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I, Rebecca Snyder, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture (Master of).

It is entitled:
The Power of Architecture: Architecture of Power

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Abstract

Prisons are intriguing institutions in our society. They appear frequently in popular culture and history yet in reality we view them with disdain or indifference. Prisons have become a dichotomy of fascination and ambivalence. In Ohio, the stated goal for prisons is to lower recidivism; however, prisons, both in programming and architecture, focus almost strictly on incarceration and neglect that goal. In the architecture of institutions, much of the time and money spent is on security and monitoring while little care is put into how the space affects the users. Architecture has the opportunity to provide people with light and air and beauty, to affect those who inhabit it. What better way to study this impact of architecture than in an environment in which the users are forced to inhabit? This thesis combines the study of the interrelationship between people and their environment with the design of justice architecture. The prison typology has seen models evolve throughout time; some of which consider the impact of the built environment on users more than others, yet we still place prisoners in crowded, unstimulating environments that are detrimental to their well-being. This is counter productive to the goal of lowering recidivism. Specifically, this thesis studies the effects of built form and architectural experience on health and rehabilitation of inmates, recognizing the psychological impacts of an environment on the user and therefore the enhanced effect on those in the penal system in the United States. As a result, an adapted prison model is proposed combining the discipline and security measures necessary in corrective buildings with architectural approaches to align with the goal of the penal administration, where architecture is used to facilitate rehabilitation, reduce recidivism, and ease reentry into society.

Keywords: prison, architecture, recidivism, reentry, rehabilitation
Fig. 2 Logo from “The Bridge” in Chicago

Fig. 3 Bill Strickland speaking at Jubilee Conference in Pittsburgh
Preface

Chicago was the first city I spent time in, a week on summer break in high school. An event that I attended that week changed my life, ‘The Bridge.’ The Bridge is a weekly gathering where ex-convicts are given a chance to build a community to replace their previous, unhealthy relationships. I had never met a convict before and here I was, a 14 year-old girl from the middle-of-nowhere Ohio supposed to greet these big guys with lots of muscle and the most tattoos I had ever seen. As the service started, I sat on the side of the room with my friends, but as we neared the end, one of their leaders strummed his guitar and said that we are all part of one family and invited us to stand together and sing as such. As my teammates and I filed into their ranks, I was overcome with the thought that these were my brothers, that they were more than ex-convicts, they were real people with real needs and desires, and at that moment I came to understand a new definition of family.

In college, I had the privilege to hear Bill Strickland speak, and while he did not talk about the prison population, he did talk about the disadvantaged. Bill Strickland is a community leader and visionary who runs a non-profit helping the impoverished of Pittsburgh build a better future. Mr. Strickland told us something that I will never forget; he said poor people deserve good buildings. They deserve light, and art, and fountains, and hope. In saying this, Bill Strickland gave my profession new meaning to me; he told me that I could be a producer of hope, that in designing buildings I could create an environment that not only worked on a functional level, but could also speak to the emotional and spiritual needs of humans. Prisons are not generally thought of as places of hope, but of security, punishment, and discipline; by reforming design to match administrative policy, prison architecture can become a place of rehabilitation and not strictly punishment.
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Fig. 4 Recidivism Rates by Country

% BACK IN PRISON IN 3 YEARS OR LESS
The Power of Architecture: Architecture of Power

Introduction

Institutional architecture mainly focuses on security and monitoring and little care is put into the psychological effects the space has on the users. This is attributable to the evolution of the concept of punishment in our society where we vacillate between harsh discipline and times of reform. While they are named correctional institutions, we treat them as places not to correct, but to punish. Prisons are used to separate criminals from the public, but while we have the opportunity, should we not use that time to rehabilitate inmates and teach them to become productive members of our society? Penal architecture should not simply contain and secure but facilitate a solution by providing an environment that encourages education, reform and rehabilitation.

Imprisonment has arisen as a humanitarian effort to alleviate the atrocities of corporal and capital punishment; however, prison now punishes beyond taking away the liberty of inmates. Only in America is it extreme to give prisoners the same rights of all citizens save for those inhibited from physically being behind prison walls (Tonry, 2004). Not punishing beyond taking away one’s liberty would allow for an environment comparable to the outside world, one with both rewards and responsibilities. If inmates habituate themselves to a healthy routine in prison, the more similar the environments are, the more likely it is for them to continue when released. Focusing on rehabilitation and re-entry should effectively lower recidivism, a rate that measures the number of inmates who return to prison in the three years following their release. This rate, at 67.5% in the United States, is almost double than Canada, Japan, or Sweden (“Statistics,” n.d.). Recidivism itself is proof of a broken system, as the purpose of punishment is to reduce the level of crime. On
Fig. 5 Holding cells in the Colosseum, Rome, Italy
top of recidivism affecting lives and politics, it also greatly affects economics. The
New York Times estimates that across 41 states, $635 million in spending could be
cut in one year by lowering recidivism just ten percent (“Recidivism’s High Cost”,
2011). Recidivism is not the only problem plaguing the criminal justice system in
the U.S. In Ohio alone, the prisons are currently running at 132% capacity (ALEC,
2013). Creating an environment or incarceration that allows inmates to successfully
reintegrate into society should not only reduce recidivism but in turn will also lessen
the strain of overcrowding.

