# Resilience

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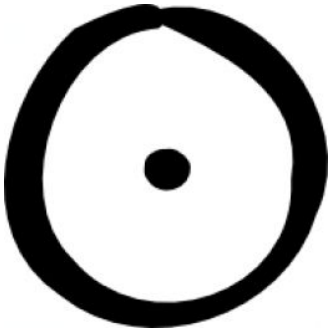


# CHAPTER I

## GENESIS

> What we call the beginning is often the end. And to make an end is to make a beginning. The end is where we start from. T. S. Eliot

Relationships found within the natural world are dynamic and sustainable. As I strive to actively understand how the environment protects, expands, and repairs itself - a sense of separateness from my fellow man has lessened. It has been replaced by a connectedness exemplified throughout nature. This is aptly illustrated by many indigenous peoples and has made the study of their cultures, their religions, and their tools of expression, a driving influence in my life; the truths found in nature help make sense of the human experience. The effect is a healing one.

The study of natural materials and substances is foundational to this artwork. I look to materials as a source, to understand relationships within the natural world. This investigative process began through book arts and book construction. The need for chemical neutrality for the conservation of paper prompted the consideration of how specific environments impact different materials. Experimentation with natural dyes and fibers began this investigation. This process approach became revelatory to my work and facilitated its content.

I wanted to speak to the impact mankind is having on the planet. Through my research of materials and the forces, the environments that help shape them, my work began to link more directly to the issues that concerned me: how to heighten awareness of the undeniably relationship man has with the earth and to invite consideration of how each individual might improve their interactions with all that is natural. Through the use of exaggerated scale, attractive forms, engaging surfaces, and titles that create associations, every piece references the process of looking more specifically at what is happening right outside the door, in nature.

To build my own relationship with the natural sphere, I've chosen many materials used by indigenous peoples as my expressive palette. These basic materials – fibers from plant stalks, natural dyes from seeds and roots, and oxidizing metals found in the earth - are essential components.

Complimenting and feeding the content of this work, I've learned more about issues of sustainability - which materials are plentiful, non-polluting, and even beneficial – to supply the raw goods needed. Observing the close relationships between materials made me increasingly aware of how natural forces support the sustainable aspects of the planet. An example of such a force, also considered a cycle of change, is referred to as the 'waste = food' loop system referenced by biologists. It is a closed cycle and explains how food production creates waste that is food for other organisms. The cycle continues indefinitely in nature. Biomimicry,[1] a relatively new term and approach to solving

[1] *Biomimicry, Innovation Inspired by Nature,* Janine Benyus, in 2002, wrote this ground-breaking book to illustrate how solutions to the world's problems of pollution and depletion could be potentially mitigated by the scientific scrutiny of natural systems; she showed how cooperative cycles between life forms, previously unknown and misunderstood, might be models for survival on the planet.

design/sustainability crises, is based on the examination of nature's systems and explores its life-cycles as they relate to sustainable strategies.

The visual end-product of my work doesn't convey these natural cycles literally, but the process of my practice does. Every by-product, is in effect, debris for recycling or reuse; these cast-offs, lay wait in my studio and spawn new associations. Over time, a dialog between materials grows. This has served to open up my work; the art product is less deliberated over, less predetermined. Even though there is always more "waste" than product, this approach produces a body of work that is concerned with each material's ability to take part in a discussion about the forces acting upon it. Using these benign materials whenever possible, my work expresses a consciousness of "doing no harm."

While this research and process work is ongoing; my expressive journey continues to get both interrupted and reinforced by life events. Whether replanting trees in a rehabilitated crop field, eradicating invasive species in public byways, or confronting crews of utility workers bent on poisoning everything growing under thousands of miles of power lines, I am reminded that very little is idyllic in this manmade world. These events create ripples in the art; my focus can become distorted. Often, these occurrences hone my impulse and become the content of my structures. This is my focus, to use my real-life experiences in relevant ways to support awareness, perhaps even change my viewers' thought, maybe awaken them to curb their actions.

Burning, eroding, and oxidizing materials, my studio practice often involves the manipulation of substances in specific settings, to reveal effects. The art studio has become a type of laboratory - testing, watching, weighing, adjusting – looking for results that can convey. This replaces a practice that was previously allocated to the making of

"art objects," not one based on creating environments with unpredictable results. As participants in the human experience, we can react to unseen forces, we can be aware of them, or we can study them and possibly alter the outcome to tease out meaning.

In an exploration of the effects of saturation, growth, pressure, proximity, gravity, even attraction, between materials and environments, I'm setting a stage. I adjust the physical details to reveal and record the results. Ultimately these outcomes, or products, will be used in combination with structures of my design. But through the process that creates them, they will record and illustrate these transient, often ephemeral changes that mimic natural events. An early example of this process illustrated the potential of capturing change on an inanimate object.

The six disc forms, in *Sha-co-pay*, (Figure 1) were created following this model of staging, waiting, and recording. The pulp was processed, beaten, and made into paper. After drying, the paper was saturated in a weak acidic environment and stretched across a slightly domed steel form to induce the transfer of iron oxide from the steel, on to the paper. Utilizing several pieces of paper and recycled strips from previously stained paper, a texture was built up and unique surfaces were attained. The objects' appearance varied due to the inclusion of harvested natural fibers and pigments: grass seeds, sumac seeds/leaves, goldenrod flower heads (both dried and green), steel shavings, saw dust (hedge, walnut, cedar), tea leaves, and indigo pods, among others. Harvested daily throughout the seasons, the gathering from feral fields in the flood plains of the Mississippi River produced a rich collection of natural sources. By wrapping both the pulp and the steel form in airtight wrappings, an oxygen-depleted environment encouraged areas of resist; trapped air bubbles created organic voids in the otherwise

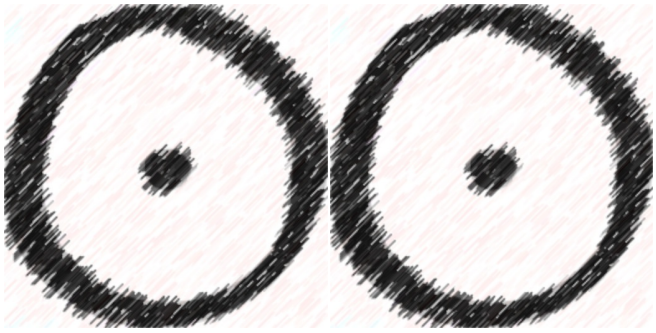
solid rust transfer. In these open areas, the pigment transfer was restricted or re-combined with neighboring substances.

These sessions of experimentation were done in close succession over nine months. Forty-eight hours of "setting" in an acidic environment were required before each paper composition could be removed from its form and rinsed free of acid, with sodium bicarbonate[2] to prevent the premature aging and eventual decomposition of the paper. Shortening the time of setting caused the colors to diminish when rinsed. Seeing the results in quick succession, then adjusting the times, the natural sources for pigmentation, the amount of pulp, allowed the process to grow in an organic, almost cellular fashion.

The first resulting series attained a provocative sense of the passage of time, even of age. The presentation of six together comprises a collection (Figure 1). The whole resemble a constructed, visual record. Physically, the works withhold any evidence of the artist's hand. In that achievement, they are not easily codified. The forms seem to be of another time. They serve as a breakthrough point in my utilization of "process" and helped to establish a more open, investigatory approach in my evolving artistic practice.

[2] $NaHCO_3$ was dissolved in water to create a bath for submerging paper until a neutral pH was attained in the water runoff.

**Figure 1 D. Rhaesa, *Sha-co-pay*, (2013). (22" x 22" each). A series of shield forms named after the Ojibwa chieftain whose legend asserts that he had six children from one birth.**



# CHAPTER II

## ESSENTIAL CONCEPTUAL CONCERNS

> As I go along with my work I formulate my thought, and from this struggle between what I want and the reality of the material—form this tension—is born a equilibrium. – Antoni Tápies

My goal is to record universal forces, systems, and elements of nature. To do so in such a way that a material's ability to transition from one form into another, to adapt, is illustrated. My work is as much an observation as it is to capture the transient changes as they occur.

With the disc forms, scar-like marks and pigmentation are presented. The "hand" of the artist, in respect to the discs' "craft," is relegated to preparing the forms, conjuring up the saturations, the environments, collecting pigmented native fibers, determining the duration needed to assist in the leaching or transfer of substances. Finally, the hand creates the form that holds the record. In this invisibility, this behind-the-scenes work, the hand's absence supports content – a mystery is conveyed. What is the source? The visible presence of the artist's hand could subtract from the work. Hence craft, in this case the artist's invisibility, is essential to the delivery of a clear, unimpeded read of creation or reaction of natural processes.

As described earlier, the process is manipulated to happen at a certain time, in a certain way, and on certain materials, but it still mimics a natural process. Adverse environments often encroach on, even destroy, pristine objects: a leaf drifts into the anaerobic depths of a waterfall basin; a buck's perfect young hide is scarred during a rutting season; freshly opened florets of a bud droop and fade under the hot noon sun. Each natural object is prone to alteration, transition, even demise. Isolating and recording these shifts in some observable product is my "work." That it not be a contrivance, and yet be related to, even duplicate, what is already happening in the natural world, drives the work. Taking the time to observe natural events is essential to the process – eyes are open, always searching the ground and the sky.

Made of natural fibers, the pigmentation from presented environments is attached to a "form," a simple orb with a slight dome, in one case. The dome shape, itself, comes from a discarded farming disc, one used to turn the soil while slicing oxygen and green manure into the organic mix that feeds the world. These resonate with the "circumpunct" symbol (Fig. 2), conveyed by native civilizations and religious expressions throughout time. The round exterior is said to symbolize the universe, whereas the center point, references the individual, in the midst of that universe.

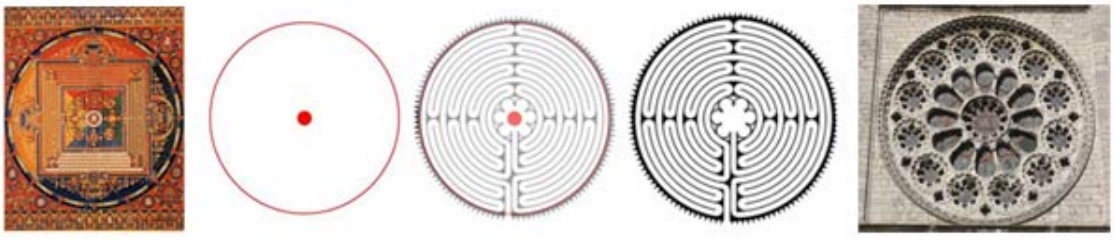


**Figure 2 Five examples of circumpunct forms. (Left to right) textile design, symbol, two labyrinths, and a gothic rose window.**

Other forms are also used, elemental forms: triangular, open pyramids; organic natural shapes, and various combinations of each. This "play" of simple shapes keeps the conversation centered on the marks made by natural processes, and the dialog between materials.

Craft: Its Contribution to Content

Excellence in craft can have variable, even negative, contributions to content. Similarly, inferior craft can diminish, impede, or conceal content, but it can also uphold it. In unexpected ways, "highly technical" craft can get in the way of content. In music, piano technique can be so perfect as to leave no room for heart – no room left for expressive interpretation by the individual performer or listener. The craft of carefully deliberated materials can be executed so perfectly that the hand of the artist either is so highly pronounced, making the content secondary, or worse, can obscure the content. It is the tight-rope every artist walks - the pursuit of content upheld by craft. The work can become confused or it can be interpreted in opposition to the artists' intent. When enough room has been left for the viewer to bring their own interpretation to the work, the artist has managed to step aside from a predetermined "willing" far enough to free the work. In that instance, the artist is not maker, but more of a revelator, even a mediator between and among experiences in both the making and the viewing of the work.

In my work the craft is tight in its doing, not its result. In the mechanism of setting up the material reactions, controlling the timing, procuring all of the items to be used, I exert the utmost control, but I step away from manipulating the results and allow

the reactions as they occur. I take control again, in determining which results to "fix" or keep and use, and how to present these findings.

Tara Donovan's approach is the opposite of this. Her work states a specific content; her craft is impeccable. At every turn, she is controlling and controlled by her message and her materials. Standing in front of two of her recent works (Fig. 3), the constructions do not physically indicate the artist's hand. There are no brush strokes or file marks, even spacing is meticulously controlled by the objects chosen; the maker delivers a presence of pure material, in unimaginable abundance; only the artist's concentration seems in accompaniment.

