

*Converge*

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Interconnectivity and systems, and the dualities found within these ideas, lay the conceptual foundation for my thesis project titled *Converge*. Interconnectivity can be perceived as an underlying human condition. Individuals are interconnected through labor, trade, environments, and a reliance on community for survival. These connections are governed by systems developed to organize the masses and designate rules of conduct. In my thesis exhibition, I create a visual vocabulary of interconnectivity using variations of the brick form. When these multiple variations are assembled in the gallery space they reference the structures of the Internet and urbanism, as metaphors for interconnectivity. These later two systems inform our world, and suggest infinite growth and potential. However, within our commuter and time-stressed American culture, these two systems produce a duality, in that they can be seen as isolating while simultaneously increasing communication. Additionally, as organizing principles the Internet and the city are in constant flux oscillating between planned construction, emergent responses, and natural deconstruction. With these ideas in mind, my thesis exhibition consists of two parts each fabricated using a specific designed system, which I describe in detail in Section II. *Converge-The Permutations 1-9* is a presentation on the wall of 211 brick variations. *Converge- Critical Mass* is an interconnected and partially emergent brick installation on the floor that transfers the language of the Internet into the concrete lay out of a city.

## I

The motivation for my thesis stems from Virginia Postrel's March 2006 article in the *New York Times* titled, "The Container that Changed the World." The article argues that the shipping container is radically altering our global economy. As a standardized tool, the shipping container has accelerated the delivery and broadened the distribution of goods and culture. By easing exchange among nations it has transformed complex supply chains into a part of everyday commerce. This article reminded me of the supply-chain anecdote in Thomas Friedman's book, *The World is Flat: A Brief History of the Twenty-First Century*, which describes how computer parts from multiple worldwide locations arrive at a single Texas plant for assembly. By tracking the supply-chain, Friedman pinpoints each

step in the creation of a product from the origin to the end point. Both the article and this anecdote humanized the anonymity of production for me.

In an earlier body of work from 2006-2007, I used the shipping container and commerce as metaphors for interconnectivity. I specifically chose the shipping container since it is both a powerful symbol of today's global economy as well as a simple box. There seemed to be a duality at play here as well as an opportunity to explore the Minimalist cube. My exploration of interconnectivity was expressed performatively as well as through photography and sculpture.

Performatively, I had a model wearing an average men's shirt from Target, walk the catwalk at a fashion show organized by the Weisman Art Museum, Minneapolis, MN while an announcer read off the supply chain. The voiceover tracked the shirt from initial conception in Minneapolis to production in China to the shirt's return to Minneapolis via a container. This research and initial instantiation transformed into an installation of the performance artifacts exhibited at the Boiler Room, Minneapolis, MN in winter 2006 and into a video (<http://www.youtube.com/watch?v=rA-T9lNRGpM>) incorporating images of the shirt and text of the voiceover that was screened at the Beijing Film Academy, thereby returning the project to China in the summer of 2007. This project, titled *DPCI 97/4/782* after the shirt's product number, exposes the complexity of today's manufacturing processes and transforms an everyday object into an extraordinary one.

Sculpturally, I created a series of medium sized interlocking ceramic modules that referenced the physicality of the shipping container. Two on-site visits to New Jersey ports in August 2006 and January 2007 furthered my research. I photographed containers on-site and heard first hand stories associated with containerized cargo. I later paired three of these photographs with three rectangular-shaped ceramic modules (16"h x 25"w x 30"d) in the piece *Content*, 2006.

Visually, these photographs depict three views of a shipping container: an empty interior, the open end of a container boarded up to secure cargo, and a locked door. These three images are placed

directly above the modules to suggest a narrative. The modules are constructed from castings of molds of corrugated metal to reference the same material used to build shipping containers, but due to the scale the modules also reference the interior cargo simultaneously. Each side is designed to interlock with its opposing side, once again mirroring the design of actual containers.

Overall, the photos and modules together call into question the contents of the containers. Through my visits to the ports, I learned that the transport of dirty bombs and the smuggling of illegal immigrants is a major concern of containerization. The economic benefits of containerization make this system viable and far out weigh the concerns. The formal elements used in *Content* are a metaphor for the interconnectivity of our economic system. On another level, I was addressing Minimalism, specifically Robert Morris' concept of the "Gestalt," where the whole of an object can be perceived by looking at a part of the object. Although I reference Minimalism with my choice of simple geometric forms and ideas of production, I alter each side of a geometric form to promote investigation rather than a gestalt. In this way viewers see distinct new information as they walk around the piece.

