FORGING from SCARS
Reconstructing a Maker-Based Identity in Lewiston, Maine

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This thesis will focus on the ways in which the physical environment affects mental wellbeing and links to community. Through mitigation of hard architecture via flexibility and permeability, a reconstructive environment can be created to provide an architectural framework for the creative development and self-actualization of the user, as well as provide an anchor for the redevelopment of a maker-based community. For victims of addiction, reintegration into civic life can be facilitated through an institutional typology open to user interface.
Abstract

The abuse of heroin and opiates in the Northeast United States has grown to reach epidemic proportions over the past fifteen years. As this epidemic rages on, many victims of addiction are unable to find or afford treatment, and unfortunately, most insurance companies only fund 30 to 60 days of treatment although it can often take that long to clear the drugs from an addict’s system. This can lead to a lifelong cycle of recovery and relapse. For a solution to this problem of recovery, many recovery therapists look to Abraham Maslow’s Hierarchy of needs. At the peak of Maslow’s Hierarchy of Needs pyramid is the need for self-actualization: the desire “to become everything that one is capable of becoming.” This ‘need’ aligns with the predominant goal of the mental health recovery paradigm, which is for people to “strive to reach their full potential” (Henwood et. all).

It is typically understood how architecture provides for basic physiological needs and safety for people in need, but how might it provide for ‘upper-level’ needs, such as Maslow’s concept of self-actualization? This idea of self-actualization relies heavily on the notion of individuality, creativity, and inspiration, so providing a framework for a user to work and create within could be beneficial to their growth and betterment as an individual. According to Kenney Miller, cofounder of the Maine Harm Reduction Alliance, “Using the arts, particularly story telling, may help rehumanize people and empower them to feel they have a voice and they have something worth saying...The more we can empower people in the recovery process, the more successful it can be” (MacQuarrie).

Because addiction affects not only individuals, but rather their entire community, providing opportunity for empowerment on a personal scale must be able to lead to empowerment and reconstruction on a community scale as well. In a city such as Lewiston, Maine, which has lost its former textile-making based
identity, residents have lost hope for job opportunity and have turned to drug and alcohol abuse as a coping mechanism. A new movement towards arts and skilled crafts has recently erupted in the downtown area, which is starting to bring back Lewiston’s Identity as a maker-based community.

This thesis will contribute to and solidify Lewiston’s maker-based movement forward, while simultaneously looking backward, learning and growing from the scars that history has embedded in the city. It will also focus on the ways in which the physical environment affects not only creativity and self-improvement, but the restoration of the human mind from an unhealthy state through internally-focused spaces as well as peripheral links to context and community.

*Introduction*

“Addiction is a thief and it steals— for those of you that have loved ones that are struggling with addiction, you know this really well. You’ve watched as someone that you care about has slowly drifted away, and drifted into a world that you and I may not even be familiar with. And for the person struggling with addiction, I think that they’re often acutely aware of just how lost they’ve become... We think that by spending time in a recovery environment, you can begin to re-frame a sense of who you are, and from that, build an identity and write a story”

—Martin O’Brien, LADC
Director of Development at Grace Street Services

In a society where addiction is seen as a sign of weakness, a person suffering from an addiction can begin to feel wretched and unworthy of the love of their friends and family members. This results in an emotional isolation that is
often worsened by their environment. By providing a physical means by which to fully express themselves and control their environment, the healing process can begin, and can lead to the discovery of a reformed individual who is greater for the experience.

The question now remains: How to create this healing environment with the correct balance of flexibility vs. rigidity, permeability vs. safety, and user-defined vs. architecture-defined spaces to allow not only for restoration of an individual to their previous self, but growth to a point of self-actualization within a malleable and ever-changing context.

**Exposure vs. Protection**

The need for both exposure and protection of an individual human being stems from our most basic instincts for prospect and refuge: a need for access to basic physiological needs, such as food and water, but also for safety from other natural dangers. These instincts can be directly related to the psychological as well as physical need for protection and exposure in a person’s surrounding environment, or the space they inhabit. As architectural theorist Grant Hildebrand states, when a building “combines strong refuge signals, inside and out, with strong prospect signals, inside and out, it may be argued that it provides conditions that human beings are preconditioned by nature to select as pleasurable in their habitations” (Hildebrand 32). Some examples of prospect and refuge are illustrated to the right. This evidence illustrates the ways in which the first two tiers of Abraham Maslow’s hierarchy of needs — physiological needs and safety — can be addressed through architecture.