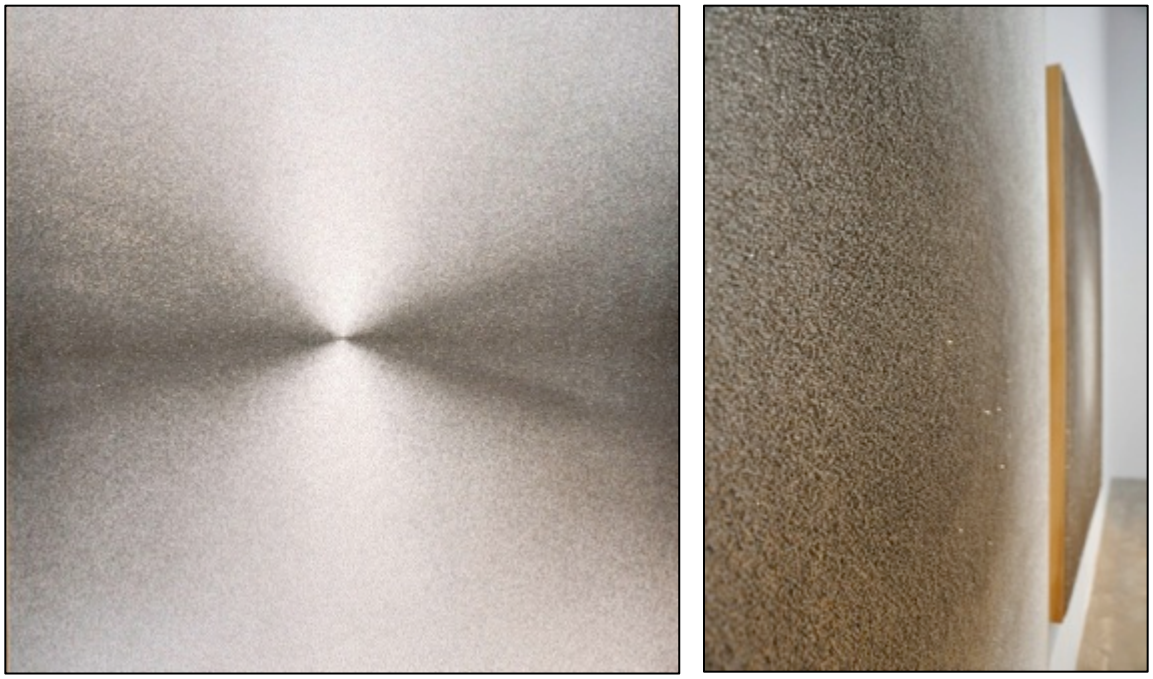


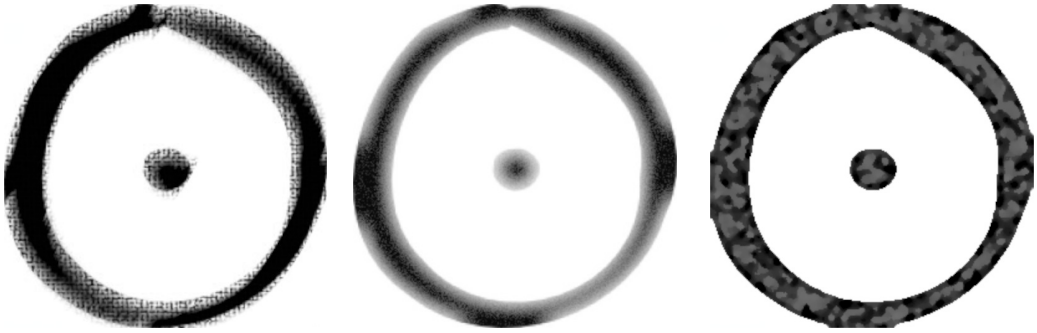
**Figure 3 Tara Donovan. *Drawing* (Pins), (2011). Nickel-plated steel pins on canvas. (72"hx 72"w x 2.5"d). Two views: photos by D.P. Rhaesa, Pace Gallery, NYC.**

In the works of installation artist Ann Hamilton, an aspect of craft is often other-minded, or withdrawn. Not that "craft" is less than essential, but it takes a back seat to the prepared layers of experience the artist has manipulated in her attempts to conjure up a response from the viewer. Like a harmonized theme, reliant on the viewer to decode,

these experiences, multi-sensory in meaning, are built into her installations so specifically that there is often a disassociation within the viewer's perceptions. While searching for connections between parts, the viewer finds an essential thread - one that weaves a new sensory logic. This new perception reveals a previously unfelt attachment between the disparate parts. This might happen through an auditory conveyance: the audible scratch of a writing instrument scribing across a deeply textured paper surface (*stylus*, 2011), or a rotating video projection that pushes a giant pencil over the expansive darkened overhead walls. Hamilton's tactics are highly crafted, rendered exactly to convey a specific slice of perception, but her "hand" is withdrawn (even when it is there), and the viewer is left isolated with an individual interpretation, laying precisely within a unique perception.

The individually crafted manipulations in Hamilton's works do not scream a certain conclusion; each provides unique layers of perception by delineated response paths, much like a poem. This poetic essence in Hamilton's work creates a contrast to Donovan's; the sensory perceptions in Hamilton's works are manipulated towards a stream of connected experiences and thoughts. Donovan's are braced with the conveyance of a single expression of a multitude of seemingly infinite material, its a lavish excess. Hamilton's installations also contain excess, but with different motives. They reach out to tempt the viewer and then strain that willing recipient through a contorting sensual sieve, one that partitions one sensory experience from another, then moves the intake to a point of saturation. The episode remakes the viewer's response and provides new insight; it is total submersion into another way of knowing... a knowing of experience. The excellence in craft with both of these artists is as a vehicle of delivery; definitely critical, but tethered and delegated to the artists' intent.

Craft in my work is also vehicular, but more for the maker. Excellence in product requires pushing past first results. Sometimes the corner turned is not fruitful, but most often, tracing back to the last time the materials, the technique, or the outcome resonated with a pure voice, it finds yet another result and a clearer resolve. It is certainly not a new concept, having been restated by many great artists: the discovery of the ways and means is the art, the object - the byproduct. My pursuit of excellence in craft is a kind of fuel – an energy that impels the work forward. The hand is best invisible, but the outcome is un-prescribed.



## CHAPTER III

## WORKS THAT REMAIN

> I live on Earth at present, and I don't know what I am. I know that I am not a category. I am not a thing—a noun. I seem to be a verb, an evolutionary process—an integral function of the universe. Buckminster Fuller[3]

Found and Altered Objects 2011-12

When I began the MFA program in 2011, my approach to art production was initially detached from conceptual issues. I was three decades older than my fellow graduate students, and my work centered on making aesthetically pleasing objects. To me, abstraction was more expressive than realism, so I gravitated towards the Modernists, the Cubists, and the Expressionists. My ideas were founded on subjects from the real world, translated into expression through exploration in form and materials. Through the use of traditional tools, these works were carved from wood, formed in clay, or constructed using non-ferrous metals. I manipulated these materials to construct forms that would convey my view of the world.

One early work was *Flight* (2010). Designed to be cast in bronze; it still awaits the economics to support that outcome.[4] It seemed at that time that the flight of a bird

[3] Buckminster Fuller, *I Seem To Be a Verb*, 1970

**Figure 4 Jacques Lipchitz, *Bather*, (1923-5). Left- Bronze, five feet tall.**

**D.P Rhaesa *Flight,* (2010). Right- wax pattern, twenty-six inches tall.**

would represent "freedom" more aptly than other ideas. I was eager to supply a maquette for a proposed public sculpture in the River Road as a part of a rest area that commemorated the flight of the African Americans from the slave state of Missouri. A bird in flight seemed an appropriate reference for the situation. Drawing from Edward Muybridge's early photographic stop-action stills, made from one of his experimental cameras, I pushed through realism to reach an abstract equivalent. During 2010, the St. Louis Art Museum had a curated an exhibit of figurative bronzes on display in Taylor Hall. Jacque Lipchitz's life-sized bronze *Bather* was present in the exhibit with many

[4] The price for producing this bronze casting was $3,000, due to its size and the price of materials. This was my first foray with public sculpture. I had been commissioned to design a monument in a nearby historic area, representing an entrance from the Mississippi River to the Underground Railroad. It was to contain a stone ruin depicting a replica of the stone cabins built by run-away slaves in the acres behind Piasa Harbor- an area called Rocky Fork Creek. The Great Rivers Land Trust owns much of that land. Their mission statement proclaimed that GRLT was to share the land with the public through historical markers that informed passers by about the local history. I wrote up a proposal that included a scaled plaster maquette and a budget including both the stone ruin and the bronze winged sculpture lifting off from the front corner of the structure to abstractly represent the slaves' flight to freedom. The stone structure was commissioned and built (2011), but due to the considerable cost, the remote location, and fear of vandalism, theft, or both, the bronze sculpture was excluded from the commission.

other, somewhat more realistic, figurative works. His abstracted figure provided some hints of translation of form into dynamic angular shapes. I borrowed these types of truncated knife-life forms from Lipchitz's style. Having constructed the wax pattern during the summer of 2010, and finding the project's money dried up in the volatile markets of that period of national recovery, completion required that I find another material to use. Reconfiguring the form in wood seemed an economic alternative.

Made of dimensional 4x4 cedar fence posts, every stick of the lumber was ripped through the band saw into swooping shapes, then reconfigured into wing-like forms by laminating, sanding, and carving. Due to the open grain and structural make-up of the soft wood, cantilevering long expanses of thin elements was more challenging than had it been in bronze. Concealing the construction elements - the nuts, bolts, and washers - without infringing on the aesthetics - was paramount. To both support the main axis of the structure and to provide a solid surface, to which the form could be attached, a base was required. Rather than represent the feeling of a bird's lift-off, as in the wax pattern, the wood translation focused on the moment just before take off, the gathering energy before its burst into space. Though an awkward stance, it provided dynamic relationships between the parts.

**Figure 5 D. Rhaesa, *Flight*, (2011). Cedar, (24”h x 25”w x 8"d).**

As I continued making, I began to work more from found objects. These source materials were manipulated and reinterpreted. I found myself waiting for lightening-bolt inspiration. I spent way too much time placing myself in environments that might spark the bolt: salvage yards, deserted outbuildings, abandoned rail yards, and even industrial waystations. And I collected… and collected. These were fertile grounds for me; the machined refuse appeared as “bones,” picked over and discarded by a society that no longer found them useful. The images and forms were arresting.

A.  B. 

C.  D. 

**Figure 6 D. Rhaesa, *Salvage Yard Detritus*, Photos (2011). A. Gears, B. Flywheel, C. Oil Barrel, D. Paint.**

I became aware of a different kind of life than my own. Whose minds designed these machines? What kind of hands put them into action. What type of lives were shaped by the turning of industry? This wandering, often on the outer edges of townships and cities, was at the fringes of development: one boundary flanked industry, the other usually extended its fingers into expanses of feral earth where nuanced juxtapositions of society's consumption intertwined with nature's concealing growth. This diet of searching uncovered piles of expressive objects; these found objects, like clothing in a second-hand shop, begged for new contexts and associations.

These efforts produced my first grouping of new works. A common theme was undeniable and continued into my later process oriented work, but they stand unique, filling in as I found my creative bearings. Together, they construct a series about degradation and resilience, waste and reuse, about the interacting forces of time and material, about the human condition surviving on a planet with limited resources.

These objects were made during a kind of passage. Sentinel-like, they mark a transformative shift in my work, away from art as object, to one of art as discovery.

**Figure 7 D. Rhaesa, *Head Form*, (2012). Antique teak tannery paddle on a weathered oak base (18"h x 8 w" x 4"d).**

Evolution of Process and Impulse

I had heard mention of "process art" in other's works, including Richard Serra's and Eva Hesse's work, but I really did not understand what it could bring to my practice. I was in route towards an understanding of how a process-oriented approach could yield the most original statements about the environment, about the forces that are imposing on

her, and about my unique perspectives on those forces caused by adjusting scale, materials, time, and context.

One of the issues that brought about this transformation, during the creation of a series made primarily of found objects, was dealing with the element of "history" resident in the objects themselves. Each had their own past; I began to understand that their "baggage" was not to be underestimated, good or bad. I learned that it could be utilized as a strong contextual impulse in a work. Whether from weather-worn cuts of a chainsaw (Fig. 8 *Standing Birth*), from a rotting black oxide developed by water submersion (Fig. 9 *Containment*), or from a parched flaking surface worn from years of wear, the signs of their specific past lent a context. At the very least, it had to be considered, and optimally, it could be rechanneled for meaning. This readapting of aged forms to present day contexts helped me to understand the plasticity of meaning. The environments I'd been seeking were ripe with such objects and my daily dose of NPR[5] provided news items to respond to– stories of nuclear melt downs, global warming, gas companies fracturing the depth of the Earth's core, as kitchen faucets began spewing the sought-after gas. Current conditions were deteriorating worldwide and society seemed unable to curtail it.

An old walnut beam had been cut and stored, forgotten for decades in a barn loft about to be bulldozed. I found it in the dark recesses of a low ceilinged upper corner. Stuffing my shoulder into roofing nails as I crawled to pull it out, I was instantly enamored with its open geometry. Washing it free of layered droppings, the rawness of the surface patina demanded that I preserve it. The birth concept came from the decision to open it up (Fig. 8 *Rebirth*). Cutting diagonally through the ten inches of well-cured walnut took four hours by hand. There was no other way to open it at the longitudinal

[5] National Public Radio news commentaries are broadcast all day long in our region.

cross section that would provide the most energy to the form. With sanders and then by hand, I hollowed the cut out gently on both surfaces; it came to resemble the curve of pregnancy, or how I might see it, if looking from the inside, pushing out. The feel of the walnut was dense but receptive to the super-fine sand paper used to hone the wood to a lustrous silk touch. Oak timber pegs were cut at angles to separate the upper walnut slab from the lower; more pegs became legs to lift the form up off the ground plane, like a being. The separation of the cut was set so that it could be just peered into, not big enough to reach inside. A partial egg, formed from a mahogany beam, was doweled into the opening to complete the birth reference.