Although I was using a variety of media to approach this shipping container project, it was important for me to reconcile the use of ceramics conceptually to discuss issues of production, interconnectivity, and containerization. I feel most artists would begin with the idea and choose the material that was most appropriate, but my artistic and academic training is in ceramics. I therefore wanted to find a place for my training in contemporary art.

I found this conceptual connection as I continued making interlocking ceramic forms. In order to mirror the way shipping containers usually exist in huge numbers, I realized I needed to increase efficiency of my production. I required a design that could be produced quickly to give me a critical mass thus making a connection to human labor in both ceramic studio practices and industrial ceramic practices. In both of these settings, repetition produces the multiple, an assembly line of objects. Additionally, I started noticing the pervasiveness of portable objects like iPods, external hard

drives and cell phones, tools used to stay connected and to network. I decided to reduce the scale of my modules to reference this portability. What resulted was a distilled idea and form that related directly to a traditional form found in clay- the brick. The choice of the brick incorporated an homage to my background in ceramics, a new reference to architecture and I later realized an art-historical lineage through Minimalist artist Carl Andre's work.



(Figure 1) Gail Heidel, *Converge*, ceramic, 10x8x3', 2007

For the new project, which developed into *Converge* (Figure 1) I first looked to my personal history growing up in a bedroom community of New York City. I have always been urban centric and aware of the duality of the commuter, living one place and traveling to the city for work. In 1999 I moved to New York City. I worked for Greenwich House Pottery as Programs Manager commuting from Park Slope, Brooklyn to the West Village for four years. In both historic neighborhoods, the scale of buildings is smaller in comparison with Mid-town Manhattan skyscrapers and the buildings are usually built from brick or brown stone. This is where I first noticed the pervasiveness of brick and the connection I felt to the neighborhoods built from it. Additionally, I commuted between a neighborhood that was on the grid plan in Brooklyn to one that was off the grid plan in the West Village. This was a reminder of city planning and the effect citizens can have when they want to preserve their neighborhood and not have it torn down to be put on the grid.

Living in New York City led to researching the history of the city. I was particularly interested in the role urban planner Robert Moses had on its development. In the 1950s he began tearing down city blocks to build the new Super Block most noticeable along the East River. Originally developed as affordable housing for middle-class families, the Super Block consisted of groups of brick apartment towers surrounded by green spaces void of any businesses. In actuality, instead of creating a utopian living situation, he designed dead zones where only people who lived in these buildings would walk through the area. Today these Super Blocks are crime-ridden low-income housing referred to as “The Projects.”

Cities reveal their history through their architecture, but what affect does this architecture play on the lives of the inhabitants? During my graduate studies, I researched whether or not specific architecture helped Americanize immigrants living in New York City in the late 1800s. This was a common belief during the Progressive movement. This idea is also similar to the Modernist belief that architecture could create a better world (Heartney, 52). Many large cities have such failed utopian architecture constructions.

Today in China this concept is evident on a massive scale. Historically, each new regime has torn down the old architecture to build new structures that reflect the mission of the government. First the low-level houses that surrounded the emperor’s palace were torn down to be replaced by brick apartment complexes that surrounded the factory during the socialist era. Now in the capitalist phase, these buildings are being torn down and replaced with mega blocks similar to Robert Moses’ vision with homogenous high-rise constructions. The only way one can tell the buildings apart is by their addresses.

Even with top-down systems in place designing homogenous cities, people choose how they will behave in these systems. The idea of a number of individual acts that disrupt an over arching system is referred to as emergent. A city planner can create a supposed utopia but cannot insure that the

community will respond to its designed purpose. It was not just one person who transformed Robert Moses' utopia into a slum, but a group of people acting without a higher authority to decide not to use the new space in the ways it was conceived. According to Stephen Johnson who writes in his book *Emergence*, "...agents residing on one scale start producing behavior that lies one scale above them: ants create colonies; urbanites create neighborhoods; simple pattern-recognition software learns how to recommend books. The movement from low-level rules to higher-level sophistication is what we call emergence" (Johnson, 18).