Imprisonment

Prisons have been around since ancient times. There were houses of chains in
Ancient Athens, accounts of prisons in Ancient Israel and Egypt (Roth, 2006 xxvi).
In the photo to the left, we see the ancient Roman holding cells beneath the floor of
the Colosseum. Each of these systems was used in conjunction with many other forms
of punishment. It was not until very recently that imprisonment became the main
form of punitive measures. Any study covering the prison system must include the
work of Michel Foucault, a French philosopher and theorist who laid the groundwork
of explaining the philosophies of the penal system. In his book, Discipline and
Punish (1977), he explores the four topics of torture, punishment, discipline, and
the prison. He explains the development of the penal system through time and how
imprisonment became the regular form of punishment. His work follows the path of
discipline and punishment through its history, beginning with torture and corporal
punishment through to the prison system today. A common thread throughout his
work, is the concept of power. Foucault declares that public execution was not about
exhibiting justice, it was to reaffirm the power of the government. He explores how
discipline is first mastered by religious institutions and has been carried over from
Fig. 6 The Architectural Relations of the Panoptic

Fig. 7 Prison Models throughout Time
monasteries to schools, hospitals, factories, and prisons. From this came the idea of the Panopticon, a design concept that allows constant one-way observation of prisoners is the epitome of imprisonment at the time where knowledge is the ultimate social control and imprisonment is a way to gain that power through knowledge. Foucault (1977) acknowledges that there are problems with imprisonment:

Because it is incapable of corresponding to the specificity of crimes.
Because it has no effect on the public. Because it is useless, even harmful, to society: it is costly, it maintains convicts in idleness, it multiplies their vices. Because the execution of such a penalty is difficult to supervise and because there is a risk of exposing prisoners to the arbitrary will of their guards. Because the job of depriving a man of his liberty and of supervising him is an exercise of tyranny. (114)

While there are issues with imprisonment, Foucault concludes that because we punish, our society believes there is a solution to criminal acts, therefore punishment should be focused on the possibility of the repetition of those crimes (the cause of recidivism). It is through addressing the problems articulated with the prison system and by implication the architecture, that true rehabilitation can be achieved.

Foucault (1977) in his analysis of the origin of the prison, brings up two defining models for the prison. He describes the dungeon as having “three functions – to enclose, to deprive of light and to hide” (200). This is in direct contrast to the other model, the panopticon, which preserves only the function of enclosing, but bombards the inmate with constant bright light and exposes them to constant examination. Within this transition from dungeon to panopticon, there is also a shift from ignoring prisoners to scrutinizing them as shown in Figure 7 where the ‘Observer’ and the ‘Observed’ are diagrammed in the prototypical prison plans. Here
Fig. 8 Mansfield Reformatory, Mansfield Ohio

Fig. 9 Alcatraz Penitentiary, Hydro Therapy Room, San Francisco, California
Prisons are intriguing institutions in our society. They appear frequently in popular culture and history. We visit prison museums, as in Alcatraz and the Tower of London, read books like *The Count of Monte Cristo*, and watch the movies *Shawshank Redemption* and *The Green Mile*, but the reality of prisons in society today is spurned, shoved out of sight and not often encountered. The dominant architecture heralded by these examples is a fortress, focused on deterrence and security. Both are important aspects to the architecture of prisons, but neither speak to the main goals of reducing recidivism and crime. Prisons have become a dichotomy of fascination and ambivalence. Very few communities desire a prison in their locale; they are something we tuck away so that they are not seen or recognized for what they are.

Prison Typology

Prisons in the United States are institutions to deprive inmates of liberty as a punishment for crimes committed. The architecture of prisons, however, must do far more by incorporating programming and design features that lead to reducing recidivism. There are newer prisons in Europe where the focus is more on human rights and the dignity of inmates, for example, the Justice Center Leoben in Austria, completed in 2004, provides individual cells furnished with a flat screen television and inmates have chances to hike the campus or create gourmet meals. In prison policy, these examples cause a great divide. Most everyone agrees drawing and quartering is outdated, inhumane, and not appropriate punishment, but is taking away someone's
Fig. 10 & 11 Justice Center Leoben, Leoben, Austria

Fig. 12 Robot Prison Guards being tested in South Korea, an extreme example of the dehumanizing technology overseers.
liberty, yet leaving all of their other rights and providing them with life in a “luxury resort” punishment enough?