**Figure 8 D. Rhaesa, *Standing Birth*, (2011). Walnut, oak, mahogany. (20"hx 24"wx 9"d)**

*Containment* (fig. 9) was completed just months after the 2011 Tsunami in Japan.[6] Similarly, the found objects used in this work loaned a patina that established a sense of history to the assemblage. To re-contextualize the wood cylinders was necessary. More than the head-like forms in the previous work, these cylinders were machined and identical; using them to suggest fuel rods was an easy decision. Diagrams researched, on nuclear waste sites, pictured the storage tanks as cylindrical. The reference to

[6] An earthquake in the Pacific, created after-shocks and a tsunami that exploded the reactors in the Japanese Fukushima Nuclear Power Plant on March 12, 2011.

radioactivity only needed to be suggested. Four single strands of copper wire were stretched around the cylinders to hold the ten "rods" precariously on a cracked concrete base. This supported the allusion of inadequate "containment," but this was not quite enough. The addition of another layer of supports, in the form of three leg-like props, pushed the balancing act of the visually weighty rods even higher, and the allusion was successful. Below them, another concrete base, much smaller in diameter,

**Figure 9 D. Rhaesa, *Containment*, (2011). Pine, wire, pigment, stone, concrete, plumb-bob, (24"hx 20"wx 20"d).**

was situated to help the whole structure teeter over the edges. Raw powdered cobalt pigment was added in little heaps atop the rod to intensify contrast. This unnatural color filtered through the middle around the base of each "rod" and dropped to the lower layer. Finally, a plumb-bob on a line was added, allowed to drag through the pile of loose pigment, and activated by the HVAC motors that would vibrate the building at unpredictable intervals. An overhead light stabbed through an internal hole causing the pigment to glow with a small orb at the base. Watercolor stain was added to emphasize

the cracks and create a sense of seepage. No mistake, nothing was being contained. It was an emotional incident that will impact our world for decades to come.

Within weeks, my employer required that I attend a conference in New York City. One evening was unscheduled and it coincided with the hours of the Metropolitan Museum of Art. Upon entering, I turned left towards the antiquities collections. There I found aisle after aisle of "found" Greek fragments. Each was perched atop a pedestal. Drawings later, it occurred to me that these figures could be powerfully combined with my architectural elements. They shared the same source – both made by hand - just at different times. I used clay to sculpt the figurative fragment. Combining the figure with the rigid, history-bound timber proved difficult. The timber was visually very heavy and dominated, even though the human element held more interest. The two polar elements spawned the idea of shifting size relationships and creating a tier using pegs. Pulling the timber off of the ground plane animated it enough to make it act more like a partner, instead of an anchor. Many configurations were tried. Finally, a stacked version,

cantilevering the timber equally with the torso split the attention, thus the title, *Shifting Torso*.

**Figure 10 D. Rhaesa, *Shifting Torso*, (2012). Re-contextualized found objects: found timber, oak pegs and hand-formed clay figure, (20"h x 30"w x 8"d).**

Large Scale Public Works

Public Works can help an artist by enlarge concerns, not just in scale, but in content. As a structure grows to encompass the viewers' space on a human scale, the work extends the reach of the maker into the public sphere. This happens in a material aspect, with the physical components and labor; but just as impactful, the act of creating a public work takes months in duration and extends across a span of the artist's life. Because of this, something unexpected happens. Instead of the artist's personal life moving over to enable the work to get accomplished, "life" moves into the work; in a sense, it becomes the work.

A studio artwork displayed in a gallery is somewhat like a sterile experiment in a lab. An artwork completed in the public sphere is more like "field" research. An unsuspecting viewer may be led to consider a public work simply because it crosses his

path. It resides in the public domain, out of doors, not behind closed doors in a museum or gallery. Dealing with a multitude of variables: the weather; the public's comments; the laborer's inconsistencies or contributions; the on site breakdown of equipment; just the logistics of the daily progress - all of these contribute to a "life-giving" experience. There is no rival for what transpires in an individual maker while pushing forward to achieve something that has never been conceived of before. Using tools often made for the task, exploring techniques that have never been tried, then adapting all of these unknowns into the daily, unexpected, and enlarged events- these alter how the sculpture is performed. The adjustment impacts how the work comes into being. Its takes on its own life and if an artist completes it responsively, this "life" has to be viewed as an indispensible part of the public artwork's becoming.

Large or small alterations in preconceived processes need to be examined for potential contributions to the end product, the content of the work, its purpose. If this is done alertly and with sensitivity, it can strengthen the message. An example of sharpening a work, through adverse circumstances, occurred during the installation of one of my public sculptures, *Built-in Resilience*, April-August, 2014. After completing three-weeks of rammed earth, the University's landscape crew arrived during lunch to install, in just two hours, three ten-foot spruce trees, leading up to my half finished sculpture. The closest tree was less than six feet away.[7] While literally, out to lunch, this dramatic site alteration occurred; short of uprooting the trees, there was nothing to be done.

[7] The landscaping crew was completing an architectural plan put forth by a recent construction addition to the nearby science wing. Using non-native species is a common practice in construction. Rather than waiting for a smaller native species to grow into scale, an instant show species is chosen.

The low-slung topography of the site consisting of an open drainage ditch was transformed into a cultivated edging of non-native species. If the original plan had been followed, the "surprise" plantings could naturally have been perceived as part of the sculpture.[8] They marched in a row right up to its space. This close proximity would have interfered with the intended message of the work.

Considerable design adjustments, including the opening of the steel pyramidal form to accept native species as a integrated portion of the whole, refocused the sculpture's content towards society's need to acknowledge and respect the resilience of native species and use them whenever possible to enhance the natural cycles. The planned, but not yet purchased circle of twenty-eight yearling trees, that would have surrounded the base of the man-made structures, was deleted. What was once a sculpture that spoke of mankind's manipulation of nature and nature's ability to overcome abuse, clarified the focus on the resilience of nature. The message's clarity grew stronger because an adaptation to the changed site was considered and made.

Vigilance is needed, during every aspect of a public work, to make the most of the inevitable challenges that await the most extensively planned projects.

[8] Even, at this writing, the "surprise spruces" penetrate the visual space of the sculpture, interfering with the line of sight when approaching from the most public side.

*Land Intersect*, 2011

*Land Intersect* was a public work created to represent my personal belief that it is possible to work together as a society to flourish without impairing the planet's wellbeing. As a whole, the thirty-five separate units that make up the simple linear shape, with one leg transitioning into a gentle curve that inclines into the ground. The individual forms are more complex than the whole; together they combine to create a levitated shape.

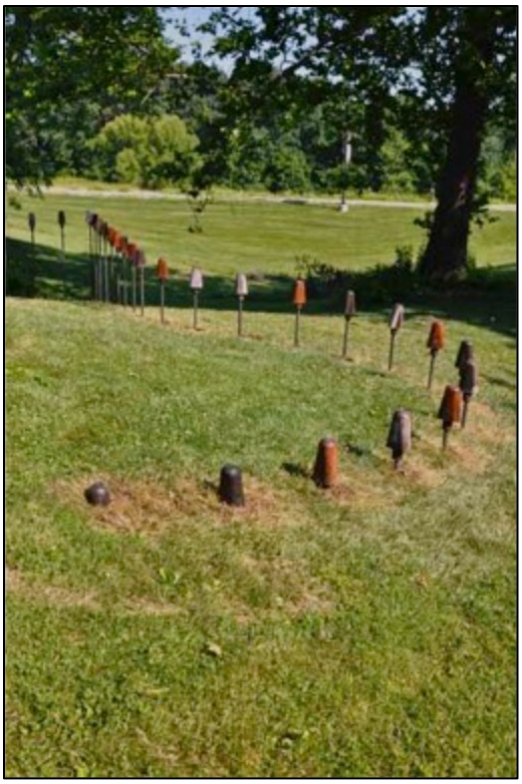


**Figure 11. D. Rhaesa, *Land Intersect*, (2011). Detail of disappearing arc.**

Constructed of found head-like objects, the salvaged 18th Century wooden industrial components are each waxed to a pristine surface and perched on a single steel leg; vaguely, they reference erect human beings. In anonymity, these forms present themselves as a unified whole and their calibrated spacing assist this interpretation; together they form an implied movement that intersects the land without disruption. It is a quiet form; extending forward, it hugs the ground then disappears from view.

Through the process of "siting,"[9] the sculpture became aligned with Buckminster Fuller's geodesic structure on the campus of Southern Illinois University, Edwardsville. Fuller designed his building specifically to share its diagonal axis, between its front and

[9] Site – an area of ground on which a town, building, or monument is constructed.

rear entrances, with the 90th Meridian[10]. As an inventor and engineer, his life work contributed innovative notions on how to work in harmony with the Earth's systems.[11] *Land Intersect* also uses this axis for its main formal elements.

Extending down a steep terrain on the 90th Meridian, the sculpture remains level until it changes direction; as it abruptly switches back to climb the terrain, it decreases in height, rising from level. This rising element gently arcs to the side as it responds to the change in elevation and the curvilinear topography that it encircles. Gradually, the serpentine form lowers and leads into the Earth until intersecting into the ground plane.

**Figure 12. D. Rhaesa, *Land Intersect*, (2011). Aligned on the 90th Meridian with the main diagonal axis of the geodesic dome.**

The construction task was not without obstacles; but carefully considered, these challenges helped to "calibrate" the forms towards a more singular "voice." In-process critiques revealed that the initial design was static, containing two

[10] The meridian 90° west is a line of longitude that extends from the North Pole across the Arctic Ocean, North America, the Gulf of Mexico, Central America, the Pacific Ocean, the Southern Ocean, and Antarctica to the South Pole.

[11] Fuller coined the phrase "Spaceship Earth" in the 1960's to help convey to the public the need to consider the planet as one with us and to recognize it as our only way to "travel" through life successfully. His inventions (the geodesic dome, Dymaxion Car, Dymaxion Home, Synergetic Theory, among others) always illustrate how to live gently on the Earth and respect her resources as finite and essential to our well-being.

straight rigid legs. These seemed to speak in conflict with the message, seemed to imply that the Earth and mankind were at odds. Sited three times, on three unique parcels, the proposed structure gravitated closer and closer to Fuller's domed building until it shared common vantage points. Due to the architecture's unique formal qualities - its circular dome and sharp edged geometric base - the structure's proximity required formal adaptation of and response to it form, to complement the visually arresting architecture. After obtaining an architect's plan of the building, permission was granted to install the work just off the south entrance and in alignment with the Meridian. A construction schedule was agreed upon; the units were welded in the studio; and the installation was completed within two weeks - to remain installed for one year.

**Figure 13 D. Rhaesa, *Land Intersect*. (2011). Detail. (13"h x 4"w x 8"d).**

The design for the project occurred just after the Tsunami in Japan that thrust unknown quantities of radioactive substances into the shared oceans. Abstract and conceptual at the same time, the work speaks of the need to coordinate society's interaction with the environment, to work considerately when utilizing the Earth's resources.

The abstract, faceless forms with preexisting patinas, stood sentinel-like, evenly spaced; together they suggested the ability of mankind to embrace the Earth, intersecting the ground plane as if a unified organ. The sculpture suggests that our interactions with our planet can be done, must be done with utmost care.

*WaterStone*, 2012

**Figure 14 D.Rhaesa, *WaterStone*, (2012). Stone (9'h x 12'w x 12'd).**

The first conceptual thoughts of the sculpture, *WaterStone*, began over the preceding two years, as I wandered creek beds almost daily with my husband. As a biologist, he researched the creatures that inhabit spring-fed watercourses; while he netted, sampled, counted, and wrote in his journal, I searched the rock ledges and the stones, thousands of them, for the unusual. Photographing and selecting, I always returned home with a cache: great or small, bright or encrusted, perfectly shaped or undulating - all with unknowable scars. When home, these lined my studios windowsills and bookshelves. Due to space, before every new load, I'd select out the repetitive, save only a the keepers and the rest would be delegated to buckets for later use.[12]

At one point, I began to notice an unusual trend, one that had not been prevalent in the ocean's limestone floors that filled the streams of my Kansas landscapes. In this particular area, triangular formations frequently present themselves among the infinitely varied shapes that signal the ebb and flow of the small Mississippian tributaries.

[12] This constant stone collecting spans my lifetime, but having moved out of state, most of my former collection had been left in my Kansas garden.

Attracted to this unique form, I picked them up more often than the others. Some were as large as ten inches, weighing pounds, while others were miniscule, not even a gram.

Unbeknownst to me, the artist Andy Goldsworthy, who for years had been an inspiration, was working on another of his stone sculptures nearby. Working in a remote location during the same time as *WaterStone* was being built, his work was unveiled as *Sea Stone*[13] at the St Louis Art Museum the following summer.[14] He explains its genesis as referencing the prehistoric sea origins of the Middle West.

