The natural center

Brian Frus

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The Natural Center

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Every time I go on a walk, I collect natural objects that capture my interest. I am drawn to these objects for many reasons. I often find myself contemplating or finding things that may go unseen to most people. I am interested by the depth of the objects, the inside and outside of them and the layers in-between, the creation and formation and growth of these natural elements, and the homes these objects find themselves in. When I see a tree, for example, I also visualize the unseen roots below the earth and the layered rings, knots, and life beneath the bark of that organism.

I intend to create a visual explanation showing my unique perspective of the unseen in nature by containing layers of information in glass. Transparent glass will allow multiple layers to be seen at once, giving viewers the whole picture while creating visual interest and stressing an organization of the contained elements. I hope to remind others of the infinite beauty and variety in nature, and that objects from nature are precious and interesting on many levels.

Statement of the basic premise(s) of the thesis:

I explore objects and forms I have collected from nature and then I make glass artworks based on the aesthetic and symbolic value these objects hold for me. The experience of the time spent in nature is important to each piece.
Statement of goals and objectives of the thesis investigation:

Through the development of this thesis, I intend to create body of work investigating a combination of glass and natural materials, sculptural glass forms relating to the materials with which they are combined, technical processes in both hot and cold glass to create form and surface, and a further development and understanding of my own conceptual reasoning for creating these works.

Critical discussion of the body of work in relation to the issues presented in the Introduction, section I.

As I walked through the park today I took particular notice that the dandelions have come out in full. Some are bright yellow and others have already turned into white balls of fluff, ready to be taken by the wind. I have always liked dandelions - they bring back good memories and I picked one up to make a wish. Instead of blowing on it right away, I sat down with it and began to think. What a beautiful thing. As I explored its pattern and detail, I began to think about its ingenious design for dispersing its seeds to far places. It is so important to that dandelion that its seeds be spread across the land, and the seed casing is a perfectly designed tool to accomplish this task. There is great beauty in forms that are created to fulfill a function. Held in place by a central core, the symmetrical seeds radiate out creating a dark center surrounded by a translucent layer of delicate fluffy wisps. I want to, I need to, and I will explore this dandelion further through my artwork.

Though I have not yet made a glass piece inspired by the dandelion, the experience
I had with it is similar to experiences I had when I went walking and found other objects that did inspire works of art. I go walking to get away from the busyness of day to day life and to immerse myself in nature. As I walk, a catharsis occurs allowing me to leave stresses behind and giving me pause to reflect on life and spirituality. Not only is the walk a time for me to get away, it also becomes an adventure into an unknown and ever changing place. As I walk I explore, searching for things that capture my interest, imagination, and intellect. Without the walk, I would not be inspired in the ways that I am. In the book, Richard Long: Walking in Circles, the importance of the walk is described:

“He has said, ‘places give me the energy for ideas,’ and elsewhere, ‘I think I get my energy from being out on the road, having the world going past me.’ Part of his work is created by walking and during the course of those walks, and part brings the materials of nature to a more domestic or sheltered environment: museums, galleries, houses, the occasional hospital or garden. But both are made in the same spirit, just as the indoor and outdoor worlds are mutually dependent. He has told us the sculptures feed the senses and the walks the imagination.”
(Richard Long: Walking in Circles. p 20)

Like Richard Long, when I walk, my imagination is active. The experience of walking, and the things I find along the way become the inspirations for my art.

“I stop at a place or pick up a material because I feel there is something to be discovered.”
(Andy Goldsworthy: A Collaboration with Nature. p 1)

My glasswork combines natural materials with highly sculptural glass forms.

Through the work I have become very interested in the seed. Because this complex object holds a universal beauty, infinite variety, and rich symbolism, I have devoted my work to exploring the seed. A seed is a symbol of life, new growth and beginnings. Every tiny seed holds potential for great things. Andreas Feininger writes:
"What a marvel that each tiny seed, small as the head of a match, contains the pattern for a giant tree, complete with all its diversifications into wood and bark, flowers and leaves, trunk, branches, root, and crown; latent, invisible, yet ready to burst forth when the conditions are right - in growth rooting to the dark earth, reaching sunward to reproduce its kind.

