennifer Halvorson • Braden Hammond • Barbara Hanna • Kazuyo Hashimoto • Niki Hildebrand • Deborah Horrell • Kyle W. Howell • Trevor Huber • Jasen Johnsen • Jeremiah Kern • Tami King • John Kobuki • Amy Krüger • Peter Layton • Jiyong Lee • Jeremy Lepisto • Walter Lieberman • Claudia Lipschultz • Chuck Lopez • Carmen Lozar • Jeff Mack • Caroline Madden • Magnum Mangkang • Natalie Martin • Grant Mayberry • Jody McLean • Robert Mickelsen • Rodman Miller • Carol Milne • Kathleen Mitchell • Mayumi Miyake • Michaela Moeller • Jessi Moore • Merrilee Moore • Ruth M. Moreno • August Muth • Anthony Parker • Amber Pellegrini • Kim Pinkerton • Carlson Gustaf Potts • Sally Prasch • Lee Proctor • Jung-Pil Pyun • John Reed • Luisa Restrepo • Gideon Rockwood • Susan Roston • Will Ruppel • Jeffrey Sarmiento • Colin Satterfield • Edward Schmid • David Schnuckel • Uli Seitz • Ron Seivertson • Ryan Selby • Devin Sjodin • Aimee Sones • Lisabeth Sterling •
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Goblet Grab Donors This year the Goblet Grab raised money for the Japan relief efforts: Nick Ashman • Pat Bako • Jeff Ballard • Susan Balshor • Dr. Biba • Granite Calimpong • Ronald Carlson • Matt Catt • Jonathan Chappell • Coatings By Sandberg • Justin Culina • Patricia Davidson • Bandhu Dunham • Matthew Eskuche • Steven Hagan • Laurel Marie Hagner • Braden Hammond • Dan Hanlon • Matthew Harvey • Doni Hatz • Kristoff Kamrath • David King • Amy Krüger • Peter Layton • Chuck Lopez • Jeff Mack • Robert Mickelsen • Merrilee Moore • Jay Musler • Pratt Fine Arts Center • Gideon Rockwood • Colin Satterfield • Edward Schmid • Spider Schneider • Mike Shelbo • John Shoemaker • Marianne Spottswood McLane • Wayne Strattman • Kazuki Takizawa • Laura Wessel • Danny White • Linnea Wong • and members who wish to remain anonymous

Donation to the History Project:
Audrey Handler, Handler Glass

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GAS apologizes to anyone who was inadvertently omitted from this list.
Coatings By Sandberg
Orange, CA - www.cbs-dichroic.com
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Emhart Glass Manufacturing, Inc.
Owensville, MO - www.emhartglass.com
Laclede Christy, founded in 1844, has built a strong relationship with all elements of the glass industry. Today, Laclede maintains this bond by continuing to provide high quality refractory products designed with the glass producer in mind. This long association provides you, our customer, with a wealth of proven refractory experience. Laclede offers crucibles in a wide range of compositions, sizes, and shapes. To meet your specialized requirements, our plant has a fully equipped and staffed mold shop.

Glass Axis
Columbus, OH - www.glassaxis.org
Founded in 1987 by twelve graduates of The Ohio State University Glass program, Glass Axis was created as a non-profit organization to provide a facility where glass students and community members interested in glass could come together and share expenses, knowledge, resources and artistic expression through the medium of glass. Glass Axis has gone through three major stages of growth in a short time. In the summer of 2001, Glass Axis made its final move to a large permanent space in the Grandview area of Columbus, OH. Glass Axis offers courses in all phases of glass art, including hot, warm and cold glass traditions & techniques. Glass Axis members can rent studio equipment (prior experience necessary). Contact the studio director with questions at studiodirector@glassaxis.org.