**Figure 15 Andy Goldsworthy, *Sea Stone*, (2012). St. Louis Art Museum, (12 ' x 73' x 20'). Photo by D.P. Rhaesa.**

But it was Goldsworthy's former works, particularly the ethereal sculptures that clouded riverbeds with plumes of suspended iron oxide clumps, and brimmed deeply worn river stones with spectrally arranged leaves that resonated with my process and observations. In his adept process, their rightness of place, his environmental sensitivity, his constructions led me to explore my perceptions further. Indeed, his stone serpentine wall that wraps through the Storm King Art Center's acreage, continues to inform my large stone projects.

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[13] Andy Goldsworthy, *Five Men, Seventeen Days, Fifteen Boulders, one Wall*, 2013. Storm King Art Center, New Windsor, NY.

[14] SLAM is a major museum in the Midwest and recently opened an addition that enabled the exhibition of many new artists. Goldsworthy's was a newly commissioned installation work.

**Figure 16 Andy Goldsworthy, *Five Men, Seventeen Days, Fifteen Boulders, One Wall*, (1998). Storm King Sculpture Center, NY.**

His approach, to wander on undefined paths through wild places, at or beyond the edges of civilization, to then construct playful interludes with the elements found there, is an inspiring way to come to grips with what is really nuanced about a place. Because of his work, responding to the pure unadulterated aspects of nature seems a valid pursuit and it pushes me forward.

Not sure what form it would take, one of the found stones that sat on my sill kept arresting my eye. It was good to touch; it had surprises on every side, even a hollowed space up under its "belly." Having three corners, it seemed to have a definite bottom, though it had sculptural merit from every view. When I finally drew it, I realized it could serve as a maquette for a much larger sculpture made of many such stones.

To site the work, it had to be photographed to create the illusion that it could be monumental in scale. Previously, my stone sculptures fit on table-tops. Siting in the landscape for its home presented difficulties beside conceptual ones. Because stone is very heavy and requires footings, access for heavy equipment, and space to deliver tonnage was requisite; if I were to succeed in making this happen, the sculpture needed a

permanent home. *The Gardens at SIUE* was a logical place to look and it was quickly determined that The Garden's director was open to considering a large stone sculpture. In my eyes, a waterway was needed to support the work conceptually, but as soon as a streambed was located and approved, numerous concerns surfaced: would the water destroy or compromise the structure over time; would the sculpture impede the flow or change the direction of water's course; would a bridge be necessary to reach the structure; could the structure support a bridge; would safety then be an issue....it didn't seem to end. Still, a waterway seemed like a conceptual necessity. The approved streambed location was aborted. This was a work founded on the idea of seeing nature up-close, making apparent the ordered geological structures in its form, and very possibly, heightening awareness of these truths to observers. Finding a site that contributed to the "read" of the work seemed critical.

It was still April, and already rain had subsided.[15] Walking through The Gardens, a depressed formation between two hills presented a possible location. Walking paths converged at the top of the area and lined its sides. The site was viewable from these paths, both coming and going. The lay of the land seemed to indicate that a deluge might cause water to flow down the center of the valley. In a couple of days, a single, brief heavy rain occurred; the next morning I confirmed that through the seam of the valley, there was evidence of water. The leaves caught in the deepest wedge of the land had been washed aside as if a strong rivulet of water had passed leaving the soil bare. As the valley shallowed out, mud an inch deep lay under the forest detritus. Water traveled here,

[15] In 2012, a warm and dry spring, followed by a scorching hot summer, plunged Illinois (and the U.S.) into one of its worst drought events on record. At its peak in late summer, the drought extended from Delaware to California, with the most intense drought conditions centered in the nation's heartland. According to the Illinois State Water Survey, the average temps from Jan to August, were the highest in Illinois history, beat only in 1936 with the driest on record. Long-term precipitation deficits still remain across the state (2014).

but it took a significant amount to create flow- A perfect site! A wooded terrain, a natural drainage formation; a place where only intermittent runoff would be delivered to a nearby creek. It seemed that with a substantial foundation, the structure would be safe, yet belong to a place where water flowed through.

The process started and with it, transformations began: digging began June 8; it rained June 9 and filled the three-foot piers full; after shoveling out the sticky muck, forms and rebar were put in place; concrete was poured June 13. Finding native stone was a major challenge. Unlike my home state of Kansas, rarely is stone harvested for building in Illinois or Western Missouri; it is all processed into road gravel and riprap for river edging. Rounded stone from rivers in southern states were purchased from a distributor two hours south of St. Louis.[16] Even though a variety of river stone was purchased, local stone was important conceptually to the sculpture. Most evenings sent me back to the Mississippi tributaries to gather 2-4 five-gallon buckets of variously sized creek stones to supplement the nine tons of purchased larger stone from Arkansas and Tennessee.

The entire installation proved hotter than expected for the shaded site. Days on end, even weeks, were in the triple digits. Precautions had to be made to protect the work: the mix of the mortar was kept wetter than normal, causing the work to proceed horizontally; smaller batches were made so that it could be used up before turning to rock; and the work was covered almost immediately with wet towels to inhibit heat caused shrinkage cracks. This last procedure complicated the work - not being able to see what was just finished potentially put at risk the visual continuity of the work. I

[16] SEMCO Stone, Perryville, MO. Type of stone purchased: Caulks Canyon Cobblers, Tennessee River Flats, Oakfield Steppers, Kewannee Creek Flats, BlackHills Flag, and Pennsylvania Bluestone.

viewed the work in the morning, when it was thoroughly doused with buckets full of clean water, photographed, then covered, except for the immediate area where stones were to be laid. Spray bottles constantly kept the work wet. At night, the wetting ritual was repeated; wet towels and tarps were added to slow evaporation, keeping the dry winds at bay. For this reason, the structure became a haven for wild creatures. When I pulled back the tarps and the towels, a scurry of hundreds of creatures was like a life cloud. When the drought dried up the stream by mid-June, the water under the tarps was the only dampness anywhere. The work progressed more slowly than planned.

The three entry arches were aspects that I had never attempted with rounded stone; the domed ceiling,[17] I had never built. This aspect also slowed the work. The only tool, besides trowels and five-gallon buckets, was a mason's line, attached to the tree bough for sighting three diagonals for the three corners; it reached down from the center of the site, some eleven feet above the ground. The bough became the apex for the three-legged form; these were pulled out loosely as guides as the corners were raised up into "spines." Each "corner" stone was laid with the mason's line in place against the stone below, then the string was laid aside once the new corner was set, to clean joints and add adjoining stones. Those three bright yellow lines were targets. The plan – the spines would meet, eventually, at the uppermost apex.

It was conceptually critical that all the exposed stone be "untouched" in appearance, "virgin" in a sense, as it was when picked up in the stream bed where originated. Levels, plumb lines, and hammers, in the true sense of providing assists, were

[17] One domed structure I reflected on, as I added two rows each day to my stone dome, was built in 1836 at the Ft. Scott, Kansas military outpost. Though the walls were locally quarried limestone, the ceiling of their munitions structure was constructed of pie-shaped wedged brick, molded specifically for the 15' diameter structure. Each brick was larger at the highest most outside plane and smaller wedge face in, as the lowest surface. For speed, a form structure is generally used as dome were constructed. Equally, each brick bore the weight of the masonry dome. My round stones were raised without a form, freehand.

not to be used. There were no straight or vertical surfaces in the stone structure. It was critical that each stone's surface plane lay in alignment with the next so that each of the three planar sides would unify as a single entity. Undulations were welcomed, as a matter of course, but seeing the structure round-out on the sides, mimicking the sand-worn faces of the original stone maquette was essential. An "organic polish" to the curvilinear surface planes was the goal. The only challenge that remained was having enough of the right shaped stones to complete the three linear spines that defined the outer-most edges.

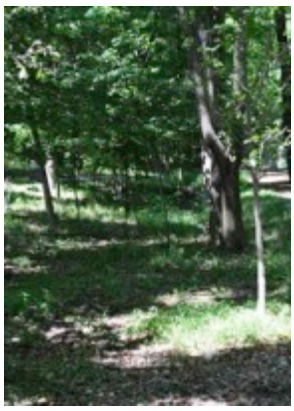
Realizing that these special three sided shapes were not as prevalent in the purchased stones as they had seemed at the stone yard, I began sorting them. Seven steel wire cages had arrived on pallets, containing over a ton of stone each. I distributed their contents evenly around the site at delivery. All triangular shaped stones were "saved" nearest the three corners of the footing. This necessitated laying out as many stones as could be accommodated between the two walking paths. Working around the sorted stone was problematic and required a daily ritual of stone moving to clear space for the ever shifting mixing and laying areas.

Steadily, the tedious work progressed. The difficult arches were spaced far enough apart to give some relief as the work progressed between them. A labor -and material-saving devise was invented when the first arch was designed. The budget was too small to waste lumber on forms for the arches; it was also necessary to keep working while the arches hardened. How to build a form that could be removed without jarring the newly laid work? While collecting supplemental stone in a streambed near our village, I uncovered a pile of empty sandbags left over from the previous year's flood. I

pulled them out to realize that I could fill them with sand on-site and the next day, I could open the top bag and let out enough sand to pull the bag out of position. This freed up the pressure on the lower sand bags so removal was simple. Once the first arch was completed, the other two followed without incident.

Originally, there was no thought of the structure being a "nature lookout," but as the structure rose and the animals came each night, it occurred to me that the structure could be created in such a way that one might peer out at nature; accommodations to achieve that end fell into place. A stone ledge seat was added with handholds for sitting in a snug back corner and lifting oneself up. Three viewing tubes, of electrical conduit, created long thin slits through the double wall. These were placed at a variety of eye levels and provided shafts of light that enabled not just wildlife viewing, but sunlight to stream into the inner stone cloister. The structure transformed into a viewing station, taking eight weeks to complete. It's a place people remember; the stone dome in the woods is an inviting shelter.

As a sculptor, I view each stone as an individual on a journey. When in nature, climatic conditions move the earth, shift the stones, and together, they rub elbows as they polish themselves by the round flowing water. The stones of *WaterStone* left off one journey descending the natural creek beds of time, and began another, as they became a unified amalgam of unique shapes in my sculpture. Together, their unity mimics the natural honing of time and points to powers and forces at work throughout the natural world; they honed me into an observer with conviction. Watching nature imbues a healing response; responding to nature transforms.


Site


Drilling


Steel Reinforced Piers


Integrated Concrete Pad/Piers


Arch Forms and Nature Siting Tubes


Sandbag Arch Supports


Spine rising

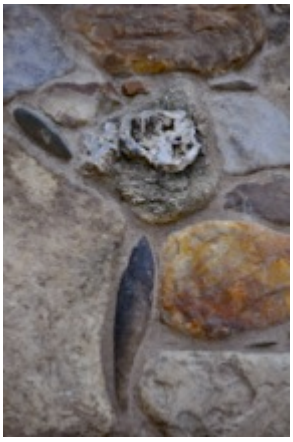

Detail

**Figure 17 D. Rhaesa, *WaterStone*, (2012). Composite of construction images.**

**Figure 18 D. Rhaesa, *Built-In Resilience*, (2014). Rammed earth, steel, and native plant species, (9' x 13' s 3.5').**

*Built-In Resilience*, 2014

All of my large-scale public sculptures have been process oriented, but the most recent, *Built-In Resilience,* stepped it up, when process became an integrated part of its content. I chose as the primary material the labor intensive process called "rammed earth," because it aligned with my content on several levels: it is regarded as an alternative building material, due to its significantly decreased carbon footprint;[18] it is inexpensive, as it consists of over 90% raw dirt; its long history speaks to issues of longevity and usefulness; and as a process, its physicality manifests a response to the natural force of pressure and further, it transforms itself from one type of material to another, while still resembling its origins. These issues combine to contribute a sense of

[18] Due to the lack of any manufacturing processing, the earth used in ramming has less than 90% of the carbon footprint required by most other commercial construction products. Additionally, it has no packaging. It was located in the neighborhood of Edwardsville at an excavation site. Finding it this way meant the construction company did not have to pay, or expend energy transporting it elsewhere.

rightness in the use of the material for this sculptural work about nature's resilience. The most significant challenge in choosing it was my unfamiliarity with the process itself.

As the maquette stage developed, the work evolved from two identical earthen forms, to a structure of contrasting pyramids; a living wall[19] would grow between them. The larger nine-foot rammed earth pyramid was designed to dominate and contrast a similar, more horizontal form made of fabricated steel. Both of these, in close proximity, were to appear to be closing in on the living wall between them. The emphasis centered on the pressures placed on the natural environment by the built one. The rammed earth pyramid represent the pressures mankind places on the environment. Its sedimentary layers reveal artifacts of steel, buried in the detritus of former builds. The steel pyramid was to express the ever-present pressure of progress. These two manmade forms, sharp edged and assertive, were placed in relation to each other so that they appeared to be closing in on a living wall, planted on the innermost face of the earthen structure. Six feet out, around the perimeter of the two large forms, were to be planted three concentric rows of three-foot sapling trees (around 75 in number); these were to provide evidence of mankind's negligence towards nature by being planted at 45º angles, rather than straight up. Over a short time (with a fast growing species such as sycamore) these saplings would begin to right themselves, turning towards the sun, but leaving evidence of their disturbance at their bases after they righted themselves. It would take a few years for the "correction" to occur in a substantial way.