Compare the seeds from various plants: many look more or less alike, some are even indistinguishable from one another. And yet, inevitably, each of these seeds will develop into one predestined type of plant and no other, containing not only the structural pattern of this plant with its diversification into root, stem, flower, and leaf, but also the characteristics of the species - the typical form of the leaf, the shape and color of the flower, down to the last minute detail. Nowhere in nature, perhaps, can the mystery of creation be felt more strongly than in the contemplation of a seed."

(The Anatomy of Nature, p 10)

"The Natural Center," refers to the core of any living thing, be it the physical center, its innermost structure, or its conceptual center, its emotional heart and spirit, purpose, and reason for being. The core is important to my work in both senses. The most protected part of an organism is its physical center, and the layers that shield it are formed specially for their purpose. Protection is an important element of nature that I am careful to include in each of my artworks. I make pieces that have an inside and an outside that are clearly separate from one another. The outermost layer becomes a cradling one, guarding the inner components from anything that may assault or damage them. The use of layers organizes information contained within while creating greater visual interest and an element of complexity. The conceptual center is a unifying idea existing within and tying each piece together, giving it a purpose, and allowing viewers to forge a connection to the nature that inspired each work. The conceptual heart of this work can be found in the contemplation of a seed.

"Though I do not believe that a plant will spring up where no seed has been, I have great faith in a seed. Convince me that you have a seed there, and I am prepared to expect wonders."

(Henry D. Thoreau: Faith in a Seed)

My first interest in the seed stemmed from the intrigue held by its many forms.
Initially as I would walk through the woods, my thesis ideas still new and undeveloped, I
gathered many objects, often seeds, based solely on their visual appearance. As my
collections grew and my thesis ideas slowly began to congeal, I started thinking about why
I collected the various things I did. Looking carefully through my museum, I
contemplated the many objects I had collected, searching for the reasons of their
importance to me. When I arrived at the seed, it struck a note within me ringing "I am the
one." A seed is the starting point in a cycle of life, and, like a phrase might bring thoughts
of an entire conversation, it brings to my mind not just the point in the cycle that it holds,
but the entire rotation.

When seeking out seeds as inspiration, I regularly encounter forms I have never
seen before. I find the gentle curves and the ingeniously designed seed cases to be
tremendously pleasing. The seed case is perhaps the most interesting part of any seed.
Crafted for specific purposes, seed casings are specialized tools designed by nature to
ensure the propagation of a species by creative methods of dispersal for its seeds.

"To insure the spread of their species, plants have developed a multitude of ingeniously engineered
devices for dispersing their seeds. Some hook to the coats of animals and fall away as they rove. Others
are dispersed by birds who feed upon their fruit but eliminate the indigestible seeds. Still others fall to
closer ground, shot to distances of several yards when the drying fruits split open with a snap. Some
travel with ocean currents and tides, remaining buoyant for months, retaining power to germinate and
grow on distant island soils. But the greatest number travel with the winds, gliding on gossamer
parachute like the dandelion seeds; spinning in spiral flight and fall, on miniature propeller forms, like
the maple seeds; or whirling in rolling race with prairie winds to shake from the parent husk, like the
seeds of the tumbleweed."
(The Anatomy of Nature. p 18)

Not only is there great variety in their forms, great interest in their aim, and great potential
in the seed carried by each inventive seed casing, but also there is a great and
overwhelming beauty in each one.
Seed Ships was the point of origin for the body of work exhibited in my thesis show. I left behind past directions in thinking and making to create a piece that actually represented a form I had observed in and collected from nature; a seed. I used some old parts I had made, tapering boat forms, as the husks for the seeds. Small, solid, textured, spherical forms became the seed components to be protected by the shells. To get the seed to stay in position where I wanted it, I made a first attempt at adding dirt, and it opened a new way of thinking. The soil worked well to cradle the seed part and it contrasted nicely with the milky sandblasted surface of the outer husk and the clear, shiny seed resting inside. Not only was it a technical evolution, it, more importantly, included a material that was from nature, giving a deeper conceptual connection to the very things that inspired it in the first place. The soil is a part of the earth, and a foundation on which new life grows. The trio of pieces that come together to form Seed Ships calls attention to the interest I have in multiples found in nature. As in natural forms, the basic shapes and components are the same, however, they have subtle differences adding a uniqueness and individuality to each. The sandblasted surface of the protective pod gives it a matte finish, a surface that has been roughed up, one can imagine, by exposure to the elements, to contrast with the shiny protected seed form inside.