The answer to the previous question comes down to the goal of punishment in our society. If the mission is as stated by the Ohio Department of Rehabilitation and Correction, to reduce recidivism, then the architecture must follow that goal. Seán McConville and Leslie Fairweather are the editors of Prison Architecture: Policy, Design and Experience, a book that arose from a London symposium on penal ideas and prison architecture. It explains there is far too little empirical research on the effects of prison architecture on the users. In the first chapter of their book, McConville (2003) also touches on technology taking away human encounters. Technology integrated into our prisons is used for security and economic reasons, allowing the prisoner to staff ratio to drop, but at what cost? McConville voices concern in how this trend will effect both the inmates and guards, supposing that neither can view the other group as human without interaction. This dehumanization causes return to the outside world to be much more difficult for the ex-convict and is something the staff must return to daily. McConville focuses on architecture and the relationship with prison policy as such:

While some currents in penological thought suggest that we can overlook the moral capacities of prisoners and staff, surely the whole ethos of architecture - its integrity as a tool in the refinement and development of civilization - cannot allow it to proceed without placing the human element at the centre of its endeavors. (15)

One of the ways that humans are at the center of architecture described in McConville’s chapter, is the notion of beauty. McConville (2003) is forthright about the fact that there is no good way to determine the actual effects of beauty, but is
“These walls are funny; first you hate them, then you get used to them, then you depend on them - that’s institutionalized.”
-Quote about Brooks from *The Shawshank Redemption*

“In here, he’s somebody, out there he’s nobody.”
-Quote about Brooks from *The Shawshank Redemption*

Fig. 13 & 14 Brooks from *The Shawshank Redemption* as an example of the harm of institutionalization in prisons.
quick to assert that it is beneficial to society and by endorsing this belief and the need to escape ugliness, “we reaffirm one of the core values of our civilization” (9).

In *Environmental Psychology*, Bell (2001) proposes the Behavior Constraint Perspective. In this theoretical perspective, perceived control is the main factor. It says after one determines a set of circumstances is beyond their control, the natural response is to reclaim that control. If this attempt is not successful, the subject becomes a victim of “learned helplessness,” (Bell, 2001). In relation to a prison, convicts get little or possibly no control over their environment or even their activities. If we envision the prisoner in this model, as soon as that control is lost (i.e., the convict enters the prison), they react and try to regain that freedom. This could provide a problem for the safety of all involved. Over time though, if the inmate is unsuccessful (as the prison is designed to be), they will be in a state of learned helplessness where they begin to submit and lose all hope of gaining control. This means any inmate that doesn’t escape from prison is going to end up in a state of learned helplessness before they leave prison. In no way can this be a productive result of the prison system. It does however fit in with other studies that talk about institutionalism, a system where hope has been removed. Doctors have found in mental hospitals that once a patient is at a point where they can be released, sometimes the patient cannot function in the outside world because they have spent too much time on the inside and have lost that ability.

In prisons, that is probably exemplified through the popular movie, *Shawshank Redemption*. In the movie, we get to know Brooks, the librarian who has been imprisoned for 50 years and is so used to ‘the life’, he tries to hurt someone within the prison so that he may stay. He had gained status within and the prison was his whole life. When he was finally released on parole, Brooks was incapable
Fig. 15 Ohio Prison Capacity
of adjusting to the outside world and hangs himself. This is a prime example of institutionalization. Bell (2001) in this chapter also talks about a case study in a nursing home where one group of residents were told they were responsible for themselves as well as given a plant to take care of. The other group was taken care of by the staff. Less than a month later, those who were given a task were doing much better than those who were given no perceived control.

Along with control of one’s environment, another important factor that gets lost in the prison environment is privacy. The Ohio prison system is currently running at 132% capacity (ALEC, 2013), meaning that gymnasiums and cafeterias are being transformed into mass warehouse living and cells designed for one occupant are now holding double. Kopec (2006) when analyzing health care environments emphasizes the impact of privacy. Along with wayfinding and accommodations for family members, he presents privacy as the vital features in designing healthcare spaces. These two environments are extremely relatable as they are both institutional, have users that do not necessarily want to be there, and are working to create an environment advantageous to treatment. Kopec (2006) describes entering a long-term healthcare facility as such, “For many, when hospitalized, nearly everything about the person, with the exception of their illness, becomes invisible; and the psychological loss of control that results from not being allowed to make decisions about their lives and the activities they can partake in, reduces the patients’ desire to be proactive about their health” (261). In prisons, inmates carry around a label of their crime; it is what others see. According to Kopec, intentionally creating privacy is a way to bring treatment rather than previous crimes to the forefront of the prisoners’ mind.
OUR MISSION
“To reduce recidivism among those we touch.”