This emergent idea operating within the city can also be a metaphor for the growth of the Internet and vice versa. The United States government originally created the Internet for military use but everyone who uses it and uploads information to a site informs and in part controls it. Connecting the city and the Internet together, Johnson writes, "Imagine the universe of HTML documents as a kind of city spread out across a vast landscape, with each document representing a building in space" (Johnson, 117). Johnson also refers to the architecture of the Internet with its nodes, hubs, links and islands. Nodes can be interpreted as websites or buildings. The links connecting nodes can be interpreted as sidewalks or roads. Some nodes are not connected to other sites and remain isolated islands similar to Robert Moses' Super Block. This correlation between the architecture of a city and the architecture of the Internet shows that these top-down-designed systems are used by people in ways that they wish. In addition, such usage causes isolation as easily as it causes interconnectivity.

Before beginning *Converge*, I condensed all of the above information. My modular unit would be the brick, a small portable object. I would create a system to deconstruct the solid brick form to reflect progression and to have the form change over time slowly taking away its function. The brick would be stamped with an identification number to individualize it when placed in the critical mass similar to the apartment complexes being built in China. The bricks would also be designed to interlock with one another although which ones do is not planned out. When arranged, the bricks would reference a cityscape that mimics the Internet's architectural organization while also becoming an emergent structure.

## II

*Converge*, the title of my thesis exhibition, is a project in two phases. Phase One is the input or fabrication system of deconstructing the solid brick form. Phase Two is the outcome of building and emergence.

Phase One is ruled by a predetermined set of parameters, set up for a seven-month production cycle of brick making. The goal was to see how many variations of this brick shape I could make without altering the total length or height of the brick.

Parameters:

1. All bricks will be fabricated using a basic rectangular mold (7 l x 3 5/16 h x 3 5/16" w) constructed from wood 2x4s. The final interior space with the removable bottom is 7 l x 2 3/4 h x 3 5/16" w.
2. The mold will be altered by placing interchangeable wooden parts inside the interior space prior to filling it with clay. These six parts will range in length from 1-6" inches sharing the dimensions of 2 3/4 h x 1 1/2 w" to produce variations of form.
3. No more than two parts will be placed in the mold at a time.
4. The parts always need to touch the bottom of the mold.
5. The parts can be placed in the mold either vertically or horizontally.
6. When placed horizontally they can only be placed length-wise.
7. When placed vertically they are to be placed length-wise except at either end of the mold the 1" and 2" parts can also be placed width-wise.
8. All parts move in 1" increments except the 1" part which has two movements, similar to chess. It can be placed to take up 1" l or 1.5" l. If taking up 1.5" l it moves in 1.5" increments.
9. After placing the parts in the mold, if the positive space is structurally unsound the variation is deleted.

With the parameters for the mold in place I also set-up some limitations on the project due to time constraints. I would make bricks from September 2007 to March 2008 for exhibition in April 2008. The production would end earlier if I finished every variation prior to March, I ran out of time, or the mold broke. I would work in one-hour time blocks rather than by production of total pieces. Each hour I would then produce as many multiples as possible of each variation. This structure governed my labor and time. Depending on the complexity of the form I produced between six and eighteen bricks per hour. Each day of production, I produced between four and seven brick variations by advancing the interchangeable part.

At the start of each production hour, I first sketched the form I was going to make, noted the date of fabrication, and the unit of time on a chart. I then placed the particular part starting with the 1" in the mold to achieve one possible shape and filled it with clay to create one possible variation. The mold was designed with a collapsible floor, which makes the mold very efficient, as it allows me to push the brick out of the mold as soon as it formed rather than waiting for it to dry in place. Once the mold is filled with clay, I placed a block underneath the floor of the mold, bore down on it and slid the brick through the mold. After a day of drying, but while the bricks were still soft, I stamped the bricks with the date of completion and the order it fell in the progression as evidence of my labor and time.