Spikey Seed Case explores a formation of multiple seeds contained linearly in a single pod, similar to many beans. The outer casing undulates smoothly to create compartmentalized sections that reasonably hold a single passenger in each compartment. Like in Seed Ships, soil is used as a filler, suspending the seed forms in place. Spikey Seed
Case employed simple, well executed glassblowing techniques to make the casing form, but also involved some difficult coldworking methods to slice the form lengthwise in half. This cutting of the form and then re-assembling it is an important opportunity for getting parts into larger components that have no or only small openings. This technique is used in later pieces. I saw two choices for re-assembly of the parts; to adhere them together so that the seam became invisible or to clearly attach the parts together in a way that drew attention to the fact that they were two parts connected. The steel wire was chosen as the means for making the connections for two reasons. First, it drew attention to the indentations that separated this pod into three sections. Second, it was structurally able to hold the parts together. The black wire was not shiny or distracting in a way that would draw too much attention to itself and it related to the colors found in the soil filling the piece. Wanting to give the wire even more of a connection with the piece, it was decided to repeat the use of wire in the seed forms themselves, making a connection between the inner and outer surfaces. The seed forms were dotted with drilled holes into which were glued tiny spines of the same steel wire used to bind the casing’s two halves together. The spines in these seeds related to many protective spiny burs I had collected on my walks through the woods. I did not realize until later that this piece had become a kind of opposite protection; instead of seeming to protect the seeds from the outside world, the casing seemed to be protecting the outside world from the formidably spikey seeds. Though it was an unplanned reversal of role, it pushed my thinking about the layers I was creating and helped me to develop my ideas more clearly in later works.

*Life Rings* adventures to an inside and a center found in nature that is based not on
a seed but on the rings of a tree. The idea of life beneath the bark delights the curious mind. The rings of a tree record the history of its life and they create visual patterns that are pleasing and meaningful at the same time. The layers of information contained in the rings of an actual tree cross-section were translated into concentric glass rings for this piece. I needed as many rings as I could get to bring across the idea the way I wanted, so I needed a large outer form to hold them all. Because large scale glassblowing is very difficult, I started with the largest shape and worked my way in. The large, conical form grows from a small base to a wider top and might continue growing outward and upward if it had not been cut off. Where it is cut off, one can see the inner layers. Originally the plan was to make whole vessels mirroring the shape of the outer form that grew proportionally smaller. Once I added the earth component I realized that this was unnecessary because all that could be seen of the forms was the uppermost edge, so, I began cutting off the forms below the surface and just used the rings at the top. By doing this, there was a reduction in the difficulty of making pieces measured to fit within one another and also a decrease in the weight of the piece. When assembled, the work was filled with soil and the rings were sunken into it from the top, giving the feeling that they traveled all the way down on the inside. In this piece the soil seems most fitting because it not only makes the connection to the earth but also speaks about the decay and breaking down to become new earth that takes place at the end of a tree’s life.

Sprout is a piece about the point a seed reaches when it begins to grow. This outer shell has been sandblasted to contrast with the inner shiny seed and the clean tendril growing up through the shells opening. Inside the shell the seed nests in a bed of soil
which is incubating and nourishing it as it begins its journey of growth. From the seed, a stem reaches out to the open air through the small opening in the shell. This piece was difficult because I wanted it to rest with the seam at an angle. After preparing the seed and sprout form, a system was devised to glue together the two hemispheres of the shell while the seed form, which was too large to fit through the opening from which the vine emerged, rested inside. Once the parts were together, the soil was carefully added and pushed down and around the seed.

*Strange Growth* was made as a response to ideas generated during a critique of *Life Rings*. The idea behind this piece was to reference layers of growth within a plant but twist it so that it also became visually interesting in a different way. The form grows from nowhere and its layers seem to grow each at their own rates. As they emerge from the wider end of the piece, one can see that they are beginning to curve up. As in *Life Rings*, the layers in this piece are only a few inches deep, hidden by the opacity of the soil packed to hold them in place.

*Uprooted* begins to explore the outer surface of the glass form as it relates to the things contained. Made soon after *Sprout*, this piece also has seemingly begun to grow. A twisting root form emerges from one end of the seed pod. The main surface of the pod has been treated similarly to that of *Seed Ships* and *Sprout*, however it has a slightly rougher and uneven surface because it was created using belt sanders instead of sandblasting. After the pod was given a milky, translucent surface, grinding wheels were used to cut in and polish concave lenses dotting its exterior. The lenses become windows
to the inside of the pod where a viewer can see hazelnuts filling the interior space.