OUR VISION
“To reduce crime in Ohio.”
Lowering Recidivism

Reducing recidivism in Ohio is not just a social goal, but also practical as it would reduce the strain on the prison system and reverse the problem of our ever-increasing prison population. Overcrowding in prisons has been an issue in the United States since the ‘hard on crime’ initiatives began in the late 1960s and early 1970s. Sheriff Jim Neal of Hamilton County asserts that around Cincinnati, prisons are continually at or above capacity (Coolidge, 2013). In the past, the solution has been simply to build new prisons which only temporarily alleviates the problem. The state is now beginning to focus on rehabilitation, diversion programs, lowering recidivism, and education of inmates as effective ways to relieve overcrowding. Some of these schemes can provide alternatives to incarceration, but these objectives can and should also be integrated into the prison system to build a better environment that promotes people to reintegrate into the community and stay out of prison after their release. The governing administration of state prisons is the Ohio Department of Rehabilitation and Corrections (ODRC), whose vision is to reduce crime in Ohio. They function to run prisons in the state and increase public safety. In 2007, the ODRC began to understand the importance of reentry of inmates into the community and has tried to refocus their energies. This not only increases public safety, but also is a financially responsible strategy. Even though the administration is shifting, the architecture of institutions like prisons still hold on to the harsh punishment model, exhibiting spaces that are detrimental to the inmates.

The Ohio Department of Rehabilitation and Corrections is in charge of most prison expenditures in the state. Their mission statement is very straightforward, “To reduce recidivism among those [they] touch” (“ODRC,” 2013). In the breakdown of the state government, their purpose is to ensure that adult felony offenders are
## PRISON GOAL

### LOWER RECIDIVISM

<table>
<thead>
<tr>
<th>EDUCATION</th>
<th>REHABILITATION</th>
<th>EASE REENTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOCATIONAL TRAINING</td>
<td>COMMUNITY INVOLEMENT</td>
<td>CONNECTION TO COMMUNITY</td>
</tr>
<tr>
<td>REDUCES LIKLIHOOD OF CRIMINAL BEHAVIOR</td>
<td>POTENTIAL FOR PRO-SOCIAL HUMAN INTERACTION</td>
<td>SIMILARITY TO THE OUTSIDE WORLD</td>
</tr>
<tr>
<td>POTENTIAL FOR PRO-SOCIAL HUMAN INTERACTION</td>
<td>EVIDENCE BASED PROGRAMMING</td>
<td>EMOTIONAL STABILITY, LIFE, AND JOB SKILLS</td>
</tr>
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Fig. 18 Prison Goal Breakdown
effectively supervised in environments which are humane and secure. By building a more effective prison, the most immediate benefit would be to decrease overcrowding in Ohio prisons by adding a new facility in Hamilton County and in the future by lowering recurrence of felonies and further alleviating the strains of overcrowding. A more effective prison would include resources that encourage the goal of reducing recidivism. The solution to recidivism distills into two main groups, programming and community. To modify behavior one must participate in evidence based practices for programming. In the prison setting, the most critical correctional practices in executing programs are: “effective use of authority,” and “relationship quality” (Manchak, 2013). As with community, the importance lies in positive human interactions. These human interactions encompassed in community and programming can be provided for through design in three main areas: education, rehabilitation, and facilitating reentry into society. An understanding of these three factors would help develop a modified typology and architecture. In an effective prison, the design accommodates spaces for education, a rehabilitative atmosphere, and an architectural experience that moderates the return of the inmate into society.

**Education**

In the psychology of criminal behavior, a risk factor describes a factor that increases the likelihood of engaging in crime (Manchak, 2013). Lower education is one such risk factor for crime, which we can work to mitigate. This is possible through educating convicts through various programs including, GED, college instruction, and vocational training. Other educational and vocational opportunities are combined with rehabilitation programs in topics like the arts or gardening. One such program, not in a prison, but in a low-income community with high drop-out rates was the brainchild of Bill Strickland. Mr. Strickland is a visionary
Fig. 19 & 20 Educational facility built by Bill Strickland to incorporate beauty into the lives of his students.
and community leader who has revived inner-city Pittsburgh with after-school art programs designed to educate and inspire. He works to change the lives of impoverished kids in inner-city Pittsburgh. In his book, *Make the Impossible Possible* (2007), Strickland outlines his life story where a high school art teacher turned his life around with clay and jazz. He, in turn created a school, the Manchester Craftsmen's Guild (MCG), based on simple principles: that poor people deserve light, fountains, and good buildings, that beauty has an effect on people, that when we treat people with respect and give them state-of-the-art resources, many of them will begin to respond in kind. They teach students the arts and in turn, they become better students in all areas of life. In 2010, it was shown that 93% of seniors who attended MCG graduated from their high schools on time opposed to the 75.5% national rate of graduation (Manchester, 2012).