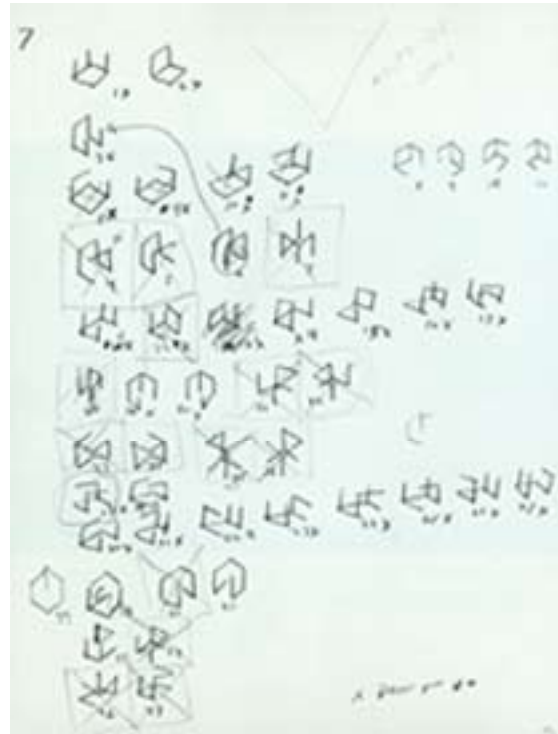
Phase One is the production phase of the project. In the end, I was able to produce a total of 1123 bricks and 211 variations. When I finished this phase, I believed I had produced every possible variation. In the final week before installation, I layed out the variations and discovered due to human error I missed a few variations in the series. Although disappointed, I have no intention on filling in the gaps as the allotted time for the project is over.

### III

On a cultural level, this phase echoes my need as a product of Contemporary America to schedule, plan, and organize my life. My production process reflects an ingrained desire, nurtured by our time-based culture, to promote efficiency. In this, I reflect the pressures of my culture by scheduling my art while also appreciating the simple joy of knowing what I will be doing everyday.



(Figure 2) Sol Lewitt, *Incomplete Open Cubes*, painted wood structures on a painted wood base, black-and-white photographs, drawings on paper, 1974.



(Figure 3) Sol Lewitt, *Working Drawing*, pen and ink, colored pencils, 8 ½ x 11", 1973.

My process has an art-historical lineage in Conceptual artist Sol LeWitt's work. In *Incomplete Open Cubes*, LeWitt dealt with the progression and permutation of the cube. He chose the cube as he thought it was an uninteresting form that could be easily manipulated (Norvell, 114). His methodology was to create a system with a strict set of parameters making all decisions in advance so the system could govern the work without making any changes during the process (Norvell, 112-114). Illustrating his process, Figure 3 is a working drawing of variations of the open cube. Running into problems working out all of the variations on his own, he eventually sought the help of mathematicians to verify and complete his system (Lewitt, 81). Figure 2 shows the work displayed with both the finished drawings and painted wood structures on a painted wood base.

Toward the end of my allotted time of production I did not need the advice of mathematicians, but I did decide to alter my process in response to my timeline. Since the number of my variations far exceeded the number that LeWitt had, and I wanted to have at least one example of each possible brick variation, I abandoned my one-hour time frame to insure that the system of all variations was completed. In an ideal world, I would have had unlimited time and energy to see this project through as stipulated in the initial parameters. In reality, I was faced with the contingency of time running out before my Thesis Exhibition. I had to make a choice and decide what was most important, following the rules of my top-down system or to morph the system to fulfill my need to finish every variation without working within the structure of the one-hour time block.

Phase Two is the building process, which results in two works: *Converge: The Permutations 1-9*, a display of 211 permutation on the wall and *Converge: Critical Mass*, an interlocking installation on the floor. The duality of the installation can be read on many levels: the scale of the building block vs. buildings, the actual vs. the potential, the individual vs. the critical mass, the isolated vs. the interconnected, and the planned construction vs. emergent outcome. This final duality deserves closer examination. The planning refers to the process in Phase One and a loose framework of which to lay out the bricks in Phase Two. The emergent aspect refers to the unpredictability of which bricks interlock with one another and what the final structure will look like. One can only plan so much before the complexity of the project due to the sheer numbers cause you to relinquish control and allow for a project to take its own course. To promote this idea I invited the Nash Gallery interns to help me lay out the bricks on the floor. I gave them a loose set of rules that they could either follow or not.

1. Choose 2-3 forms to interlock to build a cityscape.
2. Choose whether you want to build hubs, nodes, and links, or if you want to make islands.
3. Build as high as you can while maintaining a stable structure.