Because of the curved surface of the lenses, the seeds inside seem smaller than they actually are, so in each lens one can see more nuts than there is actually space for. When looking through the translucent layer of the pod the actual size of the objects contained is apparent. The lenses add visual interest as they become a part of the surface and allow the viewer glimpses of the inside. *Uprooted* was designed as a different version of a seed pod, one that has more the feel of a sack filled with many seeds waiting to be spread. The root form growing out from this pod twists as it searches for a solid place to make its home, however it finds none because it has been taken from its natural environment, uprooted, as a specimen for display.

*Echo* relates the single inner seed to its protective layer through an echo of the form. This piece is the second made with a similar look to that of *Spikey Seed Case* and the two speak to each other of the variations nature finds within a common theme. The soft inner form sparkles with the particles of life that can be seen through its membrane. Resting in a bed of soil, the seed is protected by a clean, hard shell that mimics its form. The two are connected by a single point; a stopper that penetrates both elements and brings them together. Wire bindings hold the halves of the outer shell together and accentuate the form as the inner wires do the same to the form of the seed inside.

*Seed Sequence* is a sculpture that does not reference a vessel in the same way the others may. This piece was created after thinking specifically about the pods I had collected that dropped from a Black Locust tree. The bean pods grow with small capsules
for each individual seed hanging in a series from a main stem, all of which are encased in an outer shell that allows the basic inner contours to be seen, like clothing on a body. In this piece, the outermost shell is not present because it was the inner organization that was most interesting to me. I had many sketches and spent time thinking about how to technically craft the form from glass. First, many long tapering stem shapes and small teardrop bubbles were made in the hot glass shop. After they had cooled, two stem lengths were selected, ground flat at the wide ends, and glued together to create the long spine form tapered at both ends. The process sounds simple however it was full of difficulties to be overcome. Getting the ends flat at the right angles so that the stem would not look bent took more attempts than planned. The grinding of the parts after they had been laminated proved to be the most difficult part because the stems length and curving shape was not easily fit to the grinding tools available. Once the stem was together and surfaced using a new style with clear patches sparkling through a hashed light diffusing pattern, the seed capsule forms were ready to be worked on. After giving the capsules each the same surface as the stem, they were individually ground with a curve to fit with the curved surface of the stem. Once grinding was complete, an interesting exercise in gluing followed. Because a single seed was to go in each capsule (Locust Tree seeds were collected for this component) and they were to be free to shake about within each capsule, the capsules had to be glued in an upright position with gravity keeping the seed inside resting away from the glue joint. The gluing process was managed with some extra pairs of hands, but it was not perfect. Some bad smears had to be cleaned up after the glue set. The process was very educational however, and future gluing projects went much smoother and with cleaner joints. This piece advanced my vocabulary of techniques
Protecting Three is best appreciated when the viewer takes time to notice the three inner forms hidden by the translucent textured surface of their shell. These three solid, sandblasted seeds are only visible by noticing the subtle differences in opacity and shadow as light reacts with the all clear glass form. Protecting Three was the first piece in this body of work to use all glass components without any natural materials. Further, it was the first piece I made that was composed of forms fitting together so well that the inner objects did not have to be held in place by any other material. The process for creating such a nice fit was a time consuming, back and forth action, taking the inner forms between grinders and the shell in which they would fit until everything matched up. Once the inner forms were fit, they were placed between the two halves of the outer shell while they were glued together, holding them forever inside. The outer shell was given a coldworked surface called petudo. Petudo means “hammer formed” and was developed by glassworkers trying to mimic a surface like the one arrived at by jewelers who shape their metal using hammers. Originally this piece had a stopper at the one open end but later it was decided to leave the piece without.