Glasscraft, Inc.
Eugene, OR - www.glasscraftinc.com
Founded in 1970 by Homer Hoyt, one of America's lampworking pioneers, Glasscraft is a leading distributor of the finest selection of glassblowing supplies, tools, and equipment. Now partnered with Winship Designs, the grassroots company that helped fuel the West Coast's borosilicate renaissance since 1985, we continue to honor the traditions of glassblowing while helping shape the future of the craft and the great artists that expand its boundaries year after year. Our Golden, Colorado location is home to one of the country's top glassblowing educational facilities. Our Studio was built with the student in mind focusing on safety, cleanliness and accessibility. Classes are held frequently focusing on everything from introductory to the most advanced workshops on the market. Glasscraft is also starting a webinar program to make our classes more accessible. Visit our website for a current class schedule or call for further information.

GAS INTERNATIONAL STUDENT EXHIBITION AWARDS

GIFTS OF $1,000 OR MORE

Corning Museum of Glass
Corning, NY - www.cmog.org
With over 45,000 glass objects spanning 3,500 years of glassmaking history, the Corning Museum of Glass houses the world's most comprehensive collection of glass. The Studio of the Corning Museum of Glass offers a variety of courses for the general public, as well as educational, residency, and scholarship programs designed for emerging and established artists and advanced glass students. The Rakow Research Library, located on the Museum campus, welcomes both museum guests and glass researchers to utilize its impressive collections. Its mission is to acquire and preserve all informational resources on the art, history, and early science and technology of glass, in all language formats.

GIFTS OF $500 – $999

The Glass Art Society offers sincere appreciation to the following companies who generously provided gifts of $500 or more for the 2011 GAS International Student Exhibition awards.
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The Glass Art Society honors individuals who have made outstanding contributions to GAS and to the development of the glass arts worldwide.

LIFETIME ACHIEVEMENT
Begun in 1993, this award recognizes exceptional achievement in the glass arts

- 1996 Jaroslava Brychtová
- 2001 Thomas Buecher (1926-2010)
- 2003 Dale Chihuly
- 2002 Fritz Dreisbach
- 1995 Erwin Eisch
- 1998 Kyohei Fujita (1921-2004)
- 2008 Henry Halem
- 2007 Jiří Harcuba
- 1994 Itoko Iwata
- 2010 Dan Klein (1938-2009)
- 1993 Dominick Labino (1910-1987)
- 1996 Stanislav Libenský (1921-2002)
- 2009 Marvin Lipofsky

HONORARY LIFETIME MEMBERSHIP IN GAS
This award was begun in 1977 to recognize outstanding service to GAS

- 2011 Scott Benefield
- 2006 Penny Berk
- 1979 Thomas S. Buechmer (1926-2010)
- 2004 Robert Carlson
- 1984 Andries Copier (1901-1991)
- 1998 Dan Dailey
- 2008 Laura Donefer
- 1988 Fritz Dreisbach
- 1982 Erwin Eisch
- 1977 Frank M. Fenton (1915-2005)


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Pilchuck Glass School is an international center for glass art education with a serene campus in Stanwood, Washington, which is nestled in the foothills of the Cascade Mountains. It was founded in 1971 by glass artist Dale Chihuly and patrons Anne Gould Hauberg and John H. Hauberg. What began as a one-summer glassblowing workshop has grown into the world’s most comprehensive center for glass art education. Thanks to the vision of the founders and the enthusiasm and dedication of all who have come to the campus, Pilchuck now hosts more than 500 students and artists each summer and is guided by a 41 member Board of Trustees. Pilchuck’s history is filled with stories of hard work, passion, and generosity. Although much has changed since the 1970s, the original core values of the school endure: to inspire creativity, transform individuals, and build community.