Strickland delivers empowering speeches some of which are threaded throughout his book, each inspires others to dream big and grasp the power of something as simple as clay or as beautiful as an orchid. Just as in Mr. Strickland’s powerful story of at risk youth turning their lives around through art, the same methodology can be applied to prisoners. How can we expect to lock human beings in cells, with very few positive interactions and for them to come out repentant and rehabilitated? We need to provide things like beauty, that are essential to our humanness, and art that has transformative power into our prisons if we hope for rehabilitation. In the case of Mr. Strickland, this power doesn’t come simply from adding beauty, but by teaching through exposure to possibilities of differing alternatives.

Vocational training can be a large part of education within prisons. It has been shown that inmates are much less likely to recidivate after completing a
Fig. 21 & 22 Participants in The Last Mile in San Quentin State Prison, California
vocational program within prison (RAND, 2013). One unique example of such a program is the The Last Mile at San Quentin State Prison in California. This program was started and is run by the founders of KickLabs, an accelerator company that works with entrepreneurs. They bring guest speakers in to teach business skills and work with a select set of inmates to come up with their own idea and create a business plan. Not only do they teach valuable skills in the prison, the participants are set up with an internship coming out of prison and have committed to being life-long members. They are then are expected to help other graduates of the club as they reenter into society creating a built-in mentorship component (Stanford, 2013).

Rehabilitation

Rehabilitation can have many meanings, it can be used in relation to physical ailments, substance abuse, or the restoration of position or status. In the realm of criminal justice, the substance abuse definition is valid, but there is also a larger picture of rehabilitation. According to the Oxford English Dictionary (2013), one definition is, “The improvement of character, skills, and behavior of an offender through training, counselling, education, etc., in order to aid reintegration into society.” This type of rehabilitation comes through an evidence based, cognitive behavioral framework, which can be the foundation for both educational and vocational programs (Manchak, 2013). The quality and quantity of those programs are the key to rehabilitation in prisons. In the realm of architecture, programs and the integration with the community will have a great effect on the programming and design, but rehabilitation is also influenced by the design itself. The field of Environmental Psychology studies the physical and psychological effects on inhabitants of a space, which is intensified in an environment where one is forced to remain.
Fig. 23 Model of Hard Determinism
Johnathon David Giber (1980) provides empirical research on the effects of prison design in his dissertation, *The Psychological Effects of Prison Architecture and Environmental Design*, where supported by noted psychologist Robert Sommer, declares that conduct of prisoners is not positively impacted by punishment beyond confinement. He also speaks of the psychological effects physical design may have on inmates. It is recognized, other factors such as program philosophies or social backgrounds cause ambiguities in the effects of the built environment on people, meaning everyone responds to spaces differently based on their previous experiences and understanding. To distill the features a space has on the users, Giber developed a system of measuring dimension of physical design by interviewing inmates and their perceptions of their environments (iii). He also gives theoretical models in which behavior may be modified by the environment. Through his surveys, it was found that the hard determinist model was the most congruent. This model asserts that both ‘Physical and Architectural Features’ along with ‘Policy and Program Features’ influence behavior. This emphasizes significance of architecture and the role of architects in the well-being of the inhabitants of building of their design. Giber also establishes that the most influential figure in an inmate’s life is the correctional officer (57). This encourages the implementation of the direct supervision model of prisons which started with the ‘New Generation’ prisons, where direct interactions between prisoners and guards are encouraged rather than the trend of separating the two groups as much as possible through modern surveillance and security technologies. The human interaction is significant to the success of a prison. As the push has been toward electronic monitoring and eliminating interaction between the staff and inmates, the correctional officer’s influence also greatly effects the potential of prison design. With Giber’s information in mind, this lack of interaction would
Fig. 24 Process through the Criminal Justice System
be detrimental to the rehabilitation of prisoners as positive human encounters are imperative. Giber takes this theory of punishment and the concept of penal code to the next level for the architect in proving there is a role to be played.

Michael Tonry, a professor of criminal law and policy at the University of Minnesota and editor of The Future of Imprisonment attributes values to punishment, assigning reasons or goals to the act of punishing. He contends that we could do more with prisons while spending less. One way of doing this is framing the prison as one aspect of a larger punishment system, just as hospitals are a part of the larger healthcare system. Tonry (2004) sees three values in punishment: Retributive (morally right, deserved), Instrumental (deterrence, rehabilitation, incapacitation), and the sensibilities of the times (prevailing attitudes). Therefore the purpose of a prison is to punish and prevent crimes, promote self-development, and in doing so, should not damage prisoners (8, 11-12). One such damaging effect can be the length of sentence, as it is determined in this writing that a longer sentence does not lead to the prevention of crime.

