Schema

Ann Walsh
Virginia Commonwealth University

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SCHEMA

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Fine Arts at Virginia Commonwealth University.

by

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Bachelor of Fine Art, Arizona State University, 2006

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Virginia Commonwealth University
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Acknowledgement

Graduate School is a self-serving pursuit that is all but impossible without the support of others. I would like to extend a large amount of gratitude to the faculty of Craft/Material Studies and especially my committee, Susie Ganch, Bill Hammersley, Susan Iverson and Jack Wax, for their support and for asking all the right questions. To my roommate and friend, Giselle, I would like to say thank you for making Richmond feel like home. And my brother, Stephen- my success is your success, for without our semi-annual all night back porch conversations I would never understand why it is I do what I do.
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Abstract

SCHEMA

By Ann Walsh, M.F.A.

A Thesis submitted in partial fulfillment of the requirements for the degree of Master of Fine Art at Virginia Commonwealth University.

Virginia Commonwealth University, 2008

Major Director: William Hammersley
Professor, Craft/Material Studies

A schema is described as a diagram showing the basic outline of something, or as an organizational or conceptual pattern in the mind. It is also, in Kantian philosophy, a method that allows the understanding to apply concepts to the evidence of the senses. My Schema is a model of emergence.
Introduction

“In philosophy, systems theory and the sciences, emergence refers to the way complex systems and patterns arise out of a multiplicity of relatively simple interactions.”
-Wikipedia

It is my goal with this thesis to use Steven Johnson’s 5 fundamental principles of building an emergent system as described in Emergence to describe my meandering graduate work. The first principle, “Encourage Random Encounters,” illustrates the approach to my first year’s work, exploring different materials and ideas. “Ignorance is Useful” helps explain why my energetic reaction to new stimuli keeps my work different and exciting, while retaining its cohesiveness. “Look for Patterns in the Signs” illuminates why I make art. “More is Different” gives an explanation of the work in my thesis show and “Pay Attention to Your Neighbors” provides insight into my influences.

* Wikipedia is based on emerging systems.
Encourage Random Encounters

“Decentralized systems such as ant colonies rely heavily on the random interactions of ants exploring a given space without any predefined orders. Their encounters with other ants are individually arbitrary, but because there are so many individuals in the system, those encounters eventually allow the individuals to gauge and alter the macrostate of the system itself. Without those haphazard encounters, the colony wouldn’t be capable of stumbling across new food sources or of adapting to new environmental conditions.”

I work in an intuitive manner; some mornings I wake up with an idea that needs to be made real. Throughout the process of construction I discover meaning. Not every morning dawns with new ideas, so I rework the old ones, constantly rethinking their significance. My interests and ideas tend to follow a few main threads pertaining to the human condition. In the past I made narrative sculpture, exploring my own life experiences, trying to liken my stories to other people’s to induce reflective thinking about why we do the things we do.

I began to explore the use of organic forms as allegories. My observations of parents interacting with their children made me wonder how parental protection influences children’s emotional growth, and how being overly protective might constrain it. These ideas combined in Vulnus [figure 1], which was not in my mind a totally successful piece but it did excite in me an interest in structure and skin as a metaphor for protection. The circles sewn into the surface of the interior of the flower also invited me to examine
surface texture and patterning as evidence or information (which I will discuss more in Look for Patterns in the Signs).

These ideas of surface texture, pattern as well as the thought of structure and skin as metaphors for protection were really intriguing to me. As a result, I started making forms to explore different structures and skins. Many of these explorations didn’t amount to much of anything other than odd little organisms littering my studio. The Inside-Outtaman [figure 2] came of these explorations. It was a combination of structure, skin, and surface texture. What began as a sculpture based on these simple ideas turned into a humorous statement of feeling out of place in the woodworking and furniture design area of the Craft/Material Studies Department.

I decided to combine the formal issues I was thinking about with a functional piece of sculptural furniture. The piece called Loss [figure 3] deals with my best friend’s miscarriage. It is a canvas and polyester-resin chair that brings to mind a room of unused furniture awaiting someone’s return. Simultaneously, it is a skin with evidence of a missing skeleton.