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[19] Living walls have come into favor over the last decade as displays of a "green" image. Usually installed in corporate interiors, they have been valued as a "green" alternative for mechanically driven air purification systems. More often, they are used as decorative elements in commercial settings where the company's motive is encourage a "green" perception to its clientele, thus diverting attention from awareness of the grossly consuming activities of industry. In short, living walls have been used as a "green-washing" marketing effort. To their credit, a green wall can have a tremendous visual impact on an interior; lowering interior temperatures and purifying the air, they are beautiful, but carry a considerable price tag initially and for upkeep.

This sculptural work was influenced by David Nash's work, a British sculptor. His works with trees and wood profoundly move me. He often plants saplings in simple shapes, or gridded lines, buried in the woods. The presence of these plantings made one aware both of how insignificant mankind's manipulations of nature can be, or alternately, how dangerous they might be. His treatment of nature is both reverential and sublime. It is providential that my sculpture changed significantly from how it began, because it could have been considered too direct of an "inspiration" of Nash's *Circle of Trees* (Fig. 16). There are others who have planted trees in circles: Native Americans regarded a circular grouping of trees as sacred;[20] Beverly Pepper, in her dynamic park in Spain[21], planted a huge area of concentric trees, interspersed with visitor seating. But Nash's works go much further than using live trees as design elements or to the end of making a place sacred - he presents nature as incapable of being defined or restricted by manmade constraints; his "found" branches break free of geometric, manmade confines. This resonated with my contextual focus.

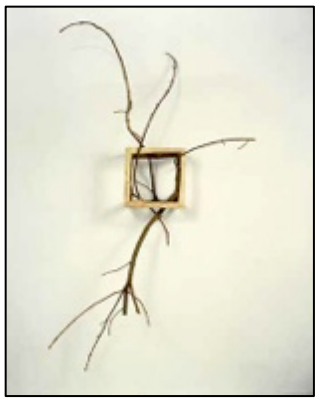

**Figure 19 David Nash, *Circle of Ashes,* (planted -1977). Left. David Nash, *Ash Branch Cube,* (1988-89). Right.**

[20] Native American cultures consistently regard trees as representational of spiritual power and some believe they are ancestors; one Northwestern tribe calls themselves the " People of the Cedars." http://www.americanforests.org/our-programs/american-forests-publications/forest-files/forest-files-november-2012/native-americans-and-trees/

[21] Krauss, Rosalind. *Beverly Pepper - Sculpture in Place.* Japan: Cross River Press, 1986. *Sol I Umbra Park* is in Barcelona, Spain and was constructed from 1987-92 with over 115 trees on 35,000 square meters

Though a seasoned gardener, living plants had never before entered my work; to feel comfortable with the idea, much research was needed. One of the revelations was to really come to grips with the type of plant the structure *should* support. It seemed conceptually logical that the plants be native to the region where the sculpture resides. As a rule, native plants grow very slowly, and to thrive, they must be grown in the correct habitat. If they were to endure the harshness of the Mid-western summer heat and winter cold[22], the plants would have to be chosen carefully, sited optimally for their wellbeing, and then, "tendered in." They would need constant care, daily, if not weekly, depending on the conditions. All of this caused me to rethink what types of living wall and tree species should be used for the work. Choosing which side of the sculpture would face south, selecting the most protected surface on which to plant, constructing a way to water regularly - all of these considerations began to filter through the design process. Creating a sculpture utilizing species that suffered or died could hardly bring about awareness of much more than the artist's insensitivity to the natural world.

More walking in the woods revealed a type of plant previously unconsidered: the Virginia Creeper (Parthenocissus quinquefolia) has a distinct plant form consisting of long trailing arms. This species is everywhere in the woods, often elegantly ascending tree trunks until disappearing from sight. As a major design change, it seemed that by designing a trellis to mount on the rammed earthen[23] face, the plants' roots could be held in the protective ground, while the exuberant climbing tendrils and leaflets, could be "trained" up the sculpture's planes. It seemed a perfect solution; in the ground, the vine would not be so susceptible to stress caused by its roots being in constant exposure to the

[22] Enduring the cycle of drought that has be reeking environmental havoc of recent years.

[23] The earthen form would be cooler, retain water better, and serve as a better climbing surface for plants than the steel.

sun, breezes, cold, and heat that could send the young plants into shock and possibly early death. At the very least, the plants would survive, but drop their leaves, go dormant, and wait for more favorable conditions to grow the next spring. I tried to purchase the vines, but only root-bare seedlings were available commercially. Instead, I went to the woods to find mature mid-sized plants that could be transplanted. These might recover from the move and begin to grow by the project's deadline.

I selected fifteen Creepers from the woods surrounding our cabin in rural, Illinois. In early May I went out to dig them. I carefully began the transplanting process. Every plant died within a couple of days. Horticulture articles provided the information needed to handle the sensitive plant without stress. I did exactly what was instructed for half of the vines, while the other half, (the ones that I managed to remove without mangling their roots), I trimmed back to six-feet in length from the crown. Then I pinched off the all of the wilted leaves. These long leaders were curled around the top of the pot for safe keeping in the shade, while the group rested in a shallow tray of water to keep them thoroughly moist. For insurance, I planted a cover crop. I was familiar with an annual vine[24] that would grow exponentially from seed in a few weeks, in case the Virginia Creeper transplants' growth was stunted the first season (an expectation for natives).

Most of this gardening activity happened in the evenings after a full day of form building, as I prepared for the construction of the rammed earth. My attraction to ramming for this project was primarily because of the visually charged surface that it could provide. I planned to imbed steel detritus from the sculpture bone-yard to assist in activating the earth's surface further. I had worked in cast concrete before, changing the

[24] Hyacinth Bean (Lablab purpureus) - a tropical Asian climbing vine of the pea family. It is widely grown as an ornamental or for its edible pods.

pigmentation and makeup of the aggregate to achieve variable surfaces. Rammed earth, due to the compression issue, promised to be more rewarding. While researching rammed earth examples, the surfaces were characterized by soft, swooping linear striations, irregular in form and tone; as these graduated up as the form, pressure on the start of a layer could be detected is lighter than at the end of the layer. This inherent flow of material and man-made activity lends the raw surfaces almost an animal-hide quality. It is a hard, but also, yielding material. I was interested in conveying a sense of history, a sedimentary evolution that spoke of the malleability of materials, progress, the inherent waste of it all, while remaining visually soft, but strong.[25]

Another very real attraction of rammed earth was its native attachment to place. The clay was procured from a nearby Illinois construction site; it literally was a by-product, or waste material, in its own right. This made the forms' raw materials true to its message. It wasn't something made into something else, by virtue of its inherent qualities; it was earth, made of earth. Only its mechanical shape belies that there is another implication; the angularity of its form, pushed manually into an unnatural shape, provides content through association and contrast.

The rammed earth is extremely labor intensive;[26] the virtually free 3,000 pounds of clay[27] were screened, mixed with water, natural pigmentations, and a stabilizer over a two-week period, while being "rammed" into place. Mixed by hand, the barely damp[28] materials filled a large wheel barrel - first damp clay, then pigmentation, aggregate, and

[25] The Great Wall of China has portions of rammed earth surviving from c. 210 BC.
[26] Three different sources describe the process of ramming as always better, with more hands. The minimum, "fully functioning" number was three men: one to screen and mix, one to shovel, and one to tamp. The two of us took turns shoveling and mixing. My partner did all of the shoveling; I did all of the tamping. It wasn't ideal; resting was required about every third load.
[27] Clay needed to be free of organic material, rock or gravel, and of a specific moisture content.
[28] To determine the correct dampness of the clay: take it in your hand, squeeze it tightly, and then drop it. If it stays intact when squeezed, but breaks into small pieces when dropped, it has enough moisture to tamp well. This test proved to be reliable as it was used throughout the project.

finally Portland Cement were added. The latter began the setting-up process. Since the whole mixture had to be shoveled into progressively higher forms, then rammed to half its volume with specially made tampers, time was critical. No mixing could be done in advance and the load had to be placed and tamped within twenty minutes of mixing or the summer sun would dry the mixture to a moisture level that was no longer compressible. If the mixture was too wet, it would not mix; it would just stick to the tamper and squeeze out the sides, no compression. If too dry, no amount of tamping would compress the mixture that had become hard gravel and dust. Both extremes were just percentages of moisture content apart; both extremes would be disastrous to the sculpture's longevity.

Tests were done. At least two loads of clay were either too dry or too wet before the loads were completely used. The proper amount of moisture could not be reached by simply adding water. Dry clay had to be lightly sprayed with water, allowed to soak overnight (or longer) until the clay could be screened. Clay that was made too wet would clog the screen - unusable; as it dried, the raw, wet clay converted into impenetrable clumps.

The process that finally seemed to provide a consistent moisture was to select clay[29] at the source with the right moisture content, cover it tightly for transport, haul it to the site, then unload it immediately into five-gallon buckets. By thoroughly covering the remaining pile with tarps and weights kept breezes and rain from altering its moisture level. The added benefit with each new delivery was that the clay could be measured and prefilled into buckets in the back of the truck; the moisture level was easily capped with lids and ready to screen. This reduced the onsite labor a bit each day, as it was built into

[29] Using the material yard's loader, top layers of dry clay were removed first to get at the clay that "tested" well, this darker, moist clay was then loaded and delivered to the site for careful and immediate storage. Due to the heat, even the open-bed truck used caused issues with evaporation; the full truck bed was covered to help prevent this.

the previous day's unloading. Still the perimeter of the clay pile would dry or gain moisture overnight and vigilant care couldn't prevent the loss of over half the clay hauled. The first week found us picking up new loads of usable clay every morning until we learned how to protect the leftover clay from changing moisture levels.[30]

Creating the varied layers was a constant mixing effort. With only three basic materials: clay, aggregate, cement, and pigmentation, finding ways to vary the mix without jeopardizing its strength, proved a challenge. Finally I began adding an iron oxide colorant and realized that changing out aggregate for sand, as well as using different clay types, also created color-shifts. What I did not want was strong stripes through the layers - the barber pole effect - I always changed the mixture conservatively. I began to be able to detect the slight value shifts of certain proportions of materials in the slightly damp material. These value shifts, of course, varied with moisture content. It wasn't until the start of the second week, when the lower forms were carefully removed, that I would know that the mixture "stayed," that the whole would not just erode at the first rain. I needed answers to the following: Was the manual tamping adequate to keep the clayey[31] balls in place? Were the proportions of materials too extreme, causing unnatural striations? Were my introduced steel shards placed randomly enough along the sides and were they adhered sufficiently to stay in place? One week was too early to remove the forms, according to my research, but I could not afford the time to wait, nor proceed without knowing the results.

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[30] At this writing, the edges of the rammed earth pyramid exhibits weak edges; at the narrow corners of the forms, the wood sucked the moisture out before tamping could compress it.

[31] A clayey soil is one that compresses and resists the penetration of water. It is composed of flat platelets (rather than granular particulates) that slide against each other when wet. It is this property that makes helps it to shed water which enable it to keep its form once dry.

The forms were designed and built with careful removal in mind; each would have to be dismantled before the contents reached maximum strength. As rammed earth forms go, this was a very small structure.[32] Most rammed earth applications are straight vertical; this one' has surface planes that rise at a steep slant and no eaves for protection. Due to the need to reach into the form and tamp the soil manually, all rammed earth formwork rises as the work progresses.[33] These forms were designed, cut and constructed entirely off-site over a two-week period. Each segmented stage was slotted into channels made in the stage below, as well as supported with threaded steel rods that spanned the form walls, embedded in the mid-section, and bolted from the exterior to arrest outward bowing from tamping. The steel rods were fitted with a plastic sleeve to prevent the damp, compressed mixture from adhering to the steel- the rods would be extracted as the forms were removed.

Once the tamping was completed, the forms were pulled off. J-bolt anchors had been embedded, as the stages rose, to aid in the attachment of the trellis. The day the rammed earth forms were removed and loaded into the truck, was the day the university landscaping crew arrived and planted three non-native spruce trees, in a row leading up to and almost touching the sculpture. As conveyed in the *Introduction*, their arrival caused an upheaval of the plan and the concentric circles of saplings had to be aborted; there simply was no room for the trees without causing a visual collision between the landscaping and the sculpture. In the end, this interruption caused a rethinking of the component parts and served to purify of the overall content of the sculpture.

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[32] McHenry, Paul Graham. *Adobe and Rammed Earth Building Design and Construction.* Hundreds of tons of clayey soil are used in building applications; structural walls are often eighteen inches thick. These soils originate in the region where the construction is taking place. This fact helps to reduce the carbon footprint of the rammed earth technique.

[33] Ibid. Even if tamping is done mechanically, with a hydraulic tamper, an operator has to reach inside the wall, or get inside of it, to access the soil surface.