Tonry points out uses for punishment going beyond Foucault's power and social control, providing a more healthy concept of a prison environment. He also factors in the sensibilities of the times which account for many of the variations of punishment we see in Foucault's history of punishment and in our own penal code. These variations could lead to new penal policies that could go hand in hand with new prison architecture to improve the rehabilitative efforts of prisons. The lack of connection between longer length of time in prison and prevention of crime provides the conclusion that the prison environment is not currently conducive to rehabilitation and that our sentencing procedures are focused solely on punishment without consideration for recidivism.
Fig. 25 Renderings of the New Danish State Prison
Facilitate Reentry

The final avenue in creating a better prison is to ease reentry into society. Being released from prison is possibly the hardest part of a prison sentence, as once one has adapted to the prison environment, it is hard to reintegrate back into the real world. One way to ease the transition is to design prisons to be as similar to the outside world as possible. Giber (1980), however, found that the area most like the outside world in his study was viewed both as the most attractive place in the prison and as a place that inspires resentment (as prisoners perceived the beauty as a pretense for visitors). Maybe instead of being similar to the outside world, specific elements of the outside need to be identified and adapted to the internal environment. For a successful prison design, one must bring the outside in, in such a way that it does not create a showpiece, but a living environment. However, we must also bring the inside out and create a two-sided interaction between the prison and the outside world. Positive reentry into society is likely impossible without positive human interactions while incarcerated. To realign the focus of prison architecture to include rehabilitation, education, and reentry, is in truth putting the human back in the center of architecture. This user-focused way of design naturally will still contain the important factors of security and safety as they are essential to the users and the typology, but exploring beauty, privacy, light, social environment, perception, and interactions can enable architecture to support penal administrators in humanizing prisons that will in turn promote rehabilitation in prisoners, and reduce recidivism.

The new Danish State Prison designed as a competition entry by C.F. Møller, creates a village with a central space, a cultural center, sports fields, and housing similar to apartments. Construction is scheduled to be completed in 2013. The site plan is grouped in clusters and has a centrifugal feel where the everything radiates out from a
Fig. 26 Campus of the University of Cincinnati
central space. This village setup is very similar to a campus feel, a typology understood from being a student at the University of Cincinnati (UC). UC in the past few decades has worked hard to create a unified campus. One of those improvements was hiring Hargreaves Associates to create a master plan for the campus, who also did the landscaping within that plan. Some of those improvements and defining characteristics of becoming a campus are landscaping, open space, green spaces, pedestrian circulation, and the interplay of buildings.

A campus structure is proposed rather than one oppressive, monumental building. A campus setting will provide the inmates with more flexibility and sense of control over their environment and be more equivalent to the outside world. This would rely on an amply secure outer boundary as demonstrated by the new Justice Center at Leoben in Styria, Austria in which security exists obscurely within the building while the overarching security is on the exterior border where it is visually diminished. While effective in its rural setting, an urban prison must also have a public face. For security a boundary must be maintained, becoming vital in the design, as it has the potential to effect the connections with the community so vitally needed in prisoner’s lives.

The security of a prison typically entails multiple layers of overlapping monitoring and containment. The main architectural feature, visible from both in and outside, is the boundary. Within the prison typology, there are two common treatments of boundary; either the whole perimeter is enclosed in fence, typically a double fence, or the exterior walls of the prison act as the containment themselves. The former is represented in the diagram on the next page by the Maryland Reception, Diagnostic and Classification Center and the latter is usually exhibited in urban settings like the Hamilton County Justice Center. The diagram expresses the
Fig. 27 Example of Building Skin as Boundary (Hamilton County Justice Center)

Fig. 28 Example of Fence Boundary (Maryland Reception, Diagnostic, and Classification Center)

Fig. 29 Model exploring the possible fluidity of boundaries.
hard outer line creating the final boundary between the inmate and the public. In the upper plan, the boundary aligns with the exterior skin of the building, eliminating any possibility of outdoor access, save for a courtyard. The bottom image refers to the type of prison that has the possibility of a more flexible interior with a hard borderline set off from the building creating an interior complex. As the project site is urban, the building skin as boundary would be a typical approach; however, the goal is to make a connection between the inside and the outside world where boundary becomes more of an interaction between the two places, therefore it may be beneficial to create a boundary that is less fixed and more permeable to encourage community involvement. This makes the means to cross said boundary, the threshold, as important as the boundary itself. Therefore, the idea is to combine the existing two boundary types and create the prison building itself as a wall and the interface between which the community and prison interact.

**Fig. 30 Interactive Boundary Diagram**

**Fig. 31 Formulaic Diagram: Prison as a Wall**
Fig. 32 Steps to Lowering Recidivism
Methodology

There are several architectural implications at a programmatic level that can potentially modify the typology and improves the inmate experience to promote rehabilitation, these are the goals throughout the design process.