While *Converge* is not literally about the Internet, I am echoing the structure of this system to

organize my cityscape. In the final installation, all of the bricks on the floor emanate from a central hub, which is composed of solid brick forms. The emanations are composed of variations of this form and can be seen as links connecting to the central hub. These links then interlock with a compatible brick to form new architectural structures or nodes. This formation references both the links and hubs of the Internet as well as the city block. By not mortaring the bricks together it adds to the potential of my work that it could easily be rearranged to meet many needs. This individuality echoes the constant flux found in systems such as cities and the Internet.



(Figure 4) Carl Andre, *Equivalent VIII*, 129 sand lime bricks, 1966

Minimalist artist Carl Andre also chose not to mortar his sculptures as seen in *Equivalent VIII* (Figure 4). This piece consists of 129 readymade sand lime bricks stacked on top of one another. The sculpture runs parallel to the ground, referencing roads and going against the verticality and “anthropomorphic form” of traditional sculpture (<http://www.martinries.com/article1991CA.htm>). With regards to this work, Andre posed the question, “whether it is possible to make art that parallels the present organization of production, technologically and economically” (Andre, 44).

Although Andre uses the readymade brick to comment on production in contemporary society and I use the handmade brick there is a commonality in our work. Both Andre and I are having a discussion about labor. Where his discussion focuses on outsourcing and industrialization, my preference for my own labor reflects a political philosophy that first starts with the body, how the body can interconnect

to the community and then the larger world. In addition, I have added a sense of time to my work through scheduling and the length of the project, which is not applicable to Andre's work.

What is the relevance of referencing Minimalism today? Contemporary society is one that recycles and samples be it fashion, music, or art but in doing so creates a hybrid of the new with the old. Minimalist sculptor Robert Morris, "spoke of contemporary industrial society, linking abstraction in art to the increasing abstraction of the production process at large" (Perry & Wood, 9). This observation about the abstraction of the production process is still a concern today especially with the development of China's economy and the United States reliance on it. We are all interconnected by this production be it our personal production or the goods that we purchase, so perhaps the Minimalists have something to still show us about the invisibility of manufacturing.

Within the art world the interest in Minimalism is widespread. Just this past January (2008) there were three exhibitions in New York City focusing on Minimalism. The best of which was "The Complexity of the Simple" at L&M Arts where younger and older artists presenting work made over the past five decades and expressing a reductive manner, were shown in one space. Reduction is still relevant as an opposition to the abundance of today's society.



(Figure 5) Tara Donovan, *Untitled (plastic cups)*, dimensions variable, approximately: 4' x 54' 5" x 49' 8", 2006.

One Contemporary artist inspired by Minimalism is Tara Donovan who has been a great influence while I have been working on *Converge*. Donovan is also interested in the ideas of production, labor, and emergence. As seen in Figure 5, she uses plastic cups that when stacked become a naturalistic landscape. As an individual unit the cup is a utilitarian object, but when placed in a critical mass the installation becomes more than the sum of its parts, it emerges into a new form. Donovan begins by “assigning predetermined rules for construction”, but similar to my work she “allows a work to ‘grow’ through repetitive labor” ([http://www.nyfa.org/nyfa\\_quarterly.asp?type=4&qid=137&id=110&fid=6&sid=16](http://www.nyfa.org/nyfa_quarterly.asp?type=4&qid=137&id=110&fid=6&sid=16)). This idea of growth can be interpreted as emergent.

Being deeply involved in this project, I have become aware of other artists and institutions investigating the relationship between ceramics and architecture. The European Work Center (EWC) in Holland had a show recently called *The Brick*. EWC along with the Gimhae Clayarch Museum in Korea also support an architect and artist residency program. This leads me to believe there is a convergence between my thoughts and ideas and the world.

#### IV

What agency do we then have when we are all interconnected? My work is commentary on this question. What I propose through my work is that top-down systems are in place but we as individuals can decide how we want to move within and through them. We have options and can make individual decisions. By making these choices our environment becomes filled with potential and transforms into an emergent rather than static place. By referencing architecture and the Internet I am giving two examples of where we can interconnect with our environment while also depicting the possibility of isolation. Additionally, there is an aspect of system failure but a hopefulness that there can be a convergence between systems and emergence where we can still build and be productive.

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