As I cleaned up to leave that Friday, with the tamping done, I began to consider again the form of the steel pyramid. It was critical to construct the structure in pieces and design a de-construction and moving strategy. Without this strategy, the structure could not be moved to its site without undue challenges due to weight, damage, or both. These details continued to evolve. One long welded seam was to go up the "spine" of the structure; this was both a strengthening element as well as a visual one. As I considered the process by which disassembly could occur, it occurred to me that a planter opening, between the two sides might be made in place of the spine. This would eliminate visible welds. I spent the weekend researching native plants that could thrive in low water, high heat conditions. These environmental characteristics are the opposite of the conditions I usually live with, so I knew very little about them. Serendipitously, the next day, a vendor was selling native plants at the local farmer's market; among the plants he had on hand were six pint-sized seedlings called Prairie Dropseed, (Sporobolus heterolepis).[34] I purchased all of them for a trial planting, then began the research that proved this species would be an excellent match in every way for my yet unconstructed sculptural planter. As the steel construction began, the sculpture started to transform; through the process of making, the concept had shifted away from a message pointing to mankind's negligence, to one centered on nature's resilience.

Plans were drawn, the steel was cut and welded with reinforcing angles to provide bolting solidity; once the two sides were bolted together, a mild acid wash was applied to

[34] Prairie Dropseed, (Sporobolus heterolepis), is an Illinois native grass. Up to 3 feet long, 1/8-1/16 inch wide blades reach about a foot high and then cascade down like a fountain. Their strong exotic scent emanates from flower panicles. The visual effect is like looking down onto a healthy crown of long hair topped with an elaborate headdress. It develops a golden fall color that persists through the winter. It is drought tolerant and grows well in poor soils, but does not tolerate disturbance well. Its presence in an open field is an indication that the soil has not been disturbed. The Native Americans used its seeds to make flour for bread by grinding. Birds also value the seeds, so planting it encourages biodiversity.

the surface daily to build up a deep patina. Measurements were made for fitting the internal floor to hold the growing medium for the plants. On moving day, three friends helped to unbolt the major sides, move them, and reconstruct the triangular steel form facing the rammed earth one. I had planned for the two parts to be two feet apart, but once set, it seemed too great a distance and the forms appeared un-unified, even separate. I shortened the distance to eighteen inches and was grateful for the planned internal, adjustable "leg supports" that enabled up to six inches of adjustment to the graded site. These legs were initially designed to help set the structure plumb, on the off-level site that had to straddle an unwanted concrete slab, but the adjusting legs also enabled the shifting to be accommodated.

Planting commenced! It seemed critical to get the plants in place and thriving, for maximum growth before dormancy. A planting medium was mixed to retain water and a liner was added to protect the tender roots from overheating. Daily the watering went on – up until the first frost. All of the plants thrived, grew and climbed; the cover crop vine blended with the natives. In winter, the cover crop will recede and not return, due to its intolerance to freezing.

In living with the work day-in and day-out, even finding a tolerance for the daily heat, the focus was pushed to a more positive and nurturing one. This shift happened because of the doing, because of the process. This is really why I am an artist. It makes my life a much better one.

Preparing footer

Clay pile - discarded clay that is either too wet or dry

Forms and tamping

More tamping

Tools: fabricated tampers, buckets, and screen

Spraying to slow the cure

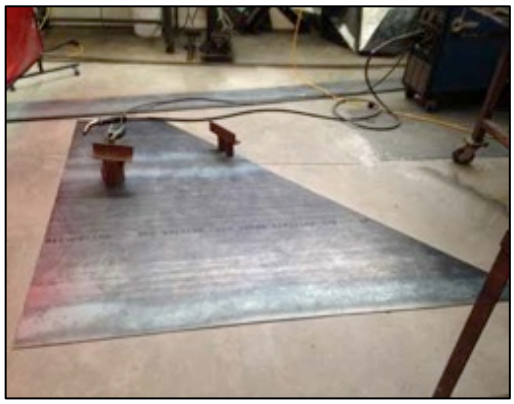
Sedimentary Gradations

Variation in aggregate size

Trellis added

**Figure 16 D. Rhaesa, *Built-In Resilience* (2014). Construction Phase I. Rammed earth form.**

Planter opening



Welding the pieces together

Layering patination

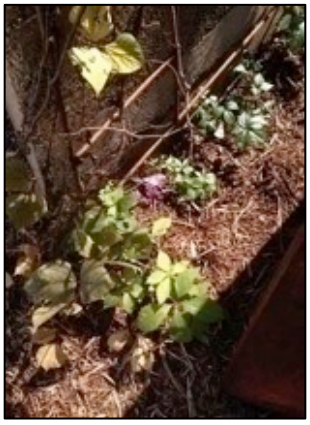
Setting the steel

Patination

Acid spray to remove marks

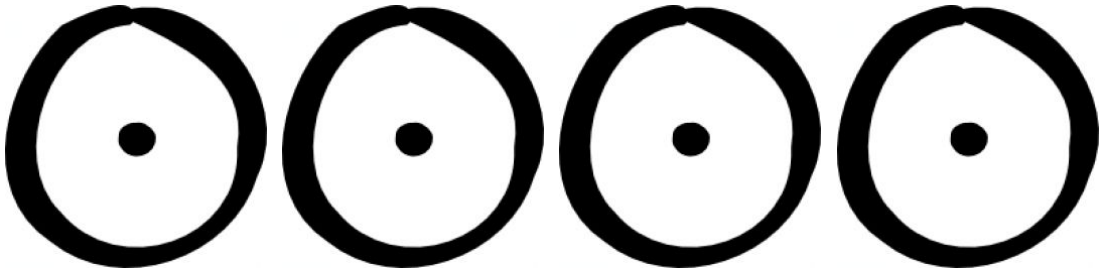
Planting Grasses

Prairie Drop Seed in place



Virginia Creeper transplants

**Figure 17 D. Rhaesa, *Built-In Resilience*, (2014)- Construction Phase II. Steel construction, patina, and planting**



# CHAPTER IV

## PROCESS OF DISCOVERY

As I go along with my work I formulate my thought, and from this struggle between what I want and the reality of the material—from this tension—is born an equilibrium. – Antoni Tápies

Circumpunct Shields, 2013-14

Renovations were undertaken, during the summer of 2013, the second part of an intensive addition and remodeling of the Art and Design Department. This impacted all of the MFA's, the faculty, and every undergraduate. Some were distanced, due to the upheaval, many were overworked as they helped make preparations, and all searched for ways to make-up for lost time. The Sculpture On Campus Competition was canceled for lack of workspace - the first time it had been suspended, since its inception fourteen years earlier. My studio space was dismantled, packed up, hauled away, and stored.

Determined to find a valuable substitute, I registered for two summer courses to replace the all-absorbing large-scale public works class that filled my previous two summers. One was an Art History course on modern sculpture, the other, a course on book arts. They were offered consecutively, so both became the concentrated activity of their duration, from May through July. Both were influential in what became critical developments in my sculptural work.

The course, Modern Sculpture, exposed me to the early process work of Eva Hesse and Richard Serra. Hesse's work in textiles, combined a new translucent substance,[35] that looked organic and earthy, to abstract organic form. The hangings looked both raw and stretched, like animal hides suspended in space. They hung with an eerie presence, a kind of frozen movement, in their repetition and open geometry. Their appeal was somewhat in their daring; they did not hold images, or allude to any known source – an enigma.

**Figure 22 Eva Hesse, *Contingent*, (1969). Fiberglass, resin, and latex on cheesecloth.**

Richard Serra's work, made of free-form cast lead, were slid while molten, up against a baseboard, to form a casting that recorded the division between the wall and the floor. The results froze when the liquid lead cooled as hit the floor and splashed up the wall. He worked these castings in multiples,

**Figure 23 Richard Serra, *Castings*, (1969), lead.**

peeling off the frozen lead, lining them up as a collection of events. This process, designed to produce spontaneity and unpredictable results, presented contradictions. "Anti-illusion" was the term used to describe both artists' work. Both focused on "the process of making" as an end. Materials were evidenced, without becoming or really representing something else, other than the recording the process that created them. This work contrasted with the formally calculated, industrial aesthetics that dominated the previous Minimalist movement. Though my end products would adapt their process to aesthetic and content carrying uses, attaching them to my forms and structures as surface, it was Hesse's, Serra's and other's explorations, during the sixties, that opened my mind to "process" as a mode of creating.

During the book arts course, the class was exposed to the structure, the history, and the process of bookmaking. Also introduced, was a new expressive means - natural materials, expressive structure, and lengthy processing recipes. Utilizing native fibers in the making of paper led to a waterfall of investigation. Research began: What fibers were regional, accessible, harvestable and resilient? How much processing and blending was required to create a strong paper base? Could the book-form itself contribute to content, rather than just "house" the content? Articles were found on cattail, bark fibers, milkweed, historical practices, and contemporary developments of book structures that performed as sculpture. Two major sources of inspiration were the publication, *Papermaking*[36], and the annual Friends of Dard Hunter Papermaking Conference, called "Papers, Please," held in St. Louis that fall[37]. I attended the conference, while continuing

[36] Hand Papermaking bimonthly publications, 1998-2005 http://newsletter.handpapermaking.org/beginner/beg72.htm

[37] Friends of Dard Hunter Conference "Papers Please," Washington, University, St. Louis, MO. October 17-19, 2013.

my explorations in fiber and was exposed to many innovative methods: for processing materials, making paper, and creating content.

I started with cattail as a native fiber to employ. Since my work's focus deals with pressures in and on nature, I was drawn to it partly because it is locally considered a "nuisance" plant, exhibiting invasive and dominating behavior towards other species in wetland areas. Making use of a free substance that locals regard undesirable resonated with my previous work. Rather than using a manufactured material, I'd be making my work from a substance I harvested and processed. I hoped that meant it would be easy to gain access to. It did. A buffalo rancher upriver had acres of wetland that was being choked by cattail. Did he "mind" if I took down a few buckets of cattail heads? " You need to take it all," he replied. I was relieved to see the edge of his crusty mouth slowly turn up a bit at the corners. Taking it all would have been monumental – the stand of cattail looked more like a crop, than a volunteer.

In July, I harvested. I brought my book mock-ups to share with Buffalo Joe, in case he was interested.[38] When I returned for more the next week, I showed him the new paper sheets that contained different ratios of his cattail alongside the kozo.[39] He listened

[38] Joe Czaia was known in the county for his experimental buffalo herd. At one time he tried to hold as many as 50 head on his and adjoining acreage. His family had been farming in Nutwood, Il since the 1840's. He gave up on the buffalo in 2001 because of the difficulty of keeping them inside his ten-foot tall, "beefed up" fences. "Fences mean nothing more to a buffalo than a fly bite, if that," Joe explained. He since has turned his 600 acres into the CREP program (Conservation Reserve Enhancement Program), where high priority local conservation issues are targeted to mediate sensitive problems. In this case, his land, a former flood plain, was once a money-producing cropland, was restored to native grasses, forbs, and trees to filter the regional watershed. Soil is the leading "pollutant" in Illinois waterways, due the to incessant farming activities. Millions of acres of soil are released to the Gulf creating a dead zone there that extends miles into the open Gulf. After the initial planting of native species, the main issue is maintenance: yearly burning, cutting out invasive species (mainly cottonwood and willow), to keep a healthy hold of the soil helps prevent erosion into waterways. I learned much about the successes and problems with the governmental program that supplied Joe a nominal $20,000/year to keep the balance of his excellent bottom land out of production and in the CREP program.

[39] Kozo is a paper made from the inner bark of a small mulberry tree, *Broussonetia Papyrifera*, from eastern Asia and Polynesia. It is harvested in long strips, which contain strengthening fibers, (think fiberglass, but natural), to be used with other fibers with less tensile strength. The bark requires cooking, hand beating to remove impurities and to separate the strands, then even dispersal throughout the pulp mixture. The more it is beaten, the finer the strands and

with interest as I leafed through the pages and then, simply asked if I thought there was any money in it. I couldn't say, so I responded, "probably not, at least not the way I'm doing it." He nodded, as if he understood, but seemed satisfied that he'd been a part of the process. I'd spied several of his fields filled with native plants that would soon boast many different types of seeds, stalks and flower heads to test over the upcoming seasons. He welcomed me to take whatever I needed, even offered me his rowboat to harvest the American Lotus covering much of his pond.

When the papermaking class moved into color, we learned to use natural stains, the most prominent being iron oxide (rust). Wrapping folded fabric around steel pipes, saturating them in vinegar, then shutting off the wrapping from oxygen with twine and flexible plastic wrap, I was able to attain a full range of browns, from pale yellow, through burnt sienna, to raw umber. First we started on silk, but immediately I began to see the relevance of transferring natural stains onto pulp for later adaption to my dimensional works. Experimentation went on daily. From that day to this one, I have been rusting something continually, experimenting with every conceivable variable. I've tried different pulp fibers, transfer agents, neutralizers, sizing, and buffers; I'd tweak the times, the layers, the pressures, the environments – had to keep notes- then, I began rusting different textiles. These efforts related back to my previous focus - of pressures on and within nature. Finally, I began to experiment with stretching the newly formed paper over wood and natural armatures and ways to suspend the pulp over rods of steel. This led to building supports to hold my stained surfaces - all referencing the earth, earthen forms, and natural, organic processes.

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the paper produced. Because it is fairly colorless, the fibrous Kozo is a perfect base element in an experimental batch of native fiber paper; it allows the coloring and textural qualities of the various pigmentation sources to dominate, while keeping the paper strong.