During these investigations, I stumbled across a book in the library full of wonderful mathematical diagrams and models. I had an epiphany that models and diagrams were visual interpretations of abstract ideas. Looking at them, I got an idea what they meant even if I really didn’t understand what they were about. I thought this is also what art is, but maybe in a more emotional, intuitive manner.

One set of diagrams that I was particularly drawn to was the Friedman-Lemaitre-Robertson-Walker cosmological models. These models were representations of the
different shapes that the cosmos could be depending on the forces present at the Big Bang.
These models reminded me of the skeletons I had made with skins exerting pressure on the
structure and the structure compressing the guts.

_The Interpretation of Reality (for Gabriel Garcia Marquez) [figure 4]_ uses the
walls of the gallery as a “skin” (the forces present) confining and shaping the skeleton
within. These representations of the body as well as architectural structure are meant to
describe the theory that the more we protect ourselves, the more we are trapped and
molded by our perceived armor or skin.
Ignorance is Useful

“The simplicity of the ant language– and the relative stupidity of the individual ants– is, as the computer programmers say, a feature not a bug. Emergent systems can grow unwieldy when their component parts become excessively complicated. Better to build a densely interconnected system with simple elements, and let the more sophisticated behavior trickle up. (That’s one reason computer chips traffic in the streamlined language of zeros and ones.) Having individual agents capable of directly assessing the overall state of the system can be a real liability in swarm logic, for the same reason that you don’t want one of the neurons in your brain to suddenly become reticent.”

My constant curiosity never fails to lead me to new and wonderful discoveries about the universe we live in. However, I usually move onto new questions without ever fully answering the old ones. It is a lot like wandering around the internet and not reading entire websites or maybe just reading the introduction to a book and then moving on to the next one. This sort of quick intellectual stimulation allows me to make the odd connections that fuel my artwork.

My inquisitiveness about the similarities I was seeing between patterns on the ground made by cities and those found in microscopic images of bacteria, fungus and algae led me to make the work in my thesis show; but it was a long and twisting path. I began by looking at maps of population densities and exploring theories of why cities formed the way they did. N42°21.48168, W071°3.6502 [figure 5] is based on the population of greater metropolitan Boston in 1998. I used tubes I made as symbols of organisms to represent the populace. By digitally projecting the population map of Boston onto the wall, I could
place the tubes in positions appropriate to the population and size of the tubes. The
resulting pattern brought to mind a map of stars or fungus growth, but the tubes with their
striations spoke more of statistics and data.
Look for Patterns in the Signs

“While the ants don’t need an extensive vocabulary and are incapable of syntactical formulations, they do rely heavily on patterns in the semiochemicals they detect. A gradient in a pheromone trail leads them toward a food source, while encountering a high ratio of nest-builders to foragers encourages them to switch tasks. This knack for pattern detection allows meta-information to circulate through the colony mind: signs about signs. Smelling the pheromones of a single forager ant means little, but smelling the pheromones of fifty foragers in the space of an hour imparts information about the global state of the colony.”

It started as circles drawn on a page; stacked up on one another like cells or stones in a wall. Black circles covering a white page, growing, and creating texture. The circles became holes drilled in the walls of turned and carved wooden vessels. That however, didn’t seem right, and the execution was veering from the idea. Then hoops of wood suspended in the air- an array of circles on a curve- information describing the shape of a universe. When I decided that the circles should be extruded into tubes it seemed so right. The tubes were each a vessel with an outer skin to hold information and a shadowy abyss to delineate the circle that was the top edge of the tube.

The surface texture, as I said before reminded me of skin and the information left on skin in the form of scars, wrinkles, and thin areas where the skeleton made itself known. To me these were evidence of where an organism had been or what had caused it to grow the way it did. The evidence was really information, data, or a record of life. This all turned the body into a vessel of information, reminding me of vinyl records, cassette tapes
and old wax phonograph cylinders. As an artwork, the marks on the surfaces were a result of me, the process by which the piece was made and an indication of the extent that I will go to keep myself busy.