The concept of protection, or refuge, is one that most decisions about remedial institution buildings are based on.
This basis for design decision-making is perhaps due to the typology of the systematic structure of the organization that leads administrators to presume that an inmate’s life should be centered on refuge only, rather than allowing for any visual prospect, or connection to their greater environment. It is a long-standing tradition to believe that the inmates deserve nothing more than being hidden away from society. For a building such as a prison, asylum, or other type of rehabilitation center, certain design decisions need to be made for the physical protection of inmates from one another, from themselves, and from the outside world, as well as for the protection of guards, other staff, and the outside world from the inmates. These design decisions often result in a hard architecture, one that is highly impenetrable and unkind to those who inhabit it, both physically as well as visually, impeding their ability for rehabilitation, which is not only detrimental to the individual inmate, but detrimental to society for its loss of the inmates who are unable to be reformed. This impermeable structure takes people who already feel cut off from society for a variety of reasons and exacerbates their mental and emotional isolation by physically isolating them through their architectural surroundings. As psychologist Robert Sommer explains, when people feel they are in a cold, oppressive, and inescapable environment, “the result may be somatic disorders, anxiety, and irritation, but the probable outcome will be numbness to one’s surroundings, with psychological withdrawal substituting for physical avoidance” (Sommer 19). One method to reducing this isolation is programmatic reinterpretation and amalgamation. In Glen Santayana’s Harvard Graduate School of Design Thesis, PriSchool, he focused on the combination of programmatic elements of both a prison and a school of criminal justice. In his own words, “Rather than regarding prisons simply as a means of
punishment that might ensure ex-convicts have no other future, this new system of higher education incarceration will promote rehabilitation and the creation of new productive members of society” (Santayana). The prison inmates and students of the school get a chance to learn and benefit from each other, and prison inmates get the chance to feel more integrated into a community that extends beyond the prison walls.

Over the past twenty years, an increasing amount of rehabilitation centers for addictive behaviors such as drug and alcohol abuse have appeared, and the design decisions behind the spaces within these institutions has taken a radically different approach than that of the traditional impermeable institution. These design decisions align more directly with those of the new healthcare paradigm, which focuses heavily on the use of natural light and softer, more comfortable materials throughout. In this instance, comfort is the primary goal, but should comfort be the only goal in the design of a rehabilitative environment? Many would argue that comfort alone cannot motivate a person to heal. While discomfort has a quantifiable effect in degrading a person’s health, comfort doesn’t necessarily have the opposite effect. What really pushes a person to get well can’t be found in comfort alone; stimulation cannot be found in a life of ease and luxury. Experiential qualities of space must also be addressed relative to individual experience in order for true rehabilitation and self-actualization to take place.

User-defined Spaces

The ability to personalize one’s surroundings is of vital importance to the design of ‘soft’ architecture, according to Robert Sommer, personalization is an element that can also contribute to protection of individuals and their property.
Allowing a disengaged individual to make decisions about the space they inhabit, as well as providing them with the tools necessary to implement personal changes can empower them to feel re-engaged in their own life, while simultaneously providing them with a set of skills that they can use to re-engage with their community inside and outside the institution.

Allowing an untrained user to make decisions about the space they inhabit might be seen as a risky process that could easily result in an unappealing, uncomfortable, or unusable space. However, the goal here isn’t the resultant design of the space; the goal of this process is to instill a sense of pride in the individuals through the process of making. In this sense, the resulting design of an individual’s space is less important than the process they went through to get to it and the pride they developed through the process. Seeds of Alteration, a graduation project by Dina Khrabsheh, Alaa Atia, and Deyar Muhaisen, is concentrated on the design of rehabilitation center for beggars in Jordan that functions through horticultural therapy. With limited design decisions regarding much of the program, the project becomes attentive to the individual’s experience of living, working, and learning in their community. Each inmate has their own planting bed outside their living area where they can cultivate whatever plants they wish. Each of these planting beds are visible to other inmates, but only accessible to the individual cultivating there, which has the opportunity to give these inmates not only a sense of pride in what they are growing, but a sense of ownership that, as beggars, they might not have felt for a long time. These sensations of ownership and pride brought about by user-personalization allow for a more efficient and effective recovery. Addictive recovery treatment “has this marvelous opportunity to create space where people can feel present again,” not only in the space that surrounds them, but in
their everyday activities, in their lives (O’Brien).