Plucked combines clear glass and steel to create a single seed carried in an industrially sealed casing. The subtle differences found between two components both made from clear glass beg the viewer to come closer for a more intimate inspection of the work. The highly contrasting black steel, a cage of tension holding the two halves of the outer seed form together around the precious item inside, has been carefully shaped to fit
tightly against the glass body. This piece has a seam across the widest part of the teardrop shaped husk, instead of a lengthwise seam creating two symmetrical halves like all the previous works. *Plucked* has a gradient surface running from rough and translucent ends to a smooth and transparent area around the seam. The wire binding the two halves tightly together was made as a new method for connecting glass sections without glue. Rings were crafted and soldered with dimples for locating the connecting parts of the frame. The rings are only able to slide to a certain point on the surface of the tapering form and from that point the connecting wires were added.

*Swelling Twinpod* brings together two forms bulging with life to become a single piece. Though the pod is an invented seed species, this piece was inspired by the twin halves of a chestnut. After forming the twin halves in the hot glass shop, they were coldworked and adhered together. The piece was given a sandblasted surface as a starting point for a gradient surface. The surface is like the one in *Plucked*, but has a smoother and less abrupt transition from clear to cloudy. This was accomplished by using progressively smoother belt sander grits. With each belt, a slightly smaller area on the high surfaces of the sides of the piece was ground until there was a smooth transparent center emerging from the frosted exterior of the rest of the pod. Once the surfaces were finished, the pod was ready to be filled. It was important to use something on the inside that would have a visually similar feel to the outside of the pod. Like many fruits that maintain a color pallet from inside to outside, I intended to fill my pod with something that fit instead of something foreign. This choice lead me to use clear glass marbles instead of actual seeds to fill the pod, giving it a collection of repetitive seed forms that matched with
the outer surface.

*Pondering Pod* is a quiet form at rest. Smooth concave lenses create windows through the pod’s heavy walls and thick milky surface, allowing viewers to glimpse clearly and with some distortion the many contained seeds filling the inside with no space for even one more. This piece was made in response to discussions revolving around *Uprooted*. Getting to the heart of the idea was the goal of this piece, and it was made by pairing down to the essentials of what made *Uprooted* work best. The root form was eliminated leaving just the pod, the thickness of the glass was enhanced so that the optical effects of the lenses would be greater, the number of lenses was greatly reduced so that each one became more important. The opening was hidden so an average viewer would not be distracted by easily figuring the technical aspects of the piece.

*Magnification Seed* brings the magnificent magnification qualities of glass to the heart of a new sectioned seed pod form like *Spikey Seed Case*. The undulating solid glass form representing the seed protected in the center of this piece was made in response to other things happening in my environment. While working to develop some specific solid forms for a visiting artist who did not work in glass, I began generating some of my own ideas that employed a similar way of working. This way of working led to the creation of a solid clear pod that would bend light and distort and magnify the elements that surrounded it. To give the work some color and something interesting to magnify, small seed grains were used instead of soil to hold the seed in place.
Sphere Seeds I, II, and III explore similarities and differences within a common format, allowing the pieces to speak with each other. The only real difference from one seed to the next is the way the surface has been treated. The Sphere Seeds outer forms were all made from parts created in the same mold, making them nearly identical to begin with. The inner forms were each made to fit inside the shells, and were filled with small dark grain seeds to give them a greater density and color. It was crucial to have an opaque core so that it could be seen even when totally covered by a translucent shell. The first Sphere Seed I has a subtly textured surface with no real way to see what is on the inside, though viewers know something is there by observing the dark area through the translucent shell and by understanding the piece in relation to the other two sitting with it. Sphere Seed II has a rougher surface than I, but it also has areas that are clear so that viewers can peek into the inside. Sphere Seed III has transparent areas spaced regularly between deep grooves running around the sphere between two points on its equator. When the three are seen together, viewers immediately understand that they are the same form.

Seed Spiral is a piece about complexity, symmetry, natural repetition, surface, protection, and whimsical beginnings. Its main stalk tapers at both ends, leaving viewers wondering where this object begins or ends. The seed cases spiral around the center stalk from two points and change from smaller at the ends to larger at the center. Like in Seed Sequence, which this piece evolved from, each seed case protects a single actual seed that was collected on a walk through nature. Because of its seed case’s double helix pattern of growth around the stem, Seed Spiral brings to minds of many viewers thoughts about
DNA. This connection to a pattern that people know as a code for life relates directly to the potential each seed holds. The idea of the seed has, at this point, had a chance to germinate and as other visual clues add a greater understanding and meaning to the work, it becomes stronger. *Seed Spiral* is on a larger scale than most the previous works, giving it a strong presence and a demand for attention. Though its many individual parts are not particularly large, as they come together they form a piece covering a surface more than 4 feet square. The many glass pods that each hold a seed are similar in form but have their own character with slight bumps or twists unique to each one.