“Pilchuck became the dream of many, not just one. Dale Chihuly was part of the creation, but did not create Pilchuck. Pilchuck created Pilchuck.” John Landon

“The magical aspect of what we did, it was opening a door to something that was already there… and because of that experience, we all got to step through that door.” Michael Nourot

During the lecture at the GAS conference, John Reed, the long-time director of operations, discussed the “Pilchuck Experience,” which was, and is, created as a result of the collective and collaborative imagination of the sessions’ participants as a group experience where everyone provided input. During the early 1970s, the furnaces were constructed from scratch in 16 days. Pilchuck’s founding always had a “make do” attitude that allowed individuals complete freedom in deciding how their needs and problems, both domestic and artistic, would be solved. This was the heart of the Pilchuck experiment. Chihuly wanted his group to find new ways of working blown glass, to explore forms, and to approach vessels as sculpture rather than as functional containers. Dale wanted a small school with a single focus (glass) as a place where one can meet everyone who was there. The critical aspect for educating young artists was the opportunity for them to be around mature artists. He also thought a great faculty was important, that teaching had everything to do with energy, enthusiasm, and simply being excited.

The artist constructed dwellings, such as a Yurt built by Thermon Statom and a tree house built by Buster Simpson. They also had roles as local outdoors-people, such as Walter Hass who handcrafted the cedar shake roof of the hotshop, and as architects like the early Pilchuck director Tom Bosworth who created an integrated architectural vision for the campus. Renowned artists came to and were educated at Pilchuck, beginning with the pioneering glass artists such as Fritz Dreisbach and Paul Marioni. Later, enormously influential international leaders in the glass arts included the Czech artists Stanislav Libenský, Jaroslava Brychtová, and Jiří Harcuba, the Italian masters Checco Ongaro and Lino Tagliapietra, the Swedish artists Bertil Vallien and Ulrica Hydman-Vallien, and the English stained glass artist Patrick Reyntiens. Many prominent artists developed their vision through Pilchuck, and in turn, influenced the culture and direction of the school as well as the Studio Glass movement. These artists include Benjamin Moore, Flora Mace, Joey Kirkpatrick, William Morris, and Ginny Ruffner, among many others over the decades.

Ruth King, the artistic director, addressed the current programming. She gave examples of innovative courses like “Learning to Fail,” led by RISD faculty member Chris Taylor, which demonstrated unconventional working methods including blowing glass upside down or melting a crucible of glass in a microwave oven (with bags of ice on top of the equipment to keep it cool). Another course, “Mind over Matter,” taught by Ken Rinaldo and Joe Cariati, used computer graphic software to help visualize glass installations, objects, and performance. Laptops in the hotshop were encouraged alongside more conventional methods as sketchbooks and chalk drawings sketched on the floor to help envision sculptures. Other cross-disciplinary courses have included a sculptural hot-glass class led by Mark Zirpel and Ben Wright, a flameworking and bronze casting class taught by Masami Koda, Gene Koss’ large-scale hot casting and performance art course, and printmaking on glass with Charlie Cohan. For these courses, a high percentage of students (about 80%) were supported by merit-based scholarships.

The artists-in-residence program expands various creative dimensions of the campus during the summer sessions. For example, the enthusiasm of fashion designers Ruben and Isabel Toledo merged into what has been dubbed “performative dance,” which created work in the hotshop that was chronicled through exquisite calligraphic paintings. They also gave a strip of cloth to everyone on campus and invited them to write about a dream or inspiration on the fabric. The participants then walked to the community gathering place, and she tied the strips so they resembled a spider’s web around the totem pole. In celebration, Preston Singletary led a song by the group to conclude what became a meaningful and spontaneous celebration.

Pilchuck has always been a work in progress. The school continues to honor a tradition of creating opportunities for innovation, experimentation, and collaboration.

– Jim Baker, Ruth King, and John Reed

Students working at Pilchuck Glass School, Photo by Russell Johnson
Toledo is honored to host the 2012 Glass Art Society Conference, a celebration of the 50th anniversary of the Harvey Littleton-Dominick Labino workshops that launched the Studio Glass movement in the United States.