- Human interaction is key.
- Similarity (or inclusion) of the outside world eases reentry.
- Idleness increases violence.
- Education reduces the likelihood of criminal behavior.
- Vocational training lowers recidivism.
- Daylight, good ventilation, and beauty affect our physical, emotional, and psychological well being.
- Perceived control helps us cope in everyday situations.

The current prison model has been assessed, including programming, space requirements, and security measures to adapt and include features speaking to the key points above and in turn reach the desired rehabilitation outcomes.
Fig. 33 Halden Campus Plan Rendering
Case Study: Halden Prison

In Norway, prisons are focused on human rights and the dignity of inmates. This is the location of Halden Prison, designed by Erik Møller Architects, completed in 2010, and chock full of amenities. Some of these include hiking trails, cooking classes, and flat-screen televisions in each individual cell (Vinnitskaya, 2011). This prison is a controversial example for many in the United States. Pictures of prisons like this have circulated here in the United States becoming the source of either jokes or outrage, but Norway has a recidivism rate of twenty percent, meaning twenty percent of the inmates are back in prison within three years. In comparison, the recidivism rate in the United States is between sixty and seventy percent. This is an example of where administrative principles and architecture go hand in hand; this prison would not be built if the ideals of rehabilitation and creating a positive, educating atmosphere were not main goals of the administration. It also shows that when working together, architects and administrators can lower recidivism.

It is the general philosophy that outer security provides inner flexibility. This means that Halden’s exterior wall allows more freedom of movement and open space for the occupants with landscaping around the building and in other areas of the site, the trees almost become forest like with pathways throughout for hiking. Hiking is just one of the many activities that inmates can choose to do on Halden’s campus. This is a way for inmates to feel in control of their life, even while having structured time and activities. In this light, Halden does much to give perceived control, where the strategy is to occupy and interact with the inmates. This coming from the idle hands theory. Basically, keep the inmates busy and they will stay out of trouble, but more than that, the goal of prisons in Norway is to make the sentence consequential to the inmate. The programming is all organized by the correctional officers, which is
Fig. 34 Halden Prison Cell

Fig. 35 Halden Prison interaction between guards and inmates.
a sharp change from how the United States trains and utilizes security.

Norway’s prison guards undergo two years of training at an officers’ academy and enjoy an elevated status compared with their peers in the U.S. and Britain. Their official job description says they must motivate the inmate “so that his sentence is as meaningful, enlightening and rehabilitating as possible,” so they frequently eat meals and play sports with prisoners (“Humane Prison,” 2012). This focus on programming and positive interaction decreases the likelihood of inmates to attack the guards and each other according to the prison strategy. It also protects the prisoners from learned helplessness or institutionalization that Bell warns against.

Privacy is much more intentional at Halden, where every inmate has their own cell, each being more like a room than a typical prison cell as shown in Figure 34. This room looks similar to a college dorm room, but with a flat-screen television in each. Many have quipped about how unnecessary televisions are for inmates so I asked Dr. John Wooldredge (2013), professor in Criminal Justice at the University of Cincinnati his thoughts on the subject. He encourages anything that works; if a television is something where a prisoner can spend time alone to decompress, or to occupy their time, why wouldn’t we? In addition to privacy according to Fairweather (2003), in every situation (vs. doubles, small occupancy units, open dormitories, and segmented dormitories) single cells had less negative effects of perceived crowding, threatening behavior and unhappiness. Furthermore, Halden puts the correctional officer not only in contact with the prisoners but in relationship with them. This rehumanizes the prison from the digital observation to that of monitoring with a beneficial connection. Fairweather (2003) has studied this in other prisons and confirms, “Greater staff-inmate contact has been found to lead to increased positive
Fig. 36 Halden Prison Design Features
relationships, allowing more effective surveillance and better security. Such contacts also help to dissolve tensions and lower the social temperature” (35).

Beauty can be in the eye of the beholder, but as shown in Figure 36, one would not expect these images to come from a prison environment and one of the differentiating factors, if not beauty, is at least a conscientious look to the aesthetic and impact of the architecture on those who use the buildings. Somehow Erik Møller Architects found a way to put the human back into the center of the architecture, even when that architecture is of a prison. Part of their success comes from their understanding of color therapy, placing calming colors in the dorms and vibrant in recreational spaces for example. They also not only commissioned art but they allowed the beauty of nature to exist within the walls, sadly a rare occurrence in prisons, as nature has an incredible impact on our psychological well-being. The natural environment not only allows us to recover the capability of increased attention, but also reduces stress (Kaplan, 1995). Each of these benefits are vital to building a space for rehabilitation. While Halden is a beautifully designed prison, the planning of the prison neglects the idea of accessibility for visitors and staff. With the proposed prison in Cincinnati, the site addresses the aspect of lowering recidivism, being well-situated to increase prison visits, human interaction, and community involvement.
Lower Price Hill

Fig. 38 Cincinnati Topographic Survey of 1912

Fig. 39 Sanbourne Insurance Map, 1904
Project

My aim is to align architecture with the stated goals in the current penal administration of Ohio’s prisons by studying the psychological effects of the built environment on the inhabitants, to create an environment that encourages rehabilitation, and lowers recidivism. Many prisons are sited out of the city in a rural area but urban settings provide access to outside community services and agencies, increase the likelihood of community partnerships, allow easier access for visitation, and ease accessibility and services for staff of the prison. Ohio prisons are overcrowded; Cincinnati is no exception. I propose to build my prison in Lower Price Hill, the neighborhood in Cincinnati with the highest crime rate, to encourage accessibility for visitation and as a resource to the community. The area between 8th and Gest and Evans and Depot (see Figure 36) provides a beneficial urban setting in an industrial area adjacent to the railroad and Metropolitan Sewer District. This allows for enough space to build a complex instead of a massive single institutional building and is close to the police academy, allowing a learning opportunity for them. It is also in close proximity to downtown where partnerships can be formed with volunteers to create rehabilitation programs. Historically, this industrial area was located on the streetcar line seen on the Sanborn Insurance Map of 1904. It was also close to the bottom of the incline as shown on this panoramic drawing of Cincinnati from 1900 (Figure 40 on the following page).
Fig. 40 Panoramic Drawing of Cincinnati, 1900
Fig. 41 Lower Price Hill Statistics
Site

Fig. 42 Bing Aerial Maps: 1996, 2006, 2011
Fig. 43 Views from and around the site, keyed into Figure 42.
Fig. 44 Site Plan
The main hindrance to rehabilitation in prisons currently is the lack of positive human interaction and community involvement. This is addressed throughout the document in examples of effective programs including education, vocational training, and in general, occupation of the inmates’ time. In the context of our correctional system today, it is not conceivable to expect the correctional officers to provide all of these interactions and programming, but it is reasonable for them to organize groups in the community willing to give of their time and expertise to provide the inmates with more positive human interactions and options to improve mind, body, and spirit. The diagram below describes the basic layout of the new prison design with the solid ‘L’ shape being the living quarters for prisoners, set up with individual rooms for privacy and perceived control, but with communal cooking, eating, and living spaces so they have the opportunity to work together, make decisions, and have some of the same responsibilities as in the outside world. In turn, the other two occupiable walls are used as an interface for the community and resources for both the prison residents and community members including a theater/auditorium, recreational facilities, chapel, library, classrooms, and dedicated visitation areas. The courtyard space created as the in-between is an outdoor space for the prisoners with recreational space and a garden for rehabilitative purposes.
Support services within the community

Fig. 46 Community Involvement Concept Diagram
Community Involvement

Fig. 47 Cincinnati Potential Community Involvement Map

Fig. 48 Lower Price Hill Potential Community Involvement Map
Residence

Fig. 49 Individual Rooms with Wet Room (Shower, Toilet, Sink)
Fig. 50 Example of Typical Cell
Fig. 51 Residential Kitchen and Dining Room

Fig. 52 Residential Living Room
Fig. 53 Plan Axon showing Residential and Community Spaces
Community

Fig. 54 Section of Library Community Building

Fig. 55 Play Room for Visitation

Fig. 56 Section of Entry, Theater, Gym, and Chapel Community Building
Fig. 57 Library Perspective
Fig. 58 Community Member teaching Gardening in Courtyard
Conclusion

Prisons come at great cost to society and still result in inmates disassociated from society. Incarceration is however our primary form of punishment, therefore we need to define the purpose of punishment to be integrated into our goals for prisons. The ODRC states that goal as lowering recidivism. The physical environment of the users is a large factor, but architecture can only be influential when coupled with policy reform. To achieve this, one must look after both the physical and psychological well-being of the inmates. For example, architecture can promote social interactions and re-humanize prisons by designing an environment that is more similar to the outside world, to create beauty, and once again, place the human at the center of architecture. In doing this successfully, the design of a prison encourages its goals as an institution.

To reduce current prison problems such as violence, overcrowding, and high recidivism, we do not need to build more and more prisons, we need to design a model for better prisons. The goal is not strictly to punish, but to lower recidivism. We can begin to create environments that are conducive to education, rehabilitation, and reentry into society. The face of the prison can be changed into one that the public can interact with, creating a more normal existence and therefore a chance to successfully integrate back into society. We can create prisons that will reduce recidivism, therefore decreasing cost of imprisonment, reducing crime, reconnecting families, and increasing the work force in Ohio. As shown by Bell and Giber, architecture has a psychological effect on the users of a building and prisons can encourage rehabilitation in inmates. Focusing prisons on rehabilitation is a social problem with policy solutions, yet architecture can play a vital role in reinforcing those policies.
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