*Story Rings* takes the idea of tree rings like in *Life Rings* and pushes them one step further. Instead of simply having concentric rings giving the idea of a sliced tree, *Story Rings* has rings that have varying thicknesses, uneven shapes, and are positioned leading to a slightly off center focal point where a solid core, the heart of the tree, sits. These things combine to create a more interesting set of patterns and allow viewers to give the rings stories based on their character.

*Patient Pod* is another variation on the sectioned pod form like *Spikey Seed Case*. The soil used to hold the seeds in *Patient Pod* was created by mixing crushed old leaves and sticks, decaying matter, dirt, water, and other things found outside until a thick consistency formed. This home made earth was then filled into half the outer shell form and the seed balls were fit into place. The seeds in this piece have a rough texture and a lens cut in at the top and bottom of each, allowing one to see inside the sphere. The surface of this piece was also worked so that it did not have an entirely smooth shiny
Surface.

*Picked* is a piece that evolved directly from *Plucked*. It is a larger work that has more things happening than its younger counterpart. The wire cage securing its two shell halves together has been made similarly to that of *Plucked* but with double the connecting components due to the pieces larger size. The shell parts themselves combine to form a teardrop shape that rests on its side. Running lengthwise down the form are slight ribs in the glass, giving it an extra bit of texture. Again, a gradient surface has been ground into the glass surface to focus attention toward the central area around the seam, where the unscuffed transparent glass allows viewers to see the interesting seed form that this glass work holds inside. The center of *Picked* is its most interesting individual component. A solid sculpted imaginary seed form of clear glass, bending the light that passes through it in all directions because of its organic surface of smooth rounded points, is the heart of this work.

*Nurturing Shells* is a complex layering of concentric spherical glass shells all protecting a single important seed at its center. Protection is the word that should come across most strongly as viewers contemplate this piece. The seed form at the center is a smooth, shiny, solid, dark, opaque, golf ball sized glass sphere. It rests atop a clear spire that anchors all the nurturing shells around it in place. Radiating out from the center are five progressively larger spheres each protecting the layers within. From the last layer, the supporting column running straight to the core projects away from the surface. The assembly of this piece was a difficult task. Once it was conceptualized, scale drawings
were made to act as a guide so that the blown and solid glass forms could be carefully callipered and made to be the necessary sizes. Once all the parts were crafted in the hot shop, they were ready to be worked in the cold shop. Cutting each sphere in half was the most difficult and potentially disastrous part of the coldworking process, so work began there. The smaller spheres cut smoothly, the larger ones gave more trouble, and the outermost section actually broke at the tail end of the cut. The area that broke was a small and it was repaired by using ultraviolet glue to carefully replace the section that had broken out. Once all five spheres were cut, the ten hemispheres’ edges were ground to give them clean smooth surfaces that would match up and fit back together. To make all the sections fit in the right places on the supporting stem, first the hemispheres were fixed tightly back together using duct tape. The solid conical stem was fit tightly into each sphere’s opening by hand grinding with grit and water. This was done starting with the smallest section and then marking the stem so that when the next section was done it would be ground only enough to match the mark. Using this method, all the sections were ground to fit properly in place for the final piece. Each section was separated back into hemispheres and given a scuffed surface using belt sanders. To bring Nurturing Shells to completion, a complex glue-up took place over the course of a few days. The process began at the center and worked its way out. Each gluing had to go smoothly because there was no way to fix a bad joint once it went together and no way to get inside to the layers underneath. Jigs were constructed at each step to help support the weight of the piece while it was being glued. A team of four people was necessary to accomplish all the tasks to make sure things happened the way they should. When the last layer was attached it sat curing for two days before it was brought to the gallery for the exhibition.
Critical evaluation of the results of the thesis investigation, in relation to the issues presented in the Introduction, section I.

This thesis investigation has been and continues to be a success. This body of work was created as an evolution of both ideas and techniques. The evolution continues.