What becomes more academically architectural about an institution that focuses on this process of self-actualization through user-made spaces is the interaction of the individual spaces with one another, with shared, community-based spaces within the project, and how these relationships create areas of flexibility and change over the course of time in the life of the institution.

*Inside-Out and Outside-In*

When looking to Abraham Maslow’s hierarchy of needs, each need is representative of the various scales of the context in which a person exists. The first two tiers in the pyramid—physiological needs and safety—encompass a person’s existence relative to all of humanity. The second two tiers—belonging and esteem—are relative to a person’s place within a smaller community. Self-actualization, the last tier, is only focused on the individual’s place within themselves. These various scales of psychological needs are related to the need for flexibility and rigidity within an architectural context.

The most common approach to addressing Maslow’s hierarchy of needs through a hierarchy of scaled spaces in an architectural context is through an outside-in method. The outside-in organization of spaces leaves the individually-scaled space, which may be considered the most vital space in a healing framework, as the heart of the project with a strong inward focus.

The primary issue with the outside-in approach is that the individual space within its heart is perhaps too centralized and too confined. By taking the opposite inside-out approach to the spatial organization of a healing architecture, the
individual becomes much more exposed to the outside world, less introspective, and more engaged. However, the inside-out approach is flawed as well, as it potentially allows over-exposure of the individual to the outside world.

In both schemes, the community-scaled space floats somewhat awkwardly in the middle between the basic needs of humanity and the self-actualization of the individual. The solution to this dilemma lies in an organization that places at its heart the rigid basis for physiological needs, surrounded by individually-scaled, modular spaces that then open to a community-scaled space with a relationship to the external context.

Sensory spaces

The user-defined space within a healing environment has the opportunity to become sensory in a way that is often not pre-designed by an architect. Architecture is usually designed to create specific sensory visual, tactile, and even acoustic experiences. The user-designed space could easily develop that into something that is much more personal, including decisions based on all sensory perceptions rather than some.

Sensory delight is most often rooted in primal human instincts. As previously stated in this essay, the instinct for prospect and refuge establishes that an individual needs to feel a certain degree of enclosure in their environment to feel protected from external dangers. Conversely, each person also requires a degree of openness in their environment to allow for perceptual access to their surroundings, so that they may be able to survive from a place of safety.

There are many more environmental sensations besides the five typically recognized. These are based on instinct, and
include temperature, vestibular, proprioception, and introception. However, not all of an individual’s sensory experience or behavior is predetermined by instinct; “most behavior is initially instinctive and then modified in humans over their course of their life development” (Spink 40). An individual’s instinct is only negligibly specific as it is altered over time by experience and learned behavior. For example, an instinct only goes so far as to determine that a person feels the need to be near natural light because sunlight is one of the primary factors that sustains life on earth. However, the way in which that person perceives their experience with varying forms of light throughout the course of their life as well as the environments they may be forced into can modify this instinct to be more specific, or even subverted. For example, this person now not only feels the need to be near natural light, but feels the need to be bathed in direct, harsh sunlight for a certain amount of time every day, because the environment they are forced into for most of their time (e.g. a compressed office building with few windows) doesn’t allow for enough natural light to keep their instincts satisfied.

An architect can only typically design for the four sensory experiences that are most easily defined by enclosure: a sensory experience within a zone, and these include sight, touch, temperature, and sound. The remaining senses are harder to define via the architect’s medium of enclosure, and therefore, often go untouched in the design process. Since the senses of smell, taste, vestibular, proprioception, and introception all occur at an experiential rather than a spatial level, it may be useful to approach the design of a sensory experience with a level of user-definition involved in the process. This may allow designers and users to work together to access and target a more specified sensory experience relative to an individual rather than designing only for the ambiguous majority.
The ability for a user to manipulate their own environment can allow for the satisfaction of their basic instincts, so that they may focus more primarily on bettering themselves—on achieving their need of self-actualization—rather than always being blocked by the sensation that their most basic needs are not being met.

Architecture of Flexibility

Institutional architecture has traditionally been rigid in terms of structure and enclosure, but also in terms of function. This thesis posits that a new typology for an institutional architecture should maintain a degree of rigidity in structure for safety, but allow for flexibility in enclosure and function. This level of flexibility can create a more dynamic use of space, one which caters to a multiplicity of programmatic uses and user groups. Flexibility within an institutional setting can be used to define relationships between spaces in different ways, which promotes different types of interaction between user groups.