“The dreads and dangers of abstract thinking are a big reason why we now all like to stay so busy and bombarded with stimuli all the time. Abstract thinking tends most often to strike during moments of quiet repose. As in, for example, the early morning, especially if you wake up slightly before your alarm goes off, when it can suddenly and for no reason occur to you that you’ve been getting out of bed every morning without the slightest doubt that the floor would support you.”—David Foster Wallace

I think this quote sums up what I want out to experience through viewing art and what I want my work to achieve for my audience. *Schema* [figure 6 & 7] is partly a representation of the white noise of my life, the over stimulation that comes from constantly being bombarded by information with never a chance to process it. But it is many other things as well.
More is Different

“This old slogan of complexity theory actually has two meanings that are relevant to our ant colonies. First, the statistical nature of ant interaction demands that there be a critical mass of ants for the colony to make intelligent assessments of its global state. Ten ants roaming across the desert floor will not be able to accurately judge the overall need for foragers or nest builders, but two thousand will do the job admirably. ‘More is different’ also applies to the distinction between micromotives and macrobehavior: individual ants don’t ‘know’ that they’re prioritizing pathways between different food sources when they lay down a pheromone gradient near a pile of nutritious seeds. In fact, if we only studied individual ants in isolation. We’d have no way of knowing that those chemical secretions were part of an overall effort to create a mass distribution line, carrying comparatively huge quantities of food back to the nest. It’s only by observing the entire system at work that the global behavior becomes apparent.”

A schema is described as a diagram showing the basic outline of something, or as an organizational or conceptual pattern in the mind. It is also, in Kantian philosophy, a method that allows the understanding to apply concepts to the evidence of the senses. My *Schema* [figures 6 & 7] is a model of emergence.

Emergence is the answer to how cities and neighborhoods are formed without a governing architect, how ant and bee colonies work with no true monarch, how our brains function and why slime mold can come together and disperse when it is nothing more than a group of single celled organisms. My installation is the culmination of all of the thoughts put forth in this paper. Its success lies in my audience’s patience and curiosity. I want them to see the patterns, the city and the data; to take a moment and think about the floor they’re standing on or better yet, the size of the universe they live in.
Pay Attention to Your Neighbors

“This may well be the most important lesson that the ants have to give us, and the one with the most far-reaching consequences. You can restate it as ‘Local information can lead to global wisdom.’ The primary mechanism of swarm logic is the interaction between neighboring ants in the field: ants stumbling across each other, or each other’s pheromone trail, while patrolling the area around the nest. Adding ants to the overall system will generate more interactions between neighbors and will consequently enable the colony itself to solve problems and regulate itself more effectively. Without neighboring ants stumbling across one another, colonies would be just a senseless assemblage of individual organisms– a swarm without a logic.”6

Visually, I find my influences in artists like Sol Lewitt, Eva Hesse, and Mary Bates-Nuebauer, among others. Sol Lewitt’s minimalist sculpture speaks to me of math, geometry and working through formulas and ideas using visual aids. Eva Hesse’s forms elicit a tactile response that borders on the erotic. In my work, I try to achieve that sort of inviting form to draw my audience in. Mary Bates-Nuebauer’s work deals with pure statistics that she interprets through a computer program into forms and digital prints. The surfaces of her forms are rife with statistical information based on the world around her. It is helpful for me to examine how other artists work through their ideas and synthesize the world around them.
Figures

Figure 1. *Vulnus*

Figure 2. *The Inside-Outtaman*
Figure 3. Loss

Figure 4. The Interpretation of Reality (for Gabriel Garcia Marquez)
Figure 5. N42°21.48168, W071°3.6502

Figure 6. Schema (installation view)

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Ann Walsh

Education

2007 Virginia Commonwealth University, M.F.A. candidate, Woodworking and Furniture Design

2006 Arizona State University, B.F.A. summa cum laude, Sculpture

Teaching Experience

Virginia Commonwealth University

2006–2007
  Instructor of Record, Introduction to Woodworking Techniques
  • Developed and taught introductory curriculum including carving, joinery, furniture design, finishing and critical thinking
  • Re-serviced and performed maintenance on woodworking machinery
  • Organized and facilitated student exhibitions
  • Budget administration

2007
  Teaching Assistant to Damon McIntyre, Kayak Building Workshop
  • Assisted with teaching how to design and build plywood and fiberglass kayaks