Initially, my conceptual reasoning was not very strong but now, through the process of making, the redesigning of ideas, and the research necessary, I am able to discuss the concept - my concept - in depth with sincerity and interest. I always had a clear idea of my self set guidelines and rules for the work (all clear glass, sculptural forms, layers, combinations with other materials, and a relationship to nature) but early on the manifestation of actual pieces that fit within the guidelines I had prescribed was giving me great difficulty. Though there were some successes, I did not hit upon anything that generated a multitude of ideas until a short eight weeks before my show. The work made prior to the eight weeks leading up to my exhibition laid the foundation for the work that was ultimately generated and shown. From the beginning, I was interested in containing in a sculptural manner and linking my work to nature and I successfully combined glass with natural materials, but early on the conceptual center, the component that created a link with the viewer and nature through the piece, was missing. Though I was making sculptures that were visually interesting and indeed combined glass with actual objects from nature, there was a spirit that I wanted in my work that was absent.
When I eventually began making glass forms that sculpturally referenced seeds, this problem was resolved. I had finally found a distinct purpose for making the work as well as a unifying theme and style of working.

Techniques in hot and cold working the glass were explored throughout the process of making, and I used new techniques for adding texture and surface and for creating works that could not be generated without both hot and cold working combined. In the hot shop, glass was formed very often using calipers to measure the size of a piece until it exactly matched scale drawings or fit properly within or around other pre-made parts. Particularly important to the work became the coldworking processes employed to create each piece, many of which were complex or simply new to me. Almost every form in this body of work that was made of two halves started as a single form that had to be cut and ground to fit back together. The cutting process is an easy one, when the work fits within the normal size limitations of the cutting tools, however, many of my parts did not. I built complex support structures and often needed help to safely divide a piece into two. Once a piece is roughly cut in two, it needs to be ground smooth. Many of my parts had to be ground by hand because they were too large to be placed on available grinding tools. The surfaces began as simply clear or sandblasted, but as the work continued they progressively grew more complex and time consuming. I experimented with a multitude of engraving techniques using diamond lathes and also began surfacing pieces using belt sanders and varying grits to create transitions of textured roughness on surfaces that were smooth and clear beforehand. I learned about grinding stoppers to fit tightly within glass vessel forms and took this knowledge to an extreme level in Nurturing Shells. Not only were new techniques discovered for the actual manipulation of the glass but also in the
finishing of the many pieces that were bound tightly in place with wire. Using wire was a new way of holding glass components in place, and I devised ways to achieve this goal that were both functional and visually interesting, without distracting from the primary goal of the work.

The seed form led me into making totally sculptural pieces. Originally I wanted to reference the vessel as a ritualistic container for natural objects, but I was always interested in finding a way to do this that would be very sculptural. With the combination of natural materials into seed forms, the work put the emphasis on the sculptural and left the viewer to search for the vessel. The seed casings, of course, are vessels for the transport of seeds, protecting them until the time has come to germinate and grow. Each glass pod, case, or shell is a container for the objects inside, whether or not it has a visible opening. The materials within these glass shells are important to each work. In many cases, actual seeds fill the interior space of the glass pods that have been crafted to hold them. When seeds are present within a work, they are there for the purpose of being the natural elements that are protected by the glass casing around them, it gives the glass a reason and purpose for being formed in the way that it is. The glass and materials contained have a direct relationship to each other. Without all its parts, a piece would not make sense.
Critical discussion of the relative successes and failures of the thesis work.

The work came together to mount a compelling and successful show. The evolution of the work was apparent from one piece to the next. Though there were no complete failures, there were some issues raised regarding the show itself, and some specific questions emerged about select pieces.

In regards to the show, the question of inclusion became the most important one. Should all the pieces be shown together? Not much of an editing process took place before the show went up. Ideally I wanted to have all the work shown. My editing process began the night before my show installation when Life Rings got knocked over and broke. Due to space limitations, I had removed two other pieces (Seed Ships and Strange Growth) from my complete body and fit the rest in. When my thesis committee saw the space, the arrangement, and the work selected for display, it was almost too late to make any changes, but changes were made. Three more works (Sprout, Uprooted, and Protecting Three) were edited out of the show to allow for a better flow through the gallery space and to allow the viewer space to approach each and every piece. Though no more could be done with the time left before the show opening, discussions were had about further editing to strengthen the body, like strengthening a plant by pruning its branches. The pieces that were removed were thought by the committee and/or myself to be in some way weaker than the other pieces. After experiencing the process of editing and the discussions pertaining, I will be more selective of the work shown in future exhibitions.