In the new Mountain View Google Headquarters, designed by Bjarke Ingels Group and Heatherwick Studios, this idea of flexibility has continued and advanced to look at the relationship between the individual units and the enclosure as a whole. Their approach defines the larger space by a series of transparent canopies and then medium-sized spaces are defined by the units that contain the smallest-scale spaces. These small units can be moved around and replaced, which creates an ever-changing series of large and medium-scale community spaces that are defined by a structurally rigid series of individually-scaled building blocks. This design strategy translates back to the idea of flexibility and rigidity in an institution-like setting. In this case, rigidity only exists as a structural framework that
defines the possibilities of the space. Flexibility allows for this rigid framework to be manipulated as program requirements and individuals inhabiting the spaces change over time.

Flexibility within a remedial institution setting allows for spaces with ever-changing relationships to one another. These spaces can in turn permit as well as promote new and different types of relationships between the people who inhabit them.

**Rehabilitation of an Individual, Rehabilitation of a Town**

While it is important to focus on an individual’s experience throughout their personal recovery process, it is also important to analyze how this idea of self-actualization can be applied to a community at large. How can a community re-create themselves after having been stripped of their former identity? One solution to this issue is the Field of Dreams approach, “If you build it, they will come.” This approach involves building a cultural spectacle in an effort to bring tourism to a decimated town, thereby revitalizing a cultural district with new jobs, both within the spectacle itself, as well as in new businesses that appear in the area. This is called the Bilbao effect based on these exact circumstances created by Frank Gehry’s Guggenheim Museum in Bilbao, Spain. Gehry’s Museum is an example where the architecture becomes the spectacle itself, but there are many other examples of the Bilbao effect, where the architecture is subservient to the spectacle.

A notable example of this means of self-actualization of a community in the United States is the Massachusetts Museum of Contemporary Art in North Adams, Massachusetts. North Adams was once a thriving textile mill town in the Berkshire Mountains. Dwindling cloth prices and enduring effects of the Great Depression led to the closure of Arnold Print Works...
in 1942 and the 26-building mill complex was purchased by Sprague Electric, a major research and development center, later that year. Growth in overseas electronics production led to the closure of Sprague in 1985, which left the massive mill complex in North Adams abandoned. Using this abandoned mill complex, the city of North Adams chose to create the largest contemporary art museum in the United States, with spaces to exhibit massive pieces of art that wouldn’t fit in traditional gallery spaces. MASS MOCA opened its doors in 1999, leading to rise in property values surrounding the complex, the creation of nearly 500 jobs (60 within the museum itself), a 12-15% increase in the number of small and medium businesses with fewer than 100 employees, and substantial increases in the average employee salary in North Adams over the first three years of its existence alone (Moss).

The architecture of the museum itself was not the spectacle that promoted North Adams’ growth, but rather the artistic displays and the spaces they were displayed within. This
approach seems to work well in a town in town decimated by the loss of their identity, as North Adams lost its production-based identity and created for themselves a new identity through the creation of a new cultural landmark that promotes new growth and development while maintaining a level of respect for their historic context.

This approach can be replicated in an attempt to rebuild an identity of a town with a failing industry through the process of making on a cultural scale, as well as rebuild the identity of individual people through the process of making on a personal scale.

Conclusion

This essay elaborated on ideas of flexibility, permeability, and user-definition within a rehabilitative, institutional environment. The way an architectural design will develop out of this research is through experiential studies, site-specific and programmatic research, and flexible, modular conceptualization. The goal through the design process will be to create a series of experiential and customizeable spaces that are linked together in a flexible manner to promote and facilitate the rehabilitation of an individual back into their own lives and into their community as well.

For people who have used drugs for many years, the drugs create for them “that place where they feel safe in spite of all of the consequences that have happened around them” (O’Brien). This thesis aims to turn that ‘safe place’ created by drugs into a safe and restorative place for an individual created by an architecture that addresses not only an individual’s recovery, but the recovery of their community at large.
SEEDS OF ALTERATION—Beggars Rehabilitation Center
Dina Khrabsheh, Alaa Atia, Deyar Muhaisen

Seeds of Alteration is a graduation project by students at the University of Jordan that aims to provide a solution for the issue of begging in Jordan. The project focuses on a programmatic hybrid between a prison/rehabilitation center and a community garden. By using a community garden in conjunction with the beggar’s rehabilitation center, the project aims to create a stimulating environment that is also productive and provides a means for cooperation of inmates and members of the outside community. Inmates can grow as individuals through horticultural therapy while learning a skill that could help them re-integrate into the outside community and help them find a job, thus reducing the likelihood that they would be found begging again.