Those innovative workshops took place at the Toledo Museum of Art, one of the host sites for this conference. The Museum boasts one of the world’s largest collections of historic glass. In conjunction with this conference, they are curating an excellent exhibition of contemporary works in glass. The Museum campus includes a stunning Glass Pavilion. We can’t wait to watch the GAS demonstrations in this beautiful space, which was designed to use glass for both the exterior and interior walls.

Our conference program is rich with presentations by renowned artists, scientists, and writers; studio visits; workshops; auctions; and many other special events. The region’s active arts community has embraced GAS, making preparations for a public Day of Glass before and after the conference. There will be numerous exhibitions, glassmaking workshops, and tours of glassmaking facilities to enjoy.

We look forward to seeing you in Toledo, a city steeped in glass history, for a stimulating conference that will celebrate the past, address the important contemporary issues, and help build a bright future for creative work in glass.

*Join us in the “Glass City” for the 2012 conference!*

**Co-Chairs**

Margy Trumbull
Jack Schmidt
Herb Babcock
BACK ISSUES OF THE GLASS ART SOCIETY JOURNAL

Some issues of the Glass Art Society Journal are available for sale. The Table of Contents of all the issues is available by contacting the GAS office directly. Recent issues (2009, 2010) are available online (in a pdf form) for members at www.glassart.org.

A GAS Journal order form can be printed from the GAS website or orders can be taken by phone. Payment can be made by check (drawn from a USA bank only), money order, or by Visa or MasterCard.

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Inset images: Joel Philip Myers, Enticement; Bertil Vallien, Janus; Background: TMA Glass Pavilion Hot Shop
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We are pleased to announce our 20th Anniversary Conference, GATHERING XX Bellevue, WA 7/25–29/2012

ARTISTS’ WORK SHOWN. LEFT, BARBARA BECKER SIMON • CENTER, PIYRY • RIGHT, DORA SCHUBERT
KMK 1 the lathe for engraving glass

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As you know, GAS was founded over 40 years ago, and has remained a membership organization. When it began, the members were interested in sharing knowledge focused on hot glass. Today, GAS has expanded to a much wider spectrum of glassworking techniques. These intersections brought new ideas and individuals to the organization. By knowing who is a part of GAS now, we can better understand where we will need to be in the next 40 years. Here is a quick look at GAS today.

- 81% of our membership lives in the USA, 19% are from 46 other countries
- Of the 6 membership levels, most are Individuals (56%), Sponsors (13%), Students (12%)
- 49% of our members list themselves as Artists and 1% as Critics
- of the 1,572 artists who listed techniques used, the most prevalent is glassblowing (52%), next ranked in order kilnforming, fusing/slumping, casting, cold-working/engraving, flameworking, architectural/public, painting, beadmaking, leaded/stained, and neon

As it was explained to me, organizations are like roads between our separate, smaller communities. They physically connect us to each other and to the distance we travelled. These roads are sometimes tough to construct and often difficult to maintain, but are invaluable when we need them. GAS members typically renew their membership at the conference. Except at the Patron and Benefactor levels, the membership fees do not fully cover the membership costs. These are subsidized by the conference, auction, grants, donations, and gifts. In recent years there has been a decline in both membership and conference attendees, which relates to the economic climate internationally. GAS has never been rich. Several years ago, we moved to a smaller office, cut mailing costs, and hold committee meetings by Skype. The 15 international board members donate their time and are required to cover their conference expenses. Our executive director has an amazing ability to negotiate contracts.

- 44% of our revenue produces the annual conference, which yields 50% of our income
- 38% is spent on other programs (website, newsletter, etc.)
- 16% is spent on staffing costs

I believe the future health and longevity of GAS depends on the interest and involvement of the community it serves. When I joined the Board in 2005, my impetus was to give back to a community that helped me begin my path. I have seen the organization help others with their careers, sustain those already on their way, and celebrate those who paved the way for us all.

Thank you for your involvement,
Jeremy Lepisto