In an oversight, I did not have an Artist’s Statement present at the show. I see this
as a failure on my part to give the viewer a better understanding of my work. Even without an artist's statement present the work is capable of communicating to a viewer all the intellectual and emotional material I wanted it to share, but if a statement had been present I believe it would have helped get the dialogue rolling.

Swelling Twinpod was one piece that raised questions about my manipulation of materials. The seed forms inside the double pod shell form are actually transparent glass marbles. The only problem with this is that they are too perfect, too uniform. In nature there are always subtle differences even when there seems to be perfect uniformity. My committee suggested that if I had hand made all or even just a few of the components on the inside, they would naturally be imperfect and add that edge of character and realism that this piece almost has but falls just short of. This will be advice I take when crafting future pieces.

One of the great successes of this thesis investigation was the creation of seed forms using all glass. I was very focused on a need to use actual objects or materials from nature in each piece. When I discovered that the same feeling could be brought across by making all the parts from glass, it opened new directions for the work that were not possible before.

The biggest success is in the finding of the concept. Now that I have found solid conceptual earth to use as a foundation for my work, the evolution of that work can go on indefinitely. I have only just begun my exploration of the seed.
<table>
<thead>
<tr>
<th>Listing of pieces created for the thesis exhibition. (Chronologically Ordered)</th>
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<tbody>
<tr>
<td><strong>Seed Ships</strong></td>
</tr>
<tr>
<td><strong>Spikey Seed Case</strong></td>
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<tr>
<td><strong>Life Rings</strong></td>
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<tr>
<td><strong>Sprout</strong></td>
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<tr>
<td><strong>Strange Growth</strong></td>
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<tr>
<td><strong>Uprooted</strong></td>
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<tr>
<td><strong>Echo</strong></td>
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<tr>
<td><strong>Seed Sequence</strong></td>
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<tr>
<td><strong>Protecting Three</strong></td>
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<tr>
<td><strong>Plucked</strong></td>
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<tr>
<td><strong>Swelling Twinpod</strong></td>
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<tr>
<td><strong>Pondering Pod</strong></td>
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<tr>
<td><strong>Magnification Seed</strong></td>
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<tr>
<td><strong>Sphere Seeds I, II, and III</strong></td>
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<tr>
<td><strong>Seed Spiral</strong></td>
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<td><strong>Story Rings</strong></td>
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<tr>
<td><strong>Patient Pod</strong></td>
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<tr>
<td><strong>Picked</strong></td>
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<tr>
<td><strong>Nurturing Shells</strong></td>
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</tbody>
</table>
Seed Ships    Glass, Earth   13” x 16” x 5”
Spikey Seed Case
Glass, Earth, Steel
22” x 8” x 5”
Life Rings  
Glass, Earth  
14” x 14” x 28”
Uprooted

Glass, Seeds

22” x 8” x 6”
Echo Glass, Earth, Steel 16” x 8” x 5”
Seed Sequence  Glass, Seeds  32" x 6" x 6"

[Image of glass seeds arranged in a sequence]
Protecting Three Glass 15” x 3” x 3”
Plucked Glass, Steel

9" x 3" x 3"
Swelling Twinpod  
Glass, Steel  
10" x 6" x 7"
Pondering Pod
Glass, Seeds
10" x 8" x 7"
Magnification Seed

Glass, Seeds, Steel

14" x 7" x 5"
Sphere Seeds I, II, and III  
Glass, Seeds  
6” x 6” x 6”
Story Rings
Glass, Earth
18" x 18" x 13"
Patient Pod

Glass, Earth, Seeds, Steel

14” x 8” x 5”
Picked

Glass, Steel

11” x 5” x 5”
Nurturing Shells  Glass  16" x 14" x 14"

Nurturing Shells (backlit)  Glass  16" x 14" x 14"
Works Cited


CD Information

There is a CD attached to the inside of the back cover. Contained on that CD are the following folders and files:

Documents:
Resume.pdf  Brian Frus’ Resume (current 01/2004).
ArtistStatement.pdf  Brian Frus’ Artist Statement.
ArtistBio.pdf  A brief Artist’s Bio for Brian Frus.

Glasswork Images:
*.jpg  Digital images of all the pieces made for this thesis.

Studio Images:
*.jpg  Digital images of Brian and his studio at RIT.