Honors/Awards
2006–2007   Graduate Teaching Assistantship, Virginia Commonwealth University

2006   Step Gallery Exhibition Award, Tempe, Arizona
       Outstanding Senior in Woodworking Award, Arizona State University
       Niche Awards Finalist
       Windgate Fellowship Finalist


2005   Arizona Artist Guild Scholarship, Phoenix, Arizona

2004–2006   Sculpture Studio Award, Arizona State University

2003–2006   Dean’s List

**Exhibitions** (*denotes solo show)

2008   *MFA Thesis Show*, Anderson Gallery, Richmond, Virginia

   *Foofaraw*, Step Gallery, Tempe, Arizona

   *Responses to Fear*, Lexington Art League, Lexington, Kentucky, National Juried Exhibition

2007   *Small Works*, Meyers Gallery, Richmond, Virginia, Juried Exhibition

   *Volume 7*, Temporary Space, Richmond, Virginia

2006   *Bathwater*, FAB Gallery, Virginia Commonwealth University, Richmond, Virginia

   *Hohepunkt*, Step Gallery, Tempe Arizona

   *The Feminine Unconscious “Awake in a Dream”*, Monorchid Gallery, Phoenix, Arizona, National Juried Exhibition

   *Multiplicity*, Step Gallery, Tempe, Arizona
   Juried Exhibition, Juror: Mary Bates Neubauer

2005   *Juried Undergraduate Show*, Harry Wood Gallery, Arizona State University
       Juried Exhibition, Jurors: School of Art Faculty, Arizona State University
Toys Designed By Artists, Arkansas Art Center, Little Rock Arkansas  
National Juried Exhibition, Juror: Kenneth Trap (formerly of the Smithsonian  
Renwick Gallery)

Raw Emergence, Step Gallery, Tempe, Arizona  
Juried Exhibition, Jurors: Tom Eckert and Tony Perez

Separation Anxiety, Ice House Gallery, Phoenix, Arizona  
Juried Exhibition, Juror: Mary Bates Neubauer

Artstravaganza, Phoenix Art Museum, Phoenix, Arizona

Packing Light, ASU Mobile Art Gallery, Phoenix, Arizona  
Juried Exhibition, Juror: Jim White

2004 Against the Grain, Step Gallery, Tempe, Arizona  
Juried Exhibition, Jurors: Tom Eckert and Tony Perez

20th Anniversary of the Neon Workshop, Rezurection Gallery, Tempe, Arizona  
Juried Exhibition, Juror: Jim White

Bibliography

500 Chairs, Lark Books, May 2008

Professional Experience

2007-2008 Welder/ Fabricator, Box-kite Designs, Richmond, Virginia  
Office Assistant, Virginia Commonwealth University, Office of  
Craft/Material Studies

2004–2006 Woodshop Monitor, Arizona State University

2004–2006 Sculpture Shop Monitor, Arizona State University

2005 Artist Assistant to Mary Bates Neubauer, Tempe, Arizona
2002–2003  Welder/Fabricator, Native Ironworks, Tempe, Arizona

Professional Development

2007  Echo Lake IX (artists collaboration workshop), Bucks County Community College, Pennsylvania

2006  Desert Iron Symposium (iron pour), Arizona State University

Technical Expertise

Fabrication Proficiency: Wood joinery, Wood carving, Wood bending (steam, laminate, and vacuum-forming), Wood turning, Upholstery, Finishing techniques, Foundry (sand molds, shell molds, lost wax casting, large metal pours), Welding (acetylene torch, MiG, TiG, and plasma cutting), Tap and die, Mold making, Plaster casting, Paper making, Vacuum-formed plastics, Polyester and epoxy resins, Fiberglass, Wax, Painting (watercolor, acrylic, and oil), and Drawing

Computer Proficiency: Microsoft and Macintosh operating systems, Word-processing, Excel, PowerPoint, Outlook, Adobe Flash, Adobe Photoshop, Adobe Indesign and Adobe Illustrator, Rhino 3d

Professional Affiliations

American Foundry Society

Contemporary Craft Society

Delaware Center for Contemporary Arts

International Sculpture Center