The building is designed simply as a structural frame-
work that organizes individual dwelling/planting units around a central, community-based garden. The individual units are raised above the central garden to allow for protection, but are open to the central space to create one seemingly continuous, multi-faceted space. The structure is loosely enclosed, at its most basic level to allow the most sunlight into the space for the plants, but also to allow for softening a program type which typically results in hard, rigid, and fully enclosed spaces.

This building is applicable both programmatically as well as experientially to this thesis through its gradation of centralized public space to exterior-bounded private space as well as through its experiential nature regarding “soft” spaces within a “hard” structural grid. A program type such as a prison operating around a centralized, publicly accessible space leads to many opportunities for an integration-bound lifestyle as well as public awareness.
PRISCHOOL
Glen Santayana

PriSchool is a design proposal which combines the programmatic elements of a prison, a school, and a community center in one complex. The massing itself breaks apart from the typical rigidity and solidarity found in prison design by opening up to allow the integration of more outdoor space and a quality of prominent natural light in all interior spaces. The masses split apart to separate the four individual program types, with the school of criminology and the community center as the most public elements flanking the prison and “pre-release” building, which are set to the interior.

The prison-school hybrid takes a new approach to the idea of rehabilitation, providing a setting where inmates and students have the opportunity to learn and grow together, while

(image from www.archdaily.com)
also being in a protected environment. Inmates whose sentences are almost through get access to metal shops, woodshops, and computer labs where they can learn employable skills so that once they are out of prison they can more easily integrate themselves back into the community. The community center aspect of the program provides a connection to the neighborhood that reduces the stigma of the prison and lessens the "hardness" of the institution.
GOOGLE HEADQUARTERS
BIG and Heatherwick Studio

The design for the Mountain View Google Headquarters is based on ideas of flexibility and modularity. The main structure of the campus consists of simple block-like structures which could be moved around and repurposed within the confines of the complex as programmatic adjacencies within the company may shift and be altered over time. As Bjarke Ingels of BIG stated, “Together with Heatherwick Studio and Google we have set out to imagine the work environments of future Googlers to be as adaptable, flexible and intelligent as the rest of Google’s wide spanning portfolio.”

The modularity of individualized spaces combined with the vast, sweeping canopies that define larger spaces allows for a conversation related to hierarchy of spaces and hierarchy of...
needs. The modular spaces allow for individual safety and structure, while their organization within the greater whole allow for links or distinctions between people, disciplines, spaces. This in turn allows the user to focus on themselves, while simultaneously focusing on their community, and, in a sense, all of humanity.

The simplicity of the design concept makes clearly visible these ideas of flexibility through modularity, and allows for a better understanding of how a user occupies differently-scaled spaces within a cohesive project.
MAGGIE’S CANCER CARING CENTER
Snøhetta

Maggie’s Centers are a series of cancer treatment centers that are the legacy of the late Margaret Keswick Jencks and her husband Charles Jencks. The goal of the centers was to provide free, global care for cancer patients through great architecture. Many of these centers have been designed by famous architects who have taken on the challenge of curing cancer through good design.

Snøhetta’s design for the Maggie’s Center in Aberdeen City, UK is heavily focused on the idea of prospect and refuge, creating a safe and reclusive space that also opens up to its surroundings so as not to demoralize/dehumanize people suffering from cancer, as many current institutions do. A rich material palette and plenty of natural light help people feel at home in the space.
MAGGIE’S CENTER
Zaha Hadid

Zaha’s design for the Maggie’s Center in Edinburgh focuses on ideas of openness and shelter—similar to Snøhetta’s design. It also focuses heavily on flexibility—using curtains throughout the building to separate or open up spaces onto one another depending on the need for privacy.

If architecture can demoralize patients—can “contribute to extreme and mental enervation,” as Margaret Keswick Jencks observed—can it not also act in an opposite fashion? These centers aim to prove that it can. According to Charles Jencks, the success of these centers can be attributed to the “architectural placebo effect”—a building, while not wholly capable of curing illness, can act as “a secondary therapy, a feedback therapy.”
Clearing is an installation by Lateral Office that questions how people can create and manage the space they occupy. The installation is interactive in such a way that people can occupy the space that is filled with thousands of vertical cables and manipulate these cables to open up individualized spaces and circulation routes. The rigid, simplistic placement of these cables allows for infinite spatial configurations, which highlights the relationship between rigidity and [in this case, literal] flexibility in the project.

Clearing is in some sense a social experiment that focuses on the ways people occupy and negotiate personal space within a larger context, and as a result of this ‘experiment’ it is evident that no two people have the same experience of personal space, even within an identical larger context.
PROGRAM NARRATIVE

This thesis calls for a programmatic study that involves recovery practices, both traditional and alternative, as well as a juxtaposition of individual and community spaces. Creating a full-immersion recovery community requires programmatic elements of housing, community, therapy, and office spaces. The ‘community’ element of this program becomes the element that connects to and infiltrates the rest of the program.

A maker space and exhibition spaces associated with it are community-based elements of the program that provide a means by which to expose the residents of this recovery community to the general public. This exposure allows for the eventual full reintegration of recovering addicts into societal norms. The maker space also allows for the ability of a resident to shape their individual space that surrounds them, creating a softened environment which they can structure in a way that aids their recovery process.
The Center for Hope and Recovery provides both temporary and permanent family housing and services for women who are in the process of recovering from an addiction. It provides spaces for both short-term treatment as well as long-term recovery. The design of this building is centered on the idea that the two different types of housing (temporary and permanent) exist in different vertical wings of the building which frame both the indoor and outdoor communal spaces between them. This gives a level of exposure to the individual spaces and a sense of privacy to the communal spaces which is the reverse of the typical program arrangement within a recovery facility.
PROGRAM DISTRIBUTION:

HOUSING

EAST WING
16 Living Units
2-3 Bedrooms
Kitchen
Bath
12000 sf

WEST WING
32 Living Units
1-3 Bedrooms
Kitchen
Bath
39000 sf

COMMUNITY

Community Room
Child Development Center
4 Classrooms
Library
Treatment Gathering Spaces
1600 sf
2400 sf
2000 sf
2000 sf

OFFICE

Administration
Medical
1500 sf
2500 sf

TOTAL (NET) 62,000 sf

TOTAL (GROSS +15%) 71,300 sf
Long-Term Housing

Short-Term Housing

Child Development Center

Therapy Spaces

Administration

Library

Community Space

Long-Term Housing

Short-Term Housing

Child Development Center

Community, Treatment, and Admin.
ST. JOHN’S REHABILITATION HOSPITAL
Montgomery Sisam Architects and Farrow Partnership
Toronto, Ontario, CANADA
Addition completed 2011

This addition to the existing St. John’s Rehabilitation Hospital takes a more traditionally medical approach to its design in the arrangement of its program. The most exposed spaces are the offices, lobby, gift shop, etc, and the private therapy rooms and living spaces are hidden from plain sight. While the program may be arranged more traditionally, the circulation is simplified into a singular loop that connects even the living areas to the most public areas in a simple, straightforward manner.
PROGRAM DISTRIBUTION:

**LIVING**
- 22 Units
  - 400 sf each

**COMMUNITY**
- Lobby
  - 4000 sf
- Gift Shop
  - 2500 sf

**OFFICE**
- 6 Offices
  - 300 sf each

**THERAPY**
- Pool
  - 3300 sf
- Gymnasium
  - 5900 sf
- Therapy Rooms
  - 13000 sf

**TOTAL (NET)**
- 40,000 sf

**TOTAL (GROSS +15%)**
- 46,000 sf
The Burnie Maker’s Workshop combines Burnie’s historic industry with a museum-like component to create a community-centered activity hub, focused on the idea of providing a ‘living room’ for the town. One of the unique aspects of the Burnie Maker’s Workshop program is a series of maker pods, where members of the community can come to work and show off their trade. There is also a large paper-making workshop used for production as well as education of the general public on Burnie’s historic paper making industry.
PROGRAM DISTRIBUTION:

MAKING SPACE

- Paper Making Workshop 3850 sf
- Maker Pods 2000 sf

COMMUNITY

- Lobby 2700 sf
- Gallery 4500 sf
- Cafe 800 sf

OFFICE

- Administration 800 sf
- Service 1500 sf

TOTAL (NET) 16,150 sf

TOTAL (GROSS +15%) 18,572 sf
Loading
Administration
Bathrooms
Cafe
Exhibition
Lobby/ Gallery
Multi-Purpose
Paper Making
Maker Pods
Admin, Service
Lobby/ Gallery
Maker Pods
Program arrangement diagrams
images by author
NEW PROGRAM: ALTERNATIVE THERAPY AND SOBER HOUSING COMMUNITY

This thesis calls for a combination of multiple program types, joining residential, community, and creation spaces into a new recovery typology. This program combines living and working space for recovering victims of addiction in such a way that they are both exposed to their neighborhood community, but also still have privacy and space that is reserved for their own protection. The program will focus primarily on alternative therapies that involve the process of making. The products of this therapeutic making will be on display in a retail/exhibition space which will serve as the institution’s primary connection to the community, where outside visitors can observe and potentially purchase the work that is being produced by the inhabitants. The number of inhabitants will be limited to allow for a tighter-knit community of recovering makers.
PROGRAM DISTRIBUTION:

**LIVING**

- Single Apartments x14: 7000 sf
- Bathroom
- Kitchen
- Large/Family Apartments x4: 3000 sf

**COMMUNITY**

- Shared Kitchen: 1000 sf
- Lounge: 1500 sf
- Gymnasium: 1500 sf

**MAKING**

- Workshops: 3000 sf
- Gallery/Exhibition: 2000 sf
- Personal Studios: 6000 sf

**OFFICE**

- Administration: 1000 sf

**TOTAL (NET)**

- 26,000 sf

**TOTAL (GROSS +20%)**

- 31,200 sf
SITE NARRATIVE

Regional Site Considerations:

1. Within the Northeast United States
2. In an area struggling with drug and alcohol abuse as well as poverty
3. An area with a dying history of making

Local Site Considerations:

1. Within a mixed-use context (Retail/Arts)
2. Exposed to community with opportunities for privacy
3. Easily accessible via local transit
4. Relationship to historic context
5. Within the poorest area of the city

In choosing the site to express this thesis within, not only do the above considerations apply, but there is also a need for an expression of the possibility of recovery within the site itself. The chosen site must itself be in need of rehabilitation; a site which exists as an underutilized hole within the existing fabric. The program will then be able to fit into this hole, making the site, as well as its surrounding context complete once more, in the same way that this thesis’ program hopes to accomplish recovery for its residents.
Types of Illicit Drug Use

- Primary types of illicit drug use in the United States: information source: Huffington Post image by author
- Painkillers and the Heroin Market: image from The Huffington Post
- Amount of illicit drug use in the United States: information source: www.oas.samhsa.gov image by author
- Rise in population of poverty areas in the United States: information source: Huffington Post image by author

Painkillers and The Heroin Market

A growing number of people are using heroin in recent years, in part because it can be cheaper and easier to find than opioid painkillers purchased on the black market. Most heroin users were first hooked on prescription opioids, which generated $11 billion in 2010 for the pharmaceutical industry.

Substance abuse treatment facilities admissions by primary drug

- Heroin
- Other Opiates and Synthetic

4 out of 5 new heroin users have abused painkillers.

A Cheaper High

$30 can buy one oxycodone pill on the street in New York...
or six hits of heroin.

*2012 data for Mississippi, Pennsylvania, and West Virginia are not available.
AMOUNT OF ILLICIT DRUG USE

RISE IN POPULATION OF POVERTY AREAS
CHOSEN SITE: LEWISTON, MAINE

The second largest city in Maine, Lewiston is a historic mill town, built around a series of textile mills along the Androscoggin River. As more and more of the American textile industry was outsourced, these mills were forced to close, leaving very little work for the people of Lewiston, as well as leaving a huge portion of the structure of the city abandoned. The people that stayed around have had a continually downsloping quality of life, and as a result, have turned to drug and alcohol abuse as a coping method.

The metaphorical nature of the textile mill has relevance to this thesis: if ‘soft’ material can be produced in a ‘hard’, industrial environment, then a ‘soft’ architecture can exist within a ‘hard’, industrial landscape.

The historic mills in Lewiston exist primarily on a
peninsula created by the creation of a series of canals built to service the Bates Mill Complex. This canal led to a separation of production spaces from living and working spaces within the city.

In recent years, there has been a development of art studios and creative production spaces along Lisbon street, in the historic downtown district of Lewiston. This activity has brought production back into the living and working district of Lewiston, allowing for the beginning of connections between the community and production spaces to exist once again.

Along this Lisbon Street “Art Walk”, there exists a site that became a hole in the fabric of downtown Lewiston a few years ago when a series of buildings burned down. The site allows for a connection of people from the community to a production space for recovering addicts, as well as maintains somewhat of a relationship to the water. The southernmost Art Walk terminus is located at Grace Street Recovery Services, an existing recovery center that focuses on traditional drug and alcohol recovery, but also provides space for recovering addicts as well as other community members to paint and sculpt and skateboard indoors.
poverty map of Lewiston
information source: U.S. Census Bureau
image by author
building fabric of Lewiston
image by author
_street grid of Lewiston
image by author
Parking of Lewiston
Lots indicated in orange, decks in red
Image by author
_green space of lewiston
image by author
Art walk of Lewiston
Temporary galleries highlighted,
Permanent galleries outlined
Image by author
chosen site: hole in fabric
image by author
chosen site: hole in fabric
image by author
ground level floor plan
1/32" = 1'-0"
image by author
Street level floor plan
1/32" = 1'-0"
image by author
Level 2 and 2.5 floor plans
1/32" = 1'-0"
Image by author
level 4 and 4.5 floor plans
1/32" = 1'-0"
image by author
_studios rendering
image by author

_model photograph
image by author
ANNOTATED BIBLIOGRAPHY


Jenny Donovan is the principal of the urban design practice Inclusive Design. Donovan’s work looks at the ways our places and communities are assembled, focusing on aspects of well-being, happiness, and resilience. Designing to Heal looks at the characteristics of places that are designed to promote healing, such as flexibility, connectivity, and reassurance.


This series of small-scale spatial interventions focuses on collaborative space making. The scale of the interventions allows for many moveable/adjustable pieces that can be custom-built or uniquely arranged. As shown in many of the examples, the resulting outcome of the intervention is often unexpected, which indicates that the ability to define one’s surroundings brings out a natural creative inclination within a person. It also reveals sudden collaboration to create something new and different out of a fairly simplistic intervention.

John Paul Eberhard is an architect by training who has dabbled in many fields, focusing for most of his career on research-based design. With Brain Landscape, Eberhard suggests a paradigm shift emerging as a connection between the fields of neuroscience and architecture, looking at the science behind the mind-body connection and how this information can be used in an architectural design setting.


Winnifred Gallagher is a freelance journalist whose work centers on the way we live and why. The Power of Place examines the connections between people and the places they live. Gallagher draws from behavioral and environmental science to examine our reactions to physical qualities of space such as light and temperature, and explore the mind-body connection.

This study uses Maslow’s hierarchy of needs as a basis for an investigation of the experiences of adults in programs for serious mental illness who have suffered from homelessness. The study focuses on the multifaceted relationship between basic physiological and safety-based needs, the setting of goals, and the meaning of the term self-actualization.


This news article discusses recent trends in heroin and opiate abuse in Massachusetts. The data presented in this article tracks the exponential increase in the deaths related to heroin and opiate abuse over the past decade.


This news article takes a look into the world of rehabilitation as viewed from Grace Street Services, a substance abuse rehabilitation center in Lewiston, Maine. Grace Street offers both traditional rehabilitation services as well as art-therapy related practices that focus on rehabilitation through art and creation.

Moss analyzes the history and development of North Adams, a city in western Massachusetts, relative to their creation of the Massachusetts Museum of Contemporary art. His analysis of several studies show that within the first few years of Mass MoCA’s opening, the city began to undergo a positive transformation for the first time in a very long time. It is implied that the museum itself spurred the change to occur, creating a model by which other cities may test out a new cultural/arts-based approach to city planning in an effort to revitalize a community.


Robert Sommer is a psychologist who has worked in various capacities as a consultant to architecture firms. Social Design focuses on bringing together the disciplines of architecture and behavioral science in a way that becomes a template for how to set up a project that spans both fields. Sommer pushes for a more focused method of examining individualized user needs and programming as a primary basis for design approaches.
In this text, Sommer goes into detail about prisons and similar programs in terms of their psychological as well as architectural impact on communities as well as individuals. He discusses how often times designing a “hard” architecture for the purposes of safety, cleanliness, and standardization can have the opposite effect on the actual use of a space. Sommer advocates for a “soft” architecture to replace the current system of prison life, and he argues that this will result in higher safety and cleanliness standards, as well as a feeling of mutual respect between guards and prisoners, without any adverse effects on mental health.


This text looks at the economics of happiness and how that translates into the world of architecture. A series of essays study how and if designing for happiness is possible, not only at a building scale, but at a city planning and even a cultural scale.
Forging from Scars:
Reconstructing a Maker-Based Identity in Lewiston, Maine
Alexandre Lynne Sixt
Thesis 2016
Tulane School of Architecture
Advisor: Prof. Marianne Desmarais