**Figure 24 D. Rhaesa, Wrapping/staining cloth, (2014). Left – with nails, goldenrod, tea, rusty chain and a hedge board for support), and right- unwrapping the stained fabric. The olive greens were created by a transfer of the tannic acids from the Osage Orange tree.**

What I honed was a process, methodically controlled and varied – a routine of making, always with a mind of watching and controlling the forces at work. What resulted is a body of visual nuance that is raw, but particular and specific to its sources. Rich and infinitely varied, the hand of the artist is not visible on these surfaces. The illusion of color is caused by saturation and proximity of absorbing naturally produced acids and bases. As a source for my sculpture, it has been both energizing and consuming - sometimes disappointing, always surprising. It is a fascinating "process"; it feeds my work continually.

The first series of works on armatures were created on a dome of steel - a found object in a scrap steel yard – a farming disc twenty-two inches in diameter.

**Figure 25 D. Rhaesa, Stained paper, (2014).**

The inclusions were as varied as the natural fields planted by Buffalo Joe: five different types of goldenrod; multiple hard and soft-wood sawdust varieties from a local saw mill;

sumac berries, florets and petioles; steel dust, shavings, slivers, and drillings; teas, coffees, spices - used and fresh; leaves from numerous forbs – especially those that change color, over the course of dropping; and metals, to both stencil shapes and to block the transfer of tones. My studio became a machine, results surfaced everyday to spawn new directions. The first coherent series from this effort was the series, *Sha-co-pay*, (The Six), from the farming discs (Fig.1). These were presented as a wall relief, as a collection.

Remnants

The final body of work began by creating steel armatures over which the stained, handmade paper could be stretched. These armatures mimicked natural forms: leaf shapes, organic segments, and various curvilinear shapes made by bending arcs of steel rod and recombining them for structural strength. In the publication *Hand Papermaking*[40] and at the papermaking conference, several artists were pushing their papermaking into dimensional forms, departing entirely from the book forms that predominate the papermaking field. Ceramic artist, Carol Zeman's and fiber artist, Jo Stealy's paper structures reference primitive cultures, in both their use of materials and their basic allusion to utilitarian forms: bowls, stretched hides, archaic dwellings, and burial structures.

[40] *Hand Papermaking* Newsletter.2012. http://newsletter.handpapermaking.org/beginner/beg72.htm

**Figure 26. Jo Stealy, *Vessels*, (2013). Left. Carol Zeman, *Petiole Bowl*, (2013). Right. (Photos by D.P. Rhaesa)**

This influence led me to Native American artifacts, their origins and the reasons for their use. These cultures' close connections to nature resonated with what I had been doing, and where I hoped my work would grow. I began reading about these natives, in this and other lands. Just about this time, I met an artisan who carves Native American flutes. He was one of a handful of Caucasians who, by invitation, have partaken in the Sun Dance, a native ritual of renewal and inspiration that involves tremendous personal dedication and physical, as well as mental, resilience. The only requirement he asked of me for making a flute was that I provide the properly dried western red cedar needed. I had connections to sawmills and wood recyclers and was able to deliver enough wood for eight flutes. The day he brought the finished flute to me, we spent five hours playing and talking. My several questions about the flute and the ritual of the Sun Dance opened a wellspring of stories regarding his closeness to different tribes. I took my flute home and returned to my work. This new connection fed my impulse to dig more deeply into the native people and their reliance upon natural substances and events to shape their lives.

In part, this interaction influenced the first structures to be made of leaf forms. These forms were fashioned after the linden tree's winged seedpods that were piled up by the thousands, along street gutters near the paper conference venues. Enlarged to just over five feet, an exaggerated sense of scale between the observer and the form, positioning the structures at eye level and altered the observer's viewpoint. The paper-thin linear forms were constructed of curvilinear steel shapes that flowed from within the structure to the exterior edge, then back to the central axis, as found in natural systems. They mirror the patterns of veins that deliver sustenance throughout trees. A thin central stem line turned into a tripod just above the floor plane, using curvilinear bends, tendril-like, above the ground. Small pod shapes, referencing seeds, were covered with stained paper and attached to the upturned feet, terminating the steel rods through their centers.

**Figure 27 D. Rhaesa, *Aloft*, (2014). (4.5'h x 3'w x 2'd), right: foot detail, (1.5"h x 3"w x 1.5"d).**

To prepare for this project, many pages of paper were made, then stained utilizing the same methods described previously. A predictable process had been developed and fairly predictable results followed. The variable that could not be controlled came from the thickened build-up of iron oxide on the steel surface. At a certain point, the transfer of oxide ceased to occur. When this oxide "crust" became loose, detaching from the steel, it acted like a coating and the transfer of oxide was, in effect, blocked.

This outcome provided the knowledge that the staining could be masked or accelerated, depending upon which side of the paper the crusty substance was placed. It naturally formed between the steel and the paper, but detached from the steel, these shapes could be used as masks. At one point, the steel was entirely cleaned of the build-up and the process began anew. By harvesting the crusty flakes, they could be reintroduced into the process in variety of ways – one was to grind it into coarse grains, with a pestle. If left in larger flakes, placed on the top of the paper under the cellophane wrapping, the transfer of iron oxide would be less intense. Finally, while placing it between the paper and the steel, the transfer was totally blocked. This indicated that shapes could be manipulated, even controlled (loosely) in what had previously been an organic process. Many paper sheets were stained on the way to making the various textures for the leaves; the search for new forms began.

The next evolution was to abstract the leaf form. Qualities of "leaf," the buoyant shapes, the thickened edges, the ability to hang, as if aloft, were applied throughout construction. Difficulty with adhering the paper was overcome by spraying the paper lightly with water. This caused the paper to expand up to a half inch. When it was glued to the armature and dried, it tightened like a drum. Most adhesive dried to a rigid film and

cracked. The Poly Vinyl Adhesive (PVA) used by book conservators and book artists proved to have adequate stretch and adhere well to wet paper. A careful balance between just damp and too wet had to be maintained and a spray bottle helped attain this equilibrium. Trimming the paper in a wet state often mangled the paper; mid-way thru, a fold, re-wet, and tear method using a fresh one sided razor was devise; this helped the edges to lie smoothly against the steel.

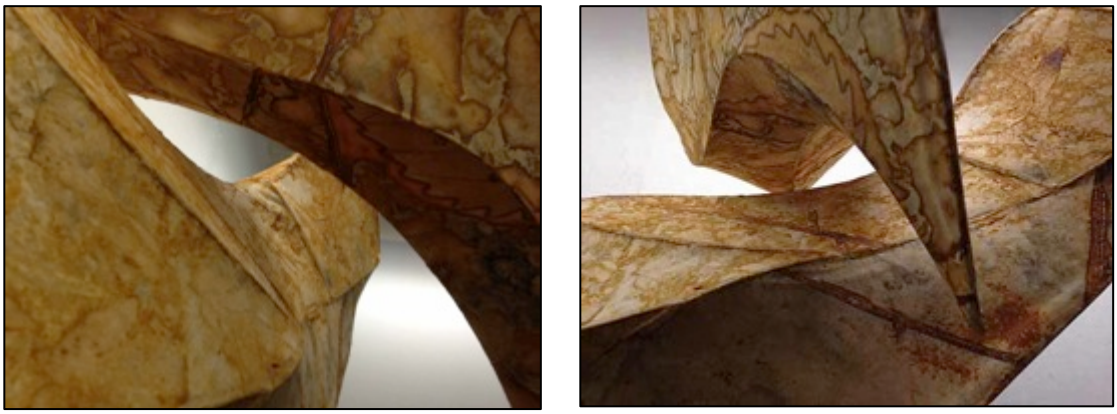
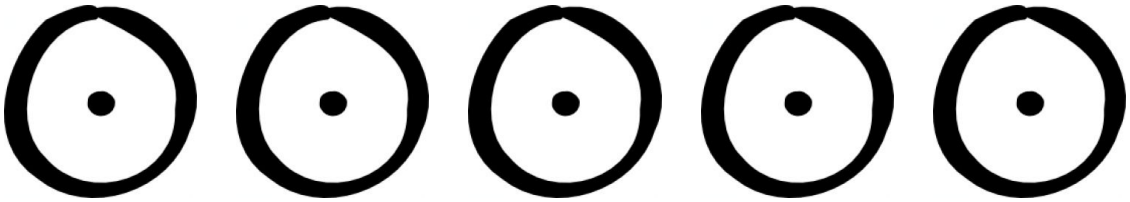


**Figure 28 D. Rhaesa, *Forms Afloat*, (2014). Details of seams and shapes: *30 x 40 x 12"***

Several abstracted forms were metamorphosed from simple shapes into more complex ones. The results provided more options and helped to hone the process further.



# CHAPTER V

# THESIS EXHIBITION

Look deep into nature, and then you will understand everything better. Albert Einstein

## Evolution

This final body of sculptures speaks indirectly and directly to issues in the natural environment that society faces, as well as to the material investigation I undertook the last nine months regarding reactions to natural forces and conditions both real and superficial.

As a whole, the works stand together in form as well as in materials used to construct them. Most of the constructions directly reference a natural form or condition, or serve as a substrate that roughly hints towards a natural occurrence. On the most basic level, rust is consistently employed as colorant, and provides an organic earthiness. This is the one constant. On a more esoteric level, the impulse to create is derived from a fascination with how the handmade paper stretches from one skeletal support to the next - What are the paper's limits? What are my limits in making? And what kinds of forms can this type of constructing give rise to? On these issues, it feels that only the surface has been scratched – ideas for more forms, more manifestations and even directions, sit in the wings to be continued after this exhibit. Finally, on the level of content, each work in

the exhibit relates either through scale, representation, or abstraction to environmental issues that reference mankind's relationship to the earth, our home.

Process wise, the greatest evolution that took place is that the forms grew in size and refinement. An obvious limit to the size of the work was determined by the size and strength of the handmade paper (11 x 17") A switch was made, from paper made in the studio, to imported handmade mulberry paper – this met the need to extend across larger expanses (26"x 34"). Cotton canvas was introduced as a carrier of color, which provided usable and surprising results, but these did not express the ephemeral quality so important to the content of the work that the paper provides. The cotton material produced a permanent record of a fleeting occurrence- not so delicate, nor translucent as the thin fibers of pulp. Always, what remains is a record of the transition or exchange of the iron oxide from the metal to the substrate. The shift in physical properties affords unique meaning. Temperature, a new element introduced by the change in the weather, (the larger works required being produced outside), caused results that inspired more experiments. The resulting effects, from the freeze/thaw cycles of an early winter, originally thought to be destructive to the process, caused visible impressions of new ranges of colors and types of shapes. What seemed like potential disaster gave rise to unexpected success. But the heartier canvas was abandoned for the structures in preference for the more tentative and translucent paper - it expressed fragility more vividly.

Thesis Exhibit

Each of the sculptures displayed, relate to an environmental issue or natural occurrence. Some sculptures convey pressures between mankind and natural elements,

while others record reactions between natural elements and cycles. Each utilizes abstraction as a basis for ideas. The pyramidal form is used repeatedly to convey manmade activity – buildings, cities, consumption- while paper pulp, colored with iron oxide, creates a connection with the earth, while speaking to the fragility of the balance needed to change course and restore what has been disturbed. Distortion of scale presents a heightened awareness of natural issues, in the hopes of bridging mankind's disconnection with nature and its many lessons.

*Force*

Composed of two pyramidal forms, *Force* is made of striated concrete mixed with earth for coloration; each pyramid appears to push against found stones to suggest the extreme pressures placed on the earth due to constant consumption.

**Figure 29 D. Rhaesa, *Force*, (2012). Concrete and stone, (32"h x 19"w x 10"d). Right: Detail of *Force.***

*Circumpunct Shields*

A series of nine paper reliefs, “circumpunct” references an ancient symbol used throughout civilization that has been interpreted as the universe (a circle) and the individual (a dot) at its center. Each disc form is pigmented with unique natural materials: pods shells from the native dogbane, sumac seeds, goldenrod blossoms, Osage orange sap, and various other wild, native plants; these are formed on found steel objects.

**Figure 30 D. Rhaesa, *Circumpunct Shields*, (2014). Wood pulp, fibers, and iron oxide, (each disc- 22" diameter).**

*Leaf Form*

This form abstractly references leaf qualities: buoyancy, shape, and color. Yet, it is not a leaf. This work is the first of the steel armature constructions covered with rusted paper. It appears to float, but is supported from above by a hanging device. It is a transition piece and served to pull the stained paper into three dimensions. Open forms like these set the stage for a series of works on armatures utilizing stained paper.

**Figure 31 D. Rhaesa, *Leaf Form*, (2014). Steel, paper and rust, (30"h x 36"w x 6"d.)**

*Desertification*

A triptych of cotton canvas, this low relief sculpture provides a visual for the extreme impact deforestation is presently having on many ecosystems worldwide. At the rate of 12 million hectares per year, the native forests are being leveled. Desertification is the unavoidable endgame of deforestation. During daylight hours, it is illuminated from natural light from behind. The walnut frames suspend the rusted cloth with an arc drawn with a ninety-three foot radius. It references the earth's imperceptible arc of the horizon.

**Figure 32 D. Rhaesa, *Desertification*, (2014). A Triptych in cotton, rust, and walnut, (15' x 6"x 6").**

**Figure 33 D. Rhaesa, *Desertification*, (2014). Detail, (6" x 12").**

*Dogbane 10.1*

This work presents a stand of six native, but giant, seedpods, just after the moment of opening, marking the beginning of a new generation. The inner clock is ticking; the survival of every species depends on careful timing with the calendar. A number of issues are impacting this native timing. One is the debated global warming issue, the other is the constant altering of the environment exacerbated by aggressive herbicides and genetic modification to improve crop yields. Both of these are upsetting the inner timing of untold native species contending with manmade pressures. Usually 4-6 inches, this super-sized stand of native dogbane represents all that is mundane in this world, but beautiful. They stand sentinel-like along our majestic waterways. Our progress is changing, even destroying this species.

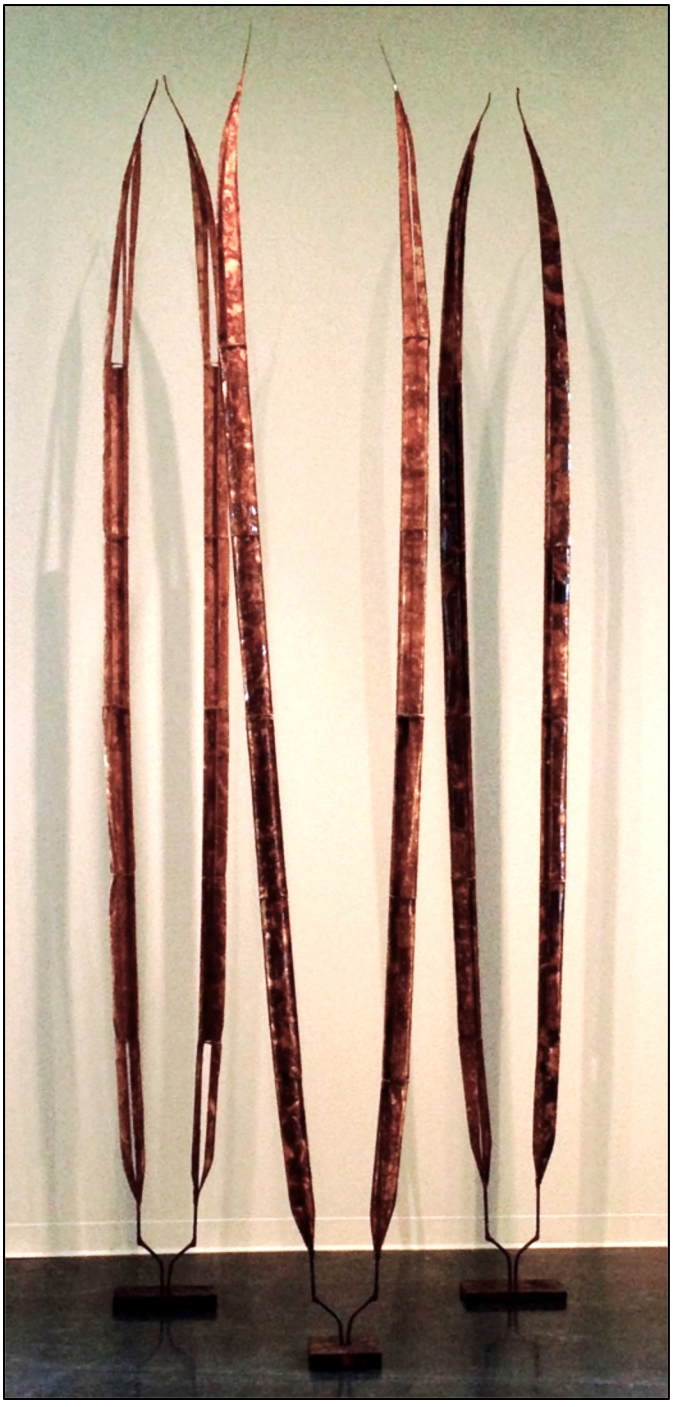


**Figure 34 D. Rhaesa, *Dogbane 10.1*, (2015). Six pods in pairs -Paper, rust, steel, (10'h x 3'w x 3'd).**

*ReLeaf*

Three organic forms combine to construct an enlarged grouping of abstracted leaf forms. Each is stretched with drum-tight kozo paper that has been pigmented with iron oxide, by resting on a plate of steel and vinegar for various periods of time. Generally, the longer the immersion, the deeper the rust coloring forms. This sculpture speaks to the cycles of nature in which every "death" provides a rebirth. Its scale creates an up-close view of natural forms.

**Figure 35 D. Rhaesa, *ReLeaf*, (2015). Mulberry paper, rust, and steel, (8'h x 6'w x 6'd).**

*Freeze - Thaw*

This hanging form presents two surfaces subjected to the forces of freezing and melting temperatures over the course of a week. The iron oxide receded and re-absorbed into the cotton fibers multiple times to provide distinct delineations of forces enacting change and chance on a natural material. In a sense, the dynamic forms visually convey the kind of tension that the natural world endures as it adjusts to the extremes placed on it by the climate. In short, the image is the witness of nature's resilient response to the extremes.

**Figure 36 D. Rhaesa, *Freeze/Thaw*, (2014). Cotton and Rust, diptych, (60"h x 92"w).**

*ReGrowth*

This sculpture utilizes the pyramidal forms to reference the manmade environment. Abandoned lots, overgrown waste areas, even derelict buildings remind us that nature is close by, waiting. This work speaks to the ability of nature to overcome, to re-establish, to re-populate - if enough life-giving qualities remain.

**Figure 37 D. Rhaesa, *ReGrowth*, (2015). Steel, rust, and wood, (30"h x 30"w x 12"d).**

*Ideas Remain*

The final sculpture presents two illusory structures (shown here in both night and day lighting); they reference what is seen today in cities across the world- the illusion of progress. It has become our habit today to build for, at most, fifty years. That is the life expectancy of our buildings. Centuries ago, the great cathedrals were built for millennium. Human expansion calls its ever-consumptive behavior "progress" when it is primarily this element of expansion that is depleting natural resources needed to sustain civilization. Made of paper that will break with the slightest touch, these structures mimic the ephemeral aspect of all that is built when consciousness for lasting materials, care-filled design, and thoughtful planning is crowded out by the bottom line - it illustrates elegant waste.

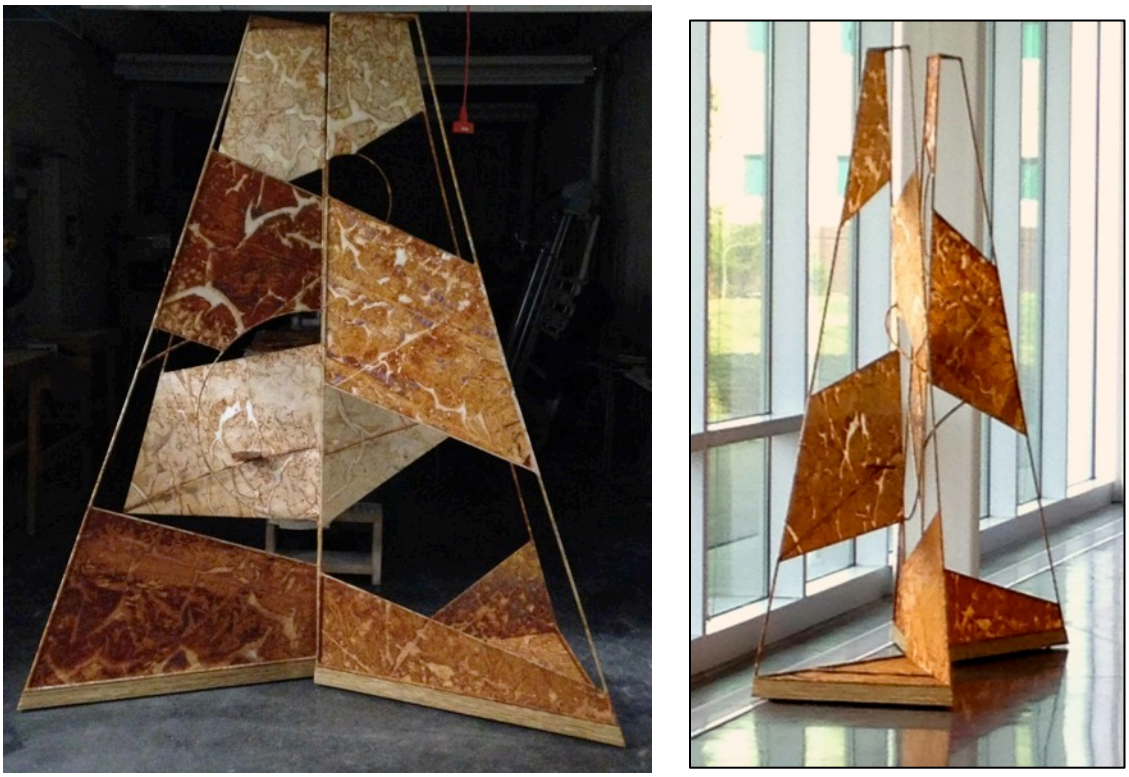


**Figure 38 D. Rhaesa, *Ideas Remain*, (2015). Steel, paper and wood, (7'h x 6' w x 30" d) – Two individual structures associated as one.**

Reflecting on the impetus that began this body of work, the research concerning the response of materials to forces has led to the understanding that there are really only two forces that struggle for balance in this world. These are the forces of the resilience in nature in contest with mankind's expansion - all other forces seem to be in a stasis of equilibrium, or about to return to it. The imbalance of these two uproots the whole. These sculptures present the ubiquitous- the ephemeral leaf and quiet Dogbane- as giants, sentinel over the persistent need for knowledge and understanding. It is this artist's hope, that taking close notice of what is directly in front of us, mankind will find the equilibrium that steadies the future. In his book titled, *Artist as Native*, Alan Gussow quotes Peter Berg, who states that, "reinhabitation involves becoming native to a place through becoming aware of the particular ecological relationships that operate within and around it. It means understanding activities, and evolving social behavior that will enrich the life of that place."[41] This is what we must be about, as discussed further by Gussow, "seeing the world with unblinking clarity, making connections to soil, to structure, and to the lives, human and otherwise, which inhabit our places."[42] My search is governed by this searching for oneness. Through it, we can open up clarity about and value in that which surrounds us.

Danne Pike Rhaesa
2015

[41] Gussow, Alan. *The Artist as Native• Reinventing Regionalism*.SanFrancisco. pg. 11

[42] Gussow, Ibid.

# WORKS CONSULTED

American Forests. "Native Americans and Trees." Accessed November, 20, 2014. http://www.americanforests.org/our-programs/american-forests-publications/forest-files/forest-files-november-2012/native-americans-and-trees/

Benyus, Janine. *Biomimicry: Innovation Inspired by Nature.* New York: Harper Collins Publishing, 1997.

Bowdon, Ros and Bill Bunbury. *Being Aboriginal*. Sydney NSW: Australian Broadcasting Corp, 1990.

Catlin, George. *Letters and Notes on the Manners, Customs, and Conditions of North American Indians*. New York: Dover Publications,1973.

Czaia, Joe. Interviews in Nutwood, IL. June 2013 – July, 2014

Eliot, T.S. "Little Gidding," Columbia University, accessed March 13, 2015. http://www.columbia.edu/itc/history/winter/w3206/edit/tseliotlittlegidding.html

Friends of Dard Hunter Conference, "Papers Please." Exhibit seen at the annual conference of The Friends of Dard Hunter, at Washington University, St. Louis, MO. October 17- 19, 2013. http://www.friendsofdardhunter.org

Fuller, R. Buckminster. *I Seem to Be a Verb: Environment and Man's Future.* New York: Bantam, 1970.

Gussow, Alan. *The Artist as Native - Reinventing Regionalism*. San Francisco: Pomegranate Artbooks, 1993.

Hamilton, Ann. *stylus*. *A Project by Ann Hamilton.* Pulitzer Foundation for the Arts. Exhibit seen October 21, 2011, July 9 – January 22, 2011. http://annhamilton.pulitzerarts.org

Hamilton, Ann, Shahrokh Yadegari, Christine Brewer, and Elizabeth Zharoff. Performance, Sept. 21, 6:30pm and 8:30pm. St. Louis: Pulitzer Foundation, 2011.

*Hand Papermaking.* Newsletter. Beltsville, MD, 2012. Accessed Dec 15, 2014.

Harrison, Charles, and Paul Wood, ed. *Art in Theory, 1900-2000, An Anthology of Changing Ideas*. MA: Blackwell Publishing, 2003.

Krauss, Rosalind. *Beverly Pepper - Sculpture in Place.* Japan: Cross River Press, 1986.

Long, Charles. *The Stone Builder's Primer.* Ontario, Canada: Firefly Books Ltd, 1998.

McHenry, Paul Graham. *Adobe and Rammed Earth Building Design and Construction.* New York: Wiley, 1984.

Rael, Ronald. *Earth Architecture*. New York: Princeton Architectural Press, 2009.

Williams, John. *Great Rivers Land Trust Newsletter.* Summer 2010, Vol. 15, Issue 1. http://www.greatriverslandtrust.com/newsletter/