

ARCHITECTURE AS A DEVICE OF CONTROL:
THEMES OF PRISON LIFE WITH FOCUS ON SOLITARY CONFINEMENT

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Doctor of Philosophy

by
GREGORY A. GALFORD
Dr. Benyamin Schwarz, Dissertation Supervisor
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ARCHITECTURE AS A DEVICE OF CONTROL

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ARCHITECTURE AS A DEVICE OF CONTROL

The undersigned, appointed by the Dean of the Graduate School, have examined the
dissertation entitled

ARCHITECTURE AS A DEVICE OF CONTROL:
THEMES OF PRISON LIFE WITH FOCUS ON SOLITARY CONFINEMENT

presented by Gregory A. Galford,
a candidate for the degree of doctor of philosophy,
and hereby certify that, in their opinion, it is worthy of acceptance.

Benyamin Schwarz, PhD

Ruth Tofle, PhD

Laura Cole, PhD

Anna Ball, PhD

ARCHITECTURE AS A DEVICE OF CONTROL

DEDICATION

To my father, whose values and beliefs inspire this work.

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EPIGRAPH

“It is said that no one truly knows a nation until one has been inside its jails. A nation should not be judged by how it treats its highest citizens, but its lowest ones.”

Nelson Mandela

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DEFINITION OF TERMS

Bid – *sentence for an inmate*

Bid post - *posting for an officer that can be requested through union rules*

Bubble – *solitary confinement officer command center*

Bucket – *solitary confinement cell*

Cellie – *inmate's roommate in a cell*

C.O. – *correctional officer*

Dedicated Treatment Unit - *units within a prison providing mental health treatment*

Doing time – *serving your sentence*

Hole – *inmate's term for solitary confinement*

DOC – *Department of Corrections*

Prison 1 – *newer prison utilizing present design prototype*

Prison 2 – *older prison utilizing former design perspectives*

Restricted housing unit (RHU) – *alternative name for solitary confinement*

Sally-port – *a controlled entry gate for prison*

SCI – *state correctional institution*

Segregated housing unit (SHU) – *another name for solitary confinement*

Slicing – *not showing up for work as an officer, requiring someone else to take your shift.*

“Time easy” – *serving your sentence in a peaceful manner. Espoused by older inmates*

ABSTRACT

This research is focused on the factors that affect the behavior of those within correctional environments, from general population areas to solitary confinement environments. The architectural perspective of this work views the building as the device of control and is based on extensive prior research into the historical theories that underlie it, while answering the question of what qualities of correctional environments shape the behavior and experience of its inhabitants.

The research was conducted at two medium security correctional institutions in a large northeastern state, with one being the second oldest and the other being the newest prison within the system. This research was conducted with twenty-four participants using a qualitative research methodology, as the researcher sought to listen to the experiences of those involved. Critical stakeholders that constituted the sample included inmates, officers, architects, health and mental health professionals, and administrators. Grounded theory was used to code the data that was obtained to identify emerging themes. Research tools included memos, interviews, observations, journals, and photographic and graphic analysis.

Specific themes emerged from the coded analysis that reflected broader environmental factors within the solitary confinement experience and in general population living areas of the facility. Themes of trust, sound, views to nature, routine, and time were identified. This work highlights the impact of mental health needs within the prison system and how those needs inform future prison design. The integration of

nature and access to views can reduce inmate stress. Sound control as well as visual control can contribute to officer safety and inmate well-being. Future building design can help with experiences of time and routine that will foster both a sense of relevance and rehabilitation for inmates and security for officers.

INTRODUCTION

A fear for everyone is to be invisible and forgotten. This work originated with that concept by expanding a previous study that focused on the way prisons and asylums contained personal histories that are largely undocumented. The residents themselves rarely recorded their lives, and their families often did not want to acknowledge this part of their family history. Shame was the dominant concept for both those inside and outside the prison or asylum walls, and the historic built artifacts are all that remains (Braithwaite, 1989, p. 4). This research begins with a focus on solitary confinement environments and progresses to the broader question that asks how environmental characteristics within a prison, as devices of control, affects the lives of prisoners. All the involved stakeholders in this research spent time in both general population and solitary confinement environments. Their experiences often move between the two, and it is the desire to understand both that informs the research question.

This work examines the prison as a type, and discusses the concept of control through the device of architecture. Through prior work on the role of surveillance in our lives, I became interested in how built environments control our behavior. The prison is the building type to best understand this concept, and I started with a thorough study of its development as a type. There is a rich historical background, often based on reform, that influences our current system, and many goals of the past are reflected in the successes and failures of our current system (Evans, 1982, p. 1).

This research focuses on solitary confinement as the environment within the prison that exerts the most control. While the life of a prisoner is always controlled and

structured within any correctional institution, there is another space that is even more dispiriting. These are spaces of punishment for deeds within the prison for people already being punished by society. Rooms that are 8'6" high x 12' long by 7' wide hold one or two people with windows that are 4" wide by 36" tall for extended periods of time.

Historical spaces of solitary confinement had as their goal the rehabilitation of the soul. Solitude and silence were seen as ways to remove corrupting influences from the criminal to help him back to a path that aligned with the religious goals of the times. Solitary confinement changed with time, and many of its original redemptive goals were forgotten as it became more of a punitive tool (Rusche, 1968, p. 65). The form and characteristics of these spaces have evolved with societal inspection, but they are still spaces that are the most controlling within our society.

These spaces are still seen as necessary to those within the correctional system. They are for those who still need to be punished and to be removed from other populations for a period of time. Being held there inspires fear in all of us. While the nature of security within these areas keeps us from really knowing the experience, within ourselves we sense that these are hidden societal spaces that are still part of our collective whole, utilizing control as a paradigm (Guenther, 2013, p. 138). Understanding how they operate helps us to understand ourselves.

There is a growing movement to look anew at how these places are used and how juvenile populations may not be sufficiently developed to cope with them. My aim with this work was to listen to the various stakeholders, to gain a deeper understanding as to how solitary confinement environments operate. I relied heavily on interviews with all those involved; their stories relate to previous work in this area of study and their

histories deserve to be listened to and shared with others. Many of those involved in this work were very grateful to be heard by someone, and I thought it important to give voice to those who may feel ignored.

This research is focused on the factors that affect the behavior of those who are involved in solitary confinement environments. The architectural perspective of this work views the building as the device of control. The work is based on extensive prior research into the historical theories that underlie the use of the tool within correctional institutions.

The research was conducted at two medium security correctional institutions in a large northeastern state, with one being the second oldest and the other being the newest prison within the system. This research was conducted with twenty-four participants using a qualitative research methodology. Critical stakeholders that constituted the sample included inmates, officers, architects, health and mental health professionals, and administration. Grounded theory was used to code the data that was obtained to identify emerging themes. Research tools included memos, interviews, observations, journals, and photographic and graphic analysis.

Specific themes emerged from the coded analysis that reflected broader environmental factors within the solitary confinement experience and in general population living. Themes of officer trust, sound, views to nature, the use of routine, and the concept of time were identified. This work also highlights the impact of mental health needs within the prison system and how it needs to inform future prison design. The integration of nature and access to views can reduce inmate stress. Sound control as well as visual control can contribute to officer safety and inmate well-being. Future building

design can help with experiences of time and routine that will foster both a sense of relevance and rehabilitation for inmates and security for officers.

Architectural Perspective of Study

This research looks at the issue from a different point of view than many who study the correctional system. As an architect, I am looking at the issue of how buildings influence actions from a different perspective than sociologists, psychologists, or criminologists. The initial interest for me was to explore how buildings control behavior. Prisons are building types that are unique in almost all ways but still exist as alternative forms of housing. They are an important part of our institutional built landscape but receive less attention and inspection from the public due to their secure nature and to the ominous role they play in culture. The physical manifestation of a prison has an importance greater than our usual awareness.

The historical background study that preceded this work also provided great value in understanding how prisons play a role in our culture and mirror civic aspirations in many ways. The history of the development of the prison directly affects its architectural form. The new American prison was built to embody societal goals of the time, and reflected how civic leaders chose to rehabilitate or reform the prisoner. Penance was often a goal of these early prisons, and that was implemented by the building form. The entwined concepts of subjugation and control were tools that were used to support these broader goals and were actualized by the prison form itself (Herman, 2001, p. 8)

Each generation of American prison design has reflected shifts in society, and the opportunity to study these two prisons, as representatives of different generations of

correctional aspirations, was extremely valuable. The prisons that are part of this study are very different, as the architectural paradigms that defined their layout were not similar. However, both facilities are governed by the same set of policy guidelines for their operation. While there is substantial standardization within prisons as to how they function, the dissimilarities in the buildings themselves require particular implementations of policies. These differences, no matter how small, are recognized by the inmates. These environments all uniquely affect behavior as devices of control, with the buildings not being a passive vessel but being an essential part of the solution for punishment.

Dissertation Structure

The conceptual framework for this research, which approaches the work through three perspectives, focused on the issue of control in a unique way: criminological, historical, and environmental. The contextual section of this dissertation provides a connection to the historical work done on the development of the prison, as its history greatly informs the penal discussions today and may provide insight into future directions. The approach to this research utilizes qualitative methods, with the goal of engaging closely with the data to gain a deeper understanding of the issues. The approach section defines the different means used to collect the data. The findings and discussion section review the categories that emerged from the data, and answers a research question that sought to find the real environmental effects of solitary confinement environments. Themes of trust, sound, nature, routine, and time are common to all the stakeholders and are discussed at length. Architectural implications are presented in the discussion component, and the conclusion connects emergent themes to current societal issues.

CONCEPTUAL FRAMEWORK

The conceptual framework for this work is comprised of three parts. The issue is framed and informed by three disciplinary ways of looking at issues of control and how that applies to spaces of solitary confinement. One is criminological, one is historical, and one is environmental. The choice of these three categories is meant to incorporate all the significant ways of reviewing these issues in ways that reflect the work. The criminological focus is the traditional way to look at these issues and has to inform the work. The historical perspective provides the necessary contextual component to understand the current penal system and how it has evolved. The architectural focus is the one that is relevant to me through my personal experience as an architect. It is necessary for this work that all three are combined to produce an effective way to approach the research.

Criminological

Control means different things to different stakeholders. Its use within criminological theory is relevant to how we look at the buildings that house criminals. Three strains of crime theory dominated much of the twentieth century. This research utilizes the one most focused on the issue of control. Rather than focusing on the friends of the juvenile delinquent or the strain on them due to external factors that block normal means of success, control theory focuses on both interior control, such as the conscience, as well as exterior control, as in an employer, parent, or other role model. The predominant control theory is the social bond theory. Hirschi's social bond theory became the most important version of control theory with two important supporting

control theories (Hirschi, 2004, p. 537). These two theories are techniques of neutralization and containment. Developed by Sykes and Matza (1957), their theories are that crimes are committed when the rules that contain our criminal behavior are removed. These techniques of neutralization are the ways in which people remove the constraints that keep them from committing crime (G. M. Sykes, & Matza, D., 1957, p. 211).

Other control theories are based on what motivates virtuous individuals to succumb to criminal forces. Control theorists such as Hirschi (1969) start with the assumption that people are naturally inclined to criminal behavior if it satisfies some desire, and it is only the controls of society that keep them from committing the crime. It is the disparities of control versus the differences in motivation that are the defining factors of whether a crime is committed (Cullen, 2011, p. 215).

The self-control theory differed from the previous works in that the strength of self-control was the predominant view of criminal behavior versus the lack of social bonds. In this theory, self-control is the only thing keeping the individual from committing a crime that often leads to a gratifying outcome for him or her, and this self-control is largely established in childhood, primarily instituted by the parent. The key to achieving this self-control within the child revolve around parental attachment to the child, parental supervision, recognition of deviant behavior, punishment of deviant acts, and the parents' own criminality (Gottfredson, 1990, p. 234). This view of criminal theory as one based on self-control aligns with the ways in which surveillance, discussed below, can rely on this activity to influence behavior. Unseen surveillance promotes a climate of fear that inhibits the freedom to commit a criminal act.

Historical

The second major relevant framework for this research is historical. The context of the development of the prison and how control is viewed theoretically influences this research work. Prior to the formal development of prisons, those convicted of serious crimes either had their fatal forms of justice meted quickly, or in the case of Britain and other colonial powers, they were transported to penal colonies abroad (Rusche, 1968, p. 58). Both America and Australia served England in this regard, but with both revolution and revulsion, these opportunities eventually diminished. As awareness of Britain's criminal justice system grew, social reformers looked at the need for a penitentiary system that used architecture as the device of control (Howard, 1777, p. 43).

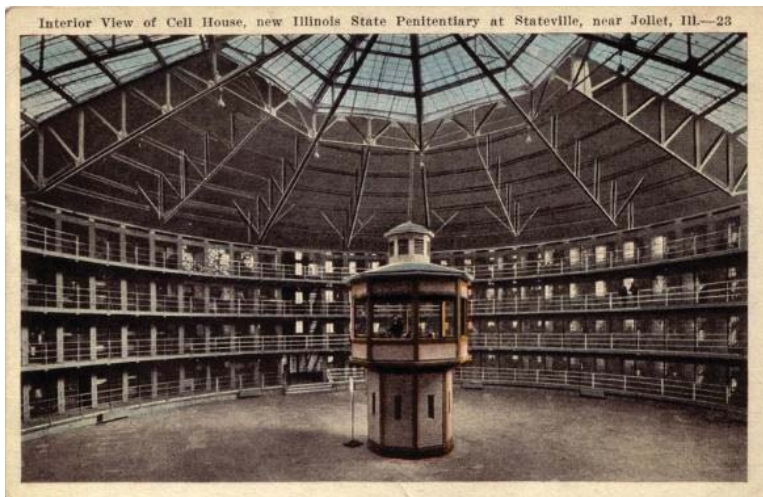


Figure 1: Panopticon at Joliet, IL

Panopticon at Joliet, IL. (n.d.). Retrieved from <https://prisonphotography.files.wordpress.com/2010/08/large-panopticon.jpg?w=490&h=316>

Jeremy Bentham was an eighteenth century philosopher known for his utilitarian designs that attempted to solve social problems with institutional housing. His panopticon, as seen in Figure 1, was a circular structure of incarceration designed for

efficiency that allowed for total control through invisible surveillance. Its circular form allowed all prisoners to face a guard tower but the view of the guard was hidden (Johnston, 1973, p. 20). Its true power of control was the inability of the prisoner to know when he was actually being viewed (Foucault, 1995, p. 201). The form of the device provided physical control, but the unique design of one-directional surveillance provided it with a more sinister and sophisticated psychological control. This architectural form was rarely built, but was very influential on American and European penal reformers. Two major models of American prisons were developed that illustrated related ideas about control through surveillance and isolation within the prison population. Both the Pennsylvania and Auburn methods were designed by reformers who incorporated rehabilitation as a major component of their designs (Johnston, 1973, p. 29). The Pennsylvania model of prisons is best exemplified by Haviland's design for the Eastern State Penitentiary in Philadelphia, as seen in Figure 2 below.

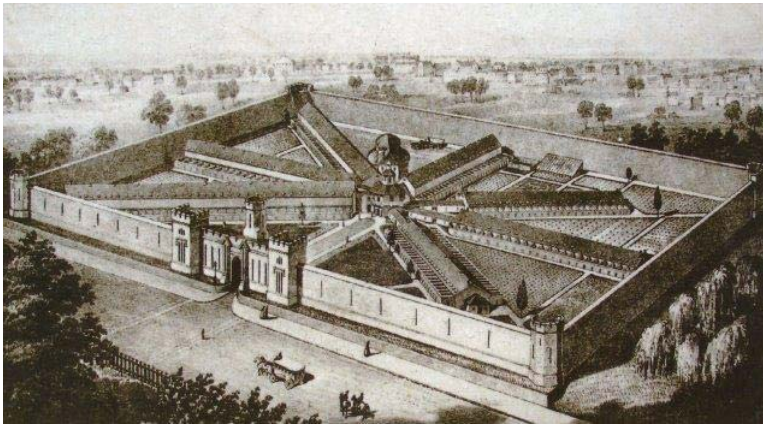


Figure 2: Eastern State Penitentiary, Philadelphia, PA

Eastern State Penitentiary. (n.d.) Retrieved from <http://hist285-phillytech.wikispaces.com/Eastern+State+Penitentiary--Abandonment+of+Quaker+Ideals>

Solitary confinement was used as the device of housing in all the cells. Its design was one of a walled perimeter, a radially-based system of cellblocks that met at a guard tower. Its

radial design was similar to Bentham's plan, but the correctional officers could not observe the prisoners from their central location. It was thought that the removal of human and environmental contact would provide a space and time for penance and rehabilitation. Food was delivered anonymously through a slot in the door and the only natural light came through a skylight that prevented visual connection with the outside world. It was thought that total control would enable the inmate to remove criminal influences, which would lead to personal reform (Ignatieff, 1978, p. 84). The mental instability of inmates produced by this system, coupled with the high cost of single cell incarceration and administration, enabled its successor – The Auburn System.



Figure 3: Auburn State Prison, Auburn, NY

Auburn Prison. (n.d.). Retrieved from <https://livingnewdeal.org/wp-content/uploads/2014/08/Auburn-Prison-2.jpg>

The Auburn system of penitentiary design, as seen in Figure 3, still aimed for control but did allow inmates to see each other. The primary difference was that, although they were permitted to be near each other, they were to attain redemption and rehabilitation through

work and total silence (Morris & Rothman, 1997, p. 197). For this study, the historical use of control is relevant to reviewing current standards of design.

Environmental

The third framework utilizes environmental tools of analysis for the prison building itself. By utilizing accepted tools to evaluate the performance of buildings, its success can be viewed against other building types that do not have such an extreme function. The prison is somewhat unique due to its direct connection of design and function to behavioral outcomes (Foucault, 1995, p. 116).

The placement of a prison is a primary category for review. The decisions made about its proximity to other architectural, environmental or climatic features are of relevance. Recent expenditures on “supermax” prisons and other institutions of high security have been in extremely remote locations. This divorce of connection to outside populations has made it harder for families to visit (Travis, 2006, p. 5) and for the institutions to recruit correctional employees. Rates of recidivism have also been tied to the ability of families to visit.

The prison as a type has relied extensively on organizational and circulation models to support the goals of incarceration, rehabilitation, and control (Hirst, 1982, p. 187). The ability to maintain order within the penitentiary historically relies on highly structured means of movement within the prison. Movement is extremely regulated to maintain control. Current systems of prison design often rely more on the free movement of inmates during the day, with visual control managed by a correctional officer or closed-circuit television. Current debates question whether the circulation of inmates

fosters or impedes the goals of rehabilitation, the extension of power, and the diminishment of violence (Hirst, 1982, p. 184).

Control within the penitentiary is also maintained by the access of daylight and artificial light. The prevalence of natural light and views affects the mental health of both the inmates and the correctional officers. Access to outside views beyond the penitentiary and the availability of natural lighting are relevant to be evaluated as an architectural feature.

The imagery of the prison façade and how it relates to its urban or rural context frames the way in which we evaluate the performance of the building type. Early prisons relied on architectural language to relay a strong message about its use and placement. Their materials were largely chosen by functional necessity, as more insubstantial materials would not have provided the necessary security. The massive stone walls and historic architectural details were intended to project power through strength, and control through separation (Bender, 1987, p. 20). The use of current building materials and finishes affects how residents and workers react behaviorally to the building itself.

The prison also uses privacy as control. How privacy is viewed within any building is an important variable to consider. Most buildings are evaluated on how they allow for a spectrum of environments from the fully public to the fully private. Having a space of one's own is generally considered a successful environmental goal and the violation of privacy is detrimental to society (Lyon, 2007, p. 12). The housing type of solitary confinement transforms this social desire to a punishment. Privacy is used to segregate the population, and exists as a means to exert power, and frames how we view building performance.

Prisons are homes, albeit non-traditional ones. They have a unique social structure with different cultural and behavioral norms than outside society (Clemmer, 1940, p. 299). The research question for this study is one that has relevance in the context of current social dialogue on the issues surrounding our criminal justice system. My interest originated in the discussion of the historical reuse of largely forgotten institutional buildings such as prisons and asylums. A deeper study into the historical precedents of the development of the prison began to illuminate architectural models that were solely designed to control behavior.

Due to recent increases in US prison growth, historical models have been implemented, but their success was no greater with reuse (McShane, 2008, p. 154). The best example of this is the growth of the method of solitary confinement. While this correctional practice has attracted researchers due to its effect on human behavior, studies on the behavioral implications of architectural design decisions are minimal.

As society pushed for increased general surveillance and correctional buildings have exerted more control on their inhabitants, their residents have experienced less control over their own lives (Bauman & Lyon, 2013, p. 3). Solitary confinement, as a magnification of the general prison environment, epitomizes this situation, and this is the approach that contextualizes the research question. Many studies have focused on the human experience and the ramifications of this prison technique, but this study proposes to analyze the environmental device used to affect behavior while realizing that the protection of correctional officers and the protection of inmates are fundamental concerns for all involved decision makers.

I want to understand how architectural influences, such as the size of the room, the usage of certain materials, thermal comfort, and access to natural light and views, affects perception and behavior. All activities of daily living will be necessary components of this work. The routines of inmates beyond the cell are equally relevant, as control is achieved by different means outside the cell (Richards, 2015, p. 37). These environmental design decisions made by stakeholders may reflect variations in perspective that can lead to unforeseen results. It is imperative to include all who play a part in the design, implementation, and use of these living environments to be part of the study. By reviewing these issues from different perspectives, insight into the solitary confinement as a subset of the general life within a prison can be gained.

The control of the inmate, whether to be punished or merely separated from the general population, is the aim of the solitary confinement cell (Abbott, 1981, p. 37). What I want to achieve in this study is a better understanding of the contribution of architecture to this exercise in control.

CONTEXT

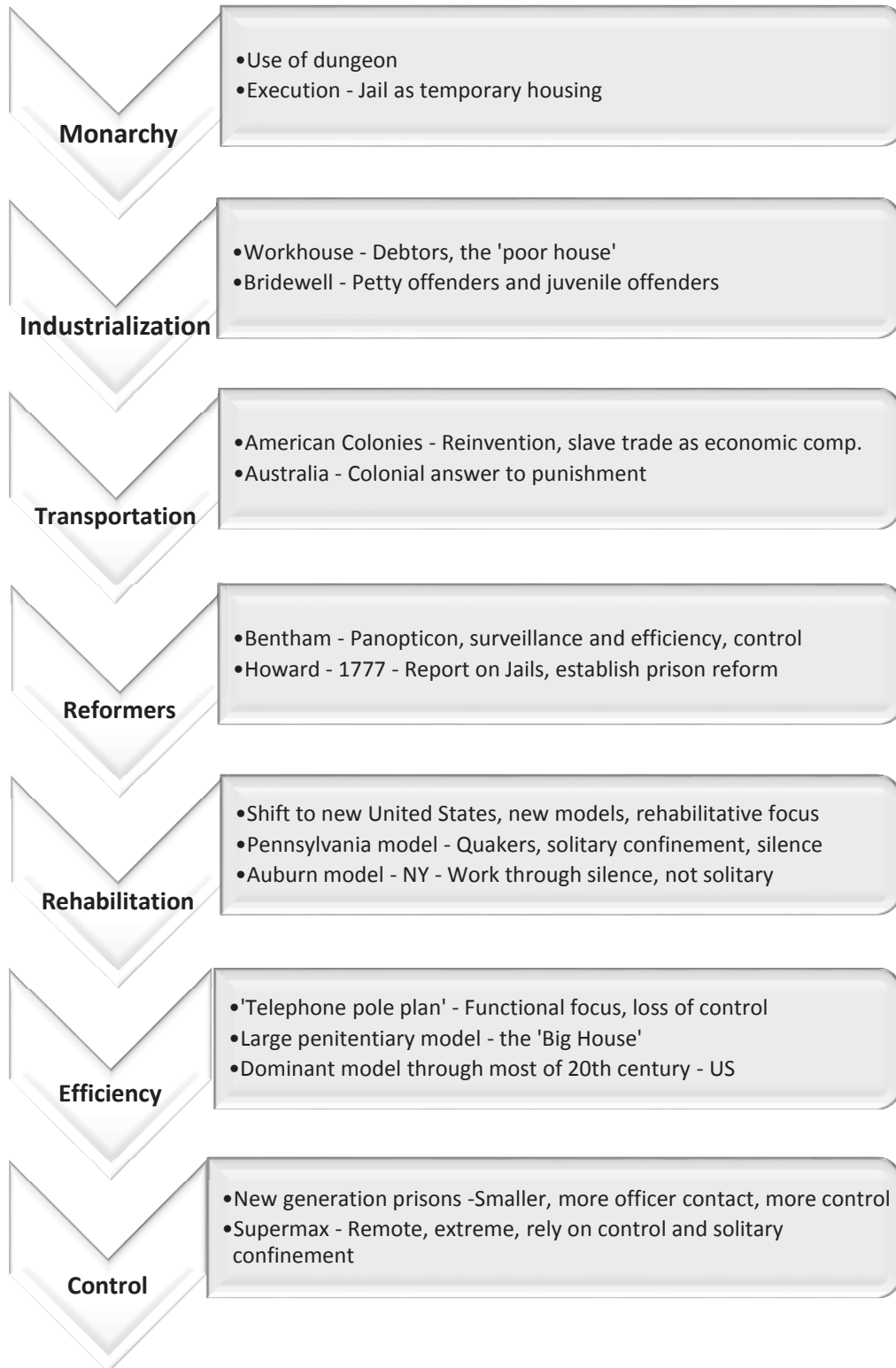


Figure 4 - Timeline of Correctional History

Introduction – Redemption, Reform and Rehabilitation

The history of the development of the prison was built upon theories that arose out of the philosophical beliefs of the times in which they were composed. As European societies industrialized, societal changes forced those in power to evaluate anew the ways in which crime and punishment were addressed. As power was expressed in new ways that aligned with changes in work and class, the prison as an institution became necessary.

The newly-formed United States provided an opportunity to put many of these ideas about punishment and control into a new setting that was influenced strongly by the religious framework of decision makers. Ideas of reform and rehabilitation, penance, and shame, emerged as new works of architecture were created solely for this purpose. Rather than adapting previous models and types, the American states provided a tabula rasa for experimentation. Tools of surveillance and work were not just a means of subjugation but also part of a path to redemption (Melossi, 1981, p. 125).

With time, many ideals were diluted, failed in execution, or proved too costly to maintain. New models were designed and many original goals were lost. Research that looks at the present state of the American correctional system with the hope of positively influencing future prototypes would be handicapped without a workable understanding of the rich history of penal development. The findings of this work clearly showed a connection to historical models, whether through a current inmate discussing ideas about isolation and penance or a correctional officer describing his ideal prison without the knowledge that he had sketched for me a model of Bentham's panopticon.

Correctional History

The correctional history of prison design involves a variety of aspects. Surveillance methods and overall goals of rehabilitation are major aspects of consideration. Surveillance contributes to the control of the inmate but also to the protection of the correctional officer. This allows for a sense of trust within the prison as it applies directly to their protection. Length of stay or incarceration was another factor in design. The historical prison only held inmates temporarily as they awaited transportation to a distant colony or execution, but modern prisons hold inmates for much longer periods of time (Rusche, 1968, p. 58).

The history of the prison is entwined with all aspects of society, and the development of the prison as an architectural type reflects changes in society. Monarchies had little use for the formalized prison as the jail or dungeon was merely a holding cell for the judged. The dungeon itself was part of the castle, so there was no separate architectural form. The early Christian church provided the initial models for prisons as a type (Wener, 2012, p. 21). The monastic cell with its focus on silence and penitence easily translated to the idea of the early prison cell. The church, in its role of casting judgment and exacting penance for that sin, was the catalyst for the establishment of the civil prison (Evans, 1982, p. 59). The industrialization of European countries produced both a shortage of labor and a growing number of persons without the means to support themselves, as they did with an agrarian lifestyle. The establishment of workhouses and houses of correction, or bridewells, were a means to correct the situation (Rusche, 1968, p. 63). The workhouse was for the indigent, but the bridewells were for petty criminals.

Both provided a means of cheap labor and were the predecessor of the prison, while the other main options were execution and transportation.

John Howard's survey of English and continental jails in 1777 provided an authoritative portrait of the status of jails. This was the first time such an extensive work was done on the status of incarceration in Britain and cities on the continent. This understanding of the current situation of the standards of criminal justice helped with the establishment of new models of prison design (Evans, 1982, p. 10). These models, inspired somewhat by Jeremy Bentham's theories, focused on means of surveillance and the individual cell as the hallmarks of design. Total control became the goal.

American models of prison design reflected different outlooks. In early American history, the connection to land ownership that was difficult in Europe provided more options for those of the lower classes. Land ownership indicated economic stability that provided a steady future for many. In Jacksonian America (1825-50), the establishment of new institutions provided a means for the young country to build on this stability. The country was proud of its prisons and asylums and was eager to display them to foreign visitors. The Pennsylvania model, and the subsequent Auburn model, provided templates for European criminal justice reformers. The focus on silence and work was in alignment with both the American religious and philosophical views of the time (Johnston, 1973, p. 29).

The acquisition of colonial lands provided new means of dealing with the problem of what to do with convicts if execution was not the easy answer. The term "transportation" was used to discuss the practice of shipping convicted felons overseas. Often the prisoners were held in ships in British or other European ports for lengths of

time in unbearable situations prior to passage. While the necessity of removing prisoners in a quick and effective way was important, an equally important reason was the way in which it tied into largely unstated capitalistic goals. Convicts transported to America or Australia provided free or inexpensive labor that was needed for work on the plantations that produced desired products for the host country. Britain was able to not only use the inexpensive labor to support its growing economy with these items of colonial trade, it was also able to avoid investment in more expensive penal systems (Rusche, 1968, p. 58).

This worked well for a time, and many prisoners were sent to colonies such as Virginia and Georgia, until the loss of the American colonies led to the temporary usage of Australia. Another factor that led to the demise of prisoner transportation was the introduction of the slave trade, especially in the Caribbean and the American colonies. While the use of convict labor was inexpensive, it could not compete economically with the growing amount of slaves imported from western Africa. While slave labor could be used indefinitely, the sentence of the convict would eventually be served, and the source of labor would be gone (Rusche, 1968, p. 60).

With this shift from monarchies to the democratic state and the dismantling of feudalism as a source, the previous forms of execution or transportation were not sufficient. New ways of dealing with a growing criminal class had to be found. As stated, the growing middle classes with more progressive outlooks were not inclined to accept brutal forms of criminal sentencing. Not all crimes were worthy of execution or transportation and new models for lesser crimes including petty thievery and an excess of debt had to be found. The establishment of workhouses or houses of correction fulfilled this need (Johnston, 1973, p. 10).

The writings on punishment and social structure by Rusche and Kirchheimer saw the early workhouses and houses of correction having an influence on prisons, but more importantly they saw them as places that fit in with the needs of an emerging capitalistic economy. The shift from a rural agrarian economy to an urban and industrial one had left many prey to the swings of capitalism. The state now had the opportunity to exploit those without means of subsistence to provide free labor to the state (Rusche, 1968, p. 63). This shift from the idea of the display of execution as a means of showing power to the utilization of the indigent and the petty criminal as a means of labor is illustrative of major changes in democratic economies, and the increasing dislike of public executions among the growing middle classes (Matthews, 2009, p. 3). While theories of redemption and reform may have been stated by progressive forces in prison movements, the underlying economic structure of how labor was supplied to the overall economy was always a major consideration (Rusche, 1968, p. 65 & 67).

This use of convict labor translated to the American prison system as well. While the early Pennsylvania system did not utilize work as a means of reintegration into society, the subsequent Auburn model did. The outgrowth of those two systems was the large state penitentiary in many of the new Midwestern and Western states. These large penitentiaries, which usually were accompanied by large farms, provided inexpensive labor that initially was exploited for monetary gain. Private businessmen could employ or lease convicts to act as laborers to work in fields or industries or they could operate a business within the prison and employ the prisoner in that way (McShane, 2008, p. 40).

This system worked well in economies with labor shortages. When the economic cycles changed and there was a labor supply in the general population, prison labor was

seen as unfair competition and was forced to reform by labor unions. The Muehlbronner Act of 1897 in Pennsylvania became a template for the industries in which prisons could operate and how much profit could be made (McShane, 2008, p. 43). The rise of organized labor in the United States provided much of the framework for the changes that transformed the use of prison labor. The options to use or abuse prison labor became more constrained and only the most exhausting and less desired types of work were allowed to them.

The strongest outcome of this change was the way in which the ideals of rehabilitation were compromised. Valuable skills that could be learned while in prison would allow the lowly skilled or unskilled convict a more reasonable chance to re-enter society with a means to meaningfully change their future. Without their ability to learn these desired economic skills, their eventual fate became more problematic. Prisoners who could be reformed and could rehabilitate their lives were now more isolated, left with more unused time, and subject to adverse prison cultural norms.



Figure 5: Former Weston State Hospital, Weston, WV

Galford, G. (2011). Weston, WV.

A unique reason that is often overlooked in the growth of prison populations that occurred in the second half of the twentieth century was the decline of the institutional mental health system in America. Under the Community Mental Health Act of 1963, many state hospitals were closed with the promise to return the mentally ill to the local community facilities where they would be in more humane environments. Aging nineteenth century asylums that needed extensive and expensive renovations could now be shuttered, as illustrated by Figure 4 above. This allowed governments to save money and to avoid the embarrassment of exposure to allegations of poor service (McShane, 2008, p. 184). The community mental health system was never able to adequately absorb the mentally ill population and many ended up homeless. Without any other societal safety net, many of those individuals ended up in the prison system. Mentally ill inmates typically received longer sentences and were less likely to be paroled; this problem has

only gotten worse in the last decades with urban prison systems reporting that 40% of their inmates have some type of mental illness (McShane, 2008, p. 69).

Beyond mental illness, the focus on work was threatened by the organization of labor unions that saw their wage and price controls undercut by prison labor. Many legislatures limited the work of the prisoner to industries that were not in any direct competition (McShane, 2008, p. 29). An effect of this change was that the inmate was not generally able to learn usable work skills, and that impeded his ability to rehabilitate or reform.

This lack of training and effective preparation for life beyond the prison fostered larger prisons and the establishment of prison cultures. Many states launched the building of larger and more remote penitentiaries that held prisoners for longer periods of time. With the “prisonization” of the inmate, he or she increasingly adopted the unique culture of the prison, which made his successful re-entry into society less probable (Clemmer, 1940, p. 299).

Reform and rehabilitation were still the standards of the US criminal justice system until the 1960s and 1970s with a professional class that had evolved in the administration of the prison system, but trust in that professional oversight of the criminal justice system eroded in the 1960s. As civil strife in the 1960s and the 1970s eroded public trust, and as the “drug wars” of the 1980s dramatically increased the violent crime rate and the incarceration rate, a strong conservative shift in the population cared less increasingly less about the rehabilitation and reform of the inmate population and more about increasing the punitive nature of their sentences. With the goal of inspiring deterrence, judges were not trusted to effectively sentence. Harsher minimum jail terms

were legislated that gave judges little room to maneuver (McShane, 2008, p. 6), as laws that mandated stiffer sentences for repeat offenders became the norm. When the addition of inexpensive illegal drugs were added to urban centers, an explosion in the US inmate population occurred (Herman, 2001, p. 26). With the addition of new technologies for surveillance, and the mandate of the courts to update the physical living conditions in American prisons, even larger and more remote prisons were built in the last two decades. Prisons of extreme security, known as “supermax” prisons, were the embodiment of this goal.

These policies are embodied in the architectural forms of the buildings themselves. The optical power of the physical form of the building is the one we respond to as it defines our major physical sense of these spaces of control. Issues of what is seen and not seen construct our understanding of the experiential nature of these buildings. Their materiality and form help us to understand the process of life within the prison. Other senses are heightened within these environments as well. The secondary sense that a prison conveys is the sense of sound. The chosen materials and built form contribute to the acoustic character of the building and influence the lived environment of the inmates and staff. Solitary confinement spaces can be among the most acoustically chaotic; the form of the building shapes that sound, just as it does for visual observation.

Surveillance was always a factor in architectural form and how it functioned within the context of the early prison or future penitentiary. Architectural form has always played a significant role in affecting the environment of inmates, as there is often a strong relationship between the theories of penal reform and the shape of the architectural enclosure that defines it. An understanding of this relationship helps to

frame the conversation with current and future modes of prison design. The types of buildings that define incarceration today are built upon a long history of prison types.

In early European or British jails, the architectural form was less important than its location, as it usually sat within a city or at its boundaries. It was still very much a part of the urban fabric of the city, and since it was often used as a holding cell prior to execution, its architectural imagery may not have been as important. During the eighteenth century, the facades of these prisons became more elaborate manifestations of an architectural language as theories on prison reform were disseminated (Bender, 1987, p. 21). Horrific and intimidating prison facades were often used to symbolize the liminal transition between the civic orders of the outside versus the somewhat chaotic interiors of the inside. The engineered systems of the penitentiary had not been incorporated yet, so the forbidding architectural symbolism of the prison façade was the dominating feature. These projected the power of the institution, but only in this symbolic way. Dominance of the architectural form did not yet extend to the interiors (Evans, 1982, p. 1).

With the progressive reformers of late eighteenth century Britain and, subsequently, America, the use of architectural form transformed from a message that was to affect the behavior of the general population through intimidation to one that focused on the engineering of behavior through the creation of extreme environments. These structures largely controlled and ordered behavior with little knowledge by the general population. The simple concept of liminality that defined the prison experience between the freedom of the city and the chaos of the prison beyond the fearsome gate gave way to a machine-like attention to the design of complete environments that had as their aim the subjugation of the human will. This translation from acceptance of penal

chaos to the belief in the design of total behavioral systems is an inflection point in the symbiotic relationship between extreme environments and affected behavior.

The form of the new prison was directly influenced by its function. While it was still usually located within the urban fabric of a city or town, its immediate façade was less about the symbolism of the institution and more about the power of its mission. Monumental walls with periodic observation towers were what the public saw, with an articulated entry system (Bender, 1987, p. 19). These prisons, such as at Pentonville in Britain, Eastern State Penitentiary in Philadelphia, or Auburn State Prison in New York, all took their design cues from Bentham's panopticon. They realized his theories in the articulation of form in different but similar ways. The centrality of the form was apparent in all three, as the concept of observation was at the base of all these plans. This was usually apparent in the radial form of the prison wings, as that was most efficient in terms of maintaining constant surveillance. While the Pennsylvania prison was the most pure in its marriage of form to function through its use of solitary cells with only skylights for light and vision, all of them had a form that constantly reinforced the power of the watcher over the watched through unobstructed views along the length of prison wings, as shown below in Figure 5.



Figure 6: Eastern State Penitentiary, Philadelphia, PA

Eastern State Penitentiary. (n.d.). Retrieved from https://9227-presscdn-0-11-pagely.netdna-ssl.com/wp-content/uploads/2016/10/30422896491_945ee0a5fe_b.jpg

The chaos of the earlier prisons, such as at Newgate, gave way to complete order and control in the progressive designs. Penitence and rehabilitation would be better served by an organization of the architectural environment that did not permit the chance encounter that would allow for criminal behavior. The idea behind the form of these prisons is that nothing is left to chance in the life of the offender (Evans, 1982, p. 5). With the total management of behavior through the machined efficiency of the environment, the chance for true reform of the prisoner's soul may occur. While the solitary confinement of the Philadelphia prison soon proved problematic in this regard, the original goals of the designed system were kept in place through much of the nineteenth century in both Europe and America.

The earliest models of prison were based upon medieval types that used dungeons within the lowest levels of existing castles. These rooms, which were similar to the eventual solitary confinement space, were used more as temporary holding cells until

judgment was passed and execution was rendered (Johnston, 1973, p. 7). These spaces eventually led to the need for more elaborate prison spaces that would serve growing urban populations. The earliest jails in Britain were typically located within city walls and were not easily identified as such (Johnston, 1973, p. 27). With time, more elaborate prisons were built and these did have identifying facades. Their location was of prime importance. Within the city, they were usually constructed near the city wall and city entrance. Logistically, it kept prisoners out of the center of the city where they could be harder to manage, and they were also near the perimeter walls to be excluded from the city with ease (Markus, 1993, p. 118).

An era of penal reform, instigated by John Howard's work of 1777 and the Penitentiary Act shortly afterwards, brought in a new era of thinking about the function and location of a prison. The themes of complete punishment and shame within the urban prison gave way to the ideals of rehabilitation and reform in the planned penitentiary spaces. Utilizing the new theories of Cesare Beccaria on criminal theories, these new prisons of Britain and early America illustrated a paradigmatic shift toward the scientific belief of human nature (Bender, 1987, pp. 22, 206).

Bentham's design for the panopticon occurred at the same time as Howard's research and the Penitentiary Act of prison reform. Its timing aided in its influence on prison design. While the panopticon was intended as a device to be used for many social institutions, its primary impact was upon sites of incarceration (Markus, 1993, p. 68). Bentham's design was to be similarly used for things such as orphanages and schools. The educational goals mirrored the goals of the prison, with religious beliefs of the

institution being the element that binds them. Both were focused on order, discipline, and habit formation (Markus, 1993, p. 79).

This religious foundation for the structure of buildings to reform human behavior was shared by the Quaker community in Philadelphia that was instrumental in planning the new Eastern State Penitentiary. This model, which had solitary confinement and silence as its hallmarks, utilized the similar cell configuration of early dungeon holding rooms, with the alteration being that these sentences were for long periods of time. The expense and isolation of the Pennsylvania model was soon overtaken by the Auburn model. Its ability to produce work through silence with the collective inmate population proved more popular within the American context (Johnston, 1973, p. 40).

The radial plans of the Philadelphia model and the Auburn model provided for centralized surveillance, if not on the same scale as the more ideal panopticon of Bentham. With the move toward more rural and isolated state penitentiaries in the southern and Midwestern US, the state penitentiary was often located upon large tracts of land where different architectural configurations were an option. What became known as the “telephone pole” plan became prominent; surveillance was not the dominant paradigm for architectural form. This is shown in Figure 6 below. Within a more functional conceptual framework, the large penitentiary separated out the many services and functions and linked them by circulation corridors that were part of the system of control. This remained a dominant prototype throughout much of the twentieth century (Johnston, 1973, p. 46). The evolution of the prison building type, even with twentieth century improvements, did not result in huge changes in the rates of rehabilitation, with

issues of inmate culture being of more significance than architectural form (Johnston, 1973, p. 50).

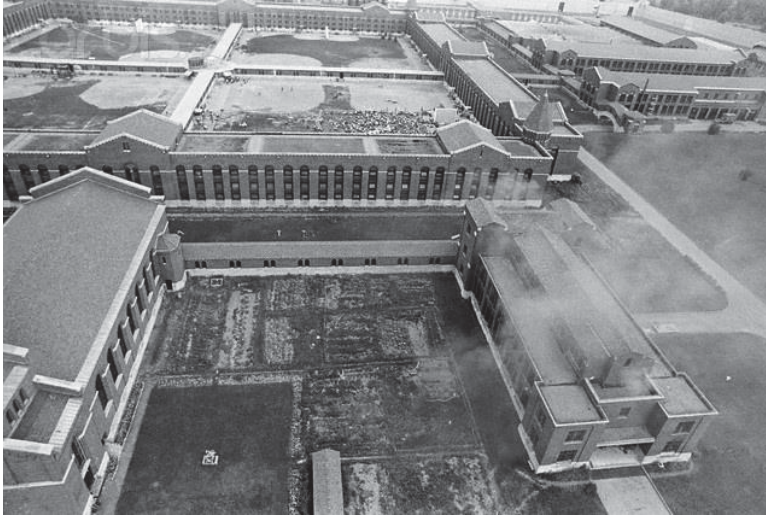


Figure 7: Attica State Prison, Attica, NY

Attica State Prison. (n.d.). Retrieved from <https://i.pinimg.com/originals/7d/a9/1b/7da91b19cf77c3106c5520b6a33b5f8c.jpg>

The large state penitentiary became problematic with time due to many issues. The overcrowding at many large state prisons led to cultures of violence as the prisons were often understaffed with underpaid correctional officers that had not received sufficient training. Buildings were often of poor architectural design with inadequate means of surveillance. Due to their remote locations, sufficient oversight to living conditions was not always observed and at times led to rioting (McShane, 2008, p. 154). Newer strategies to deal with the conditions included more open living spaces and better surveillance techniques with officers serving inside, rather than outside, the inmate population so that they can be more in control. This increased rehabilitation as an aspect of relationships between inmates and staff (McShane, 2008, p. 168).

The penitentiary operates on a system of organization, restraint, and regimes of action that are independent of the outside culture, as the design of the penitentiary is planned around human behavior. The dialogue between the architectural form and how it dictates behavior seems more blurred due to outside forces of social disruption and greater technological advancements (Bender, 1987, p. 34). The influence of architectural form may lessen over time as different technological options for surveillance and monitoring allow for greater home confinement. The connection between where and how someone is incarcerated will change for the non-violent offender. The prison may even become more like the medieval liminal prison at the edge of the city, establishing its civic role through its visible and engaged urban location.

Control and Subjugation

Control is realized within the modern and the historic prison in different ways, but with similar goals. Current correctional policies are designed to keep order and to maintain officer security. Modern systems use methods that are often known to the public, so standards of humane care are recognized. These systems often have evolved from historic approaches that worked within their time and place, and should be viewed through their own temporal perspective.

The scaffold, as shown in Figure 7 below, was the complete visual means of control in the monarchical model. Crime and punishment both had a quick and final resolution. The illustration of pain served as a way to remind the population of the boundaries of behavior. With the shift to more democratic means of government, more subtle means of domination with less overt means of control were utilized. Control was

through not only surveillance, but also through the installation of systems of governmental and societal management (Spierenburg, 1984, p. 205).

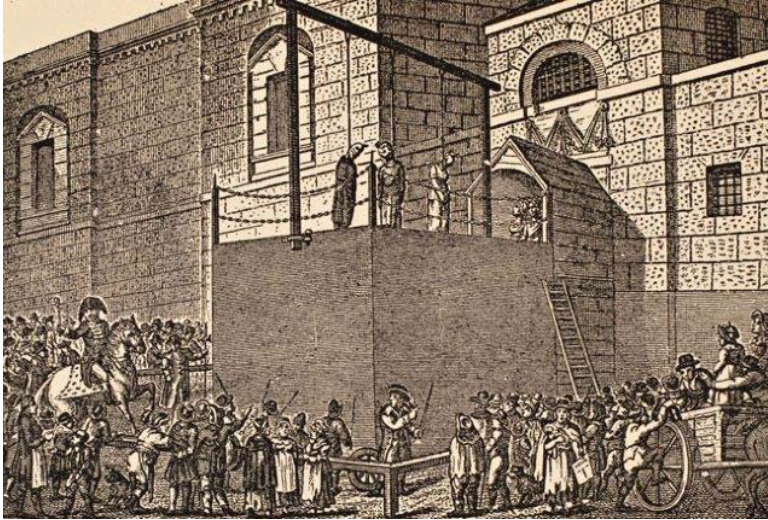


Figure 8: Scaffold at Newgate Prison, London

Newgate Prison. (n.d.). Retrieved from https://upload.wikimedia.org/wikipedia/commons/thumb/f/fd/Hangin_outside_Newgate_Prison.jpg/220px-Hangin_outside_Newgate_Prison.jpg

Spierenburg (1984) writes extensively about the use of the scaffold as a symbol of the power of the state. The constant physical presence of the scaffold when coupled with the periodic spectacles of execution provided sufficient fear among the population to keep them from questioning this authority. This worked well for the monarchies throughout Western Europe until mindsets changed and they saw this brutality as unacceptable. As Europeans saw themselves as modern, and a middle class emerged, overt and cruel forms of punishment that had to be witnessed to be accepted became less palatable (Spierenburg, 1984, p. 73). This did not mean that the new sensibility rejected torture and execution as a means of punishment, but that it was no longer viewed as humane to have to witness it. Spierenburg (1984) credits Foucault with his studies of this change in how the population was repressed. Gone was the spectacle of public suffering

that was only complete in its definition by the “societal gaze”. The scaffold itself became a symbol of something taboo. The materials and construction were seen as something to be avoided by the general population, and being involved with the materials that were used was seen as distasteful at best. Executioners became harder to obtain and maintain, such that legal forms of coercion were used to fill these unpopular posts (Spierenburg, 1984, p. 87).

While involvement with the rites of execution were becoming increasingly objectionable, pain and punishment were still acceptable. New models had to be designed to achieve this power without requiring the active participation of the upper classes. The lower classes were always content with the event of the execution, but for those in positions of power, new and invisible means had to be devised (Spierenburg, 1984, p. 196). The progressive forces of the countries of Western Europe did not advocate for the removal of punishment, just to devise new means that did not require their direct involvement. Spierenburg also writes about the way in which Foucault focused on these changes in societal sensibilities. He not only understood the need to study the absolute systems of punishment, but to also acknowledge the works of others such as Rusche and Kirchheimer (Matthews, 2009, p. 11). Their desire for secret means of torture was not really a concern with the humanitarian rights of those being punished, just with their own middle class sensitivities (Spierenburg, 1984, p. 185).

Two additional ways in which subjugation is realized are through the concepts of social control and shame. With social control theory, it is not control that subjugates the potential criminal, but the absence of control. A positive family environment provides the best control to reduce the threat of crime. In situations where that family structure is

weaker, civic and educational groups provide that social control. Deviant behavior is a result of a wide variety in established norms of social acceptance (Shaw, 1942, pp. 99,100).

More subtly, other middle class entities such as social clubs, professional guilds, civic organizations, and military veteran organizations are examples of middle class social venues that maintained control by providing strong social bonds. Criminal theories of self-control believe that these institutions preserve civility and prevent criminality, and the absence of these institutions may lead to crime as the societal aspect of shame is reduced or removed. These civic institutions utilize conformity as a goal and shame as a means of control (Braithwaite, 1989, p. 75).

The workplace also has many necessary systems of rule, and adherence to its goals are closely aligned with the overall civic goals for the middle and upper classes. While there were organizations to keep the middle class in adherence to certain societal aims, those who were deemed criminal or poor largely did not have such options and were controlled through the workhouses, bridewells, or prisons. The need for inexpensive labor may also have been a factor in having less social and civic options for those in the lower economic classes. The standard of living for the bourgeoisie was somewhat dependent upon the availability of providing inexpensive labor to manufacture the products for middle class use and export. This also allowed for the exploitation of convict labor in a way that goes beyond dehumanization to violate their human dignity (Guenther, 2013, p. 140).

A prominent work by Hirschi and Gottfredson (2004) established that the lack of control was a key ingredient, as this lack of self-control affected the adolescent because

there were not sufficient positive controls in their life. The absence of control produced crime which led to imprisonment (Hirschi, 2004, pp. 537-552). As well as a lack of control that can lead to crime, it can also be thought of in terms of time and memory, as the usage of control within architecture is manifested in many ways. The control of the experience of the inmate through the articulation of forms is also impacted by their memory of the experiences beyond the wall. The social and psychological challenges to memory as evidenced by control in the environment became more pronounced with the reformers of the late eighteenth century. Prior to this, prisons were open spaces with little inside order (Ignatieff, 1978, p. 30). The control was the gate which established the liminal divide. Without architectural confinement as a device, the affliction of pain was the primary substitute (Ignatieff, 1978, p. 45). The depersonalization of the individual that begins with their entrance into the prison, and especially within the sensory deprivation of solitary confinement, affects their own memory. Their personal identities were removed by sharing the same haircut and clothing styles (Ignatieff, 1978, p. 101). This erasure can then be applied to the prison population as a whole who must now struggle with a new collective memory, within a new culture, while maintaining the memory of experience beyond the wall (Bal, 1999, p. 99).

With the works of reformers who investigated living conditions, theories with goals of reform and rehabilitation from the background of the reformers themselves informs the dialogue about the use of control. Many of the funders of these new ideas were industrialists who were politically moderate and scientifically oriented. They saw human behavior as something that could be refined and manipulated. The design of efficient social systems in an industrializing Britain was of great appeal. Jeremy

Bentham's plans and subsequent works at Pentonville represented this mindset that translated from the factory system to the prison (Ignatieff, 1978, p. 62).

Beyond architectural form, we see "crime control" as a societal goal that is shaped by underlying philosophical positions. The fluidity of modern systems and the predominant free market perspective on ethics and decision-making have impacted how we view crime as a problem and how to contain it (Garland, 1990, pp. x,xi). These new control theories of crime are interwoven with our social, self, and situational context as well (Garland, 1990, p. 15).

After the influential Pennsylvania and Auburn models of the early nineteenth century, the large state penitentiary of the late nineteenth and early twentieth century became increasingly remote from the society it served and took on a unique culture of its own. The management of the "Big House" was problematic; it was too large to manage (Cox, 2009, p. 154). The connection between architectural form and control was clear in its early manifestations of the nineteenth and twentieth century prison, unlike today as the structures of discipline as discussed by Foucault are shown to be ephemeral in terms of visibility in today's social structure (Bauman, 2007, p. 1). Governments breed insecurity as a means of control, and post-modern capitalism has created fear and insecurity among the working class while rewarding those with the levers of oversight (Bauman, 2007, pp. 26,28).

The Poor Law of 1834 by the British parliament linked the role of prisons to the lower classes in a unique way. The role of the independent and rural artisan had been damaged by the industrialization of the country. The relocation of workers led to a growth in pauperism that was coupled with a growth in crime. Industrialization led to

further division of classes, which led to a growing number of poor, which led to a greater usage of workhouses. The use of the workhouse begins to blur into the growth of prisons and provides a parallel to today (Melossi, 1981, p. 38). This blur also led to the discussion that solitary confinement was depriving the labor market of necessary workers for an industrializing economy. Their total isolation didn't allow them to be an effective worker, and their lack of vocational activity prevented them from practicing and acquiring new occupational skills (Melossi, 1981, p. 128).

Houses of correction, or workhouses, were similar to the early prison. They had the goal of dominating the worker or inmate. The social control of shame was an underlying current that was actualized in architectural form and is still an effective tool within certain cultures (Matthews, 2009, p. 245). To the observer, the facades of these prisons presented a strong and severe face to the citizens of the city to remind them of the power inherent in the institution. Its purpose was to project power and control. With the interior layout of the prison directly analogous to the social model of domination, the inmate would often have their sensory experience diminished in several ways. With no real human contact, no human voices to hear, no human to touch or to see, many were afflicted with mental illness. Human contact and conversations were, and are, rare within this world (Reiter, 2016, p. 26). The inmate was then viewed as a deviant due to his neuroses. The system broke the inmate's ability to project his will by removing sensory input. The prison was the ultimate device to project the power of the state to not only control the mind and body of the inmate, but also his link to sanity and memory (Evans, 1982, p. 67).

Michel Foucault writes about the concept of subjugation in different forms throughout his writings on the history of the prison. With his work, he sees the initial process of the suppression of the convicted that begins when the judge passes sentence. He notes that the establishment of penal codes in the nineteenth century transferred this power to civil authorities, thereby installing the government more strongly in the process of punishment and control (Foucault, 1995, p. 22). Foucault saw this penal code as an extension of the growth of bureaucracy of the state. The eighteenth century may have relied on the theatre of public punishment, but that was consumed by a “uniform machinery of the prisons”, which established a network of buildings across the continent. The English extension of this model was the addition of work, the domination of the inmate, and the addition of isolation as a component (Foucault, 1995, pp. 116,122). This change from the public spectacle of the scaffold to the more hidden forms of surveillance effectively transferred power through knowledge to the state. The direct connection between public crowd as witness and the doomed is now more insidious and the individual is repressed by this social order (Foucault, 1995, p. 217).

Subjugation is realized through a complex relationship with power and knowledge within the system of the penitentiary. Paul Hirst’s writings on the works of Foucault argue that he saw history and architecture as part of a new dialogue that utilized philosophy as a tool to view culture (Hirst, 1982, p. 171). The prison becomes the ideal architectural device to see how power can be accumulated through knowledge acquired through surreptitious means of surveillance. This is all done within a larger conceptual framework of governmental institutions. With these hidden means of surveillance, the

tools of domination as established by architecture gain respectability by being part of a professional intellectual discourse (Hirst, 1982, pp. 171,172).

Hirst (1982) investigates power in a deeper way. He sees its use as a means to suppress subjects of a government. It is essentially a negative force that is countered by truth as a positive force. Truth acts as a critique of power and must be contained and controlled itself as it threatens the ability of the suppressor to subjugate the suppressed (Hirst, 1982, p. 181). Knowledge, as seen by Foucault, is thoroughly linked to power in the modern era and cannot be easily separated. The institutions that Foucault studies are ones that rely on the production and use of knowledge to project control. The means through which this knowledge is gathered and utilized to subjugate is done through surveillance. Architecture becomes the device of power and control by utilizing its form to define the watching institution (Hirst, 1982, p. 183).

Foucault's focus on the institutions of the state, such as the asylum, hospital, and prison, are critical because they replace the clear power of the monarchy. They are the modern translation of monarchical power that utilize less brutal, but more insidious, techniques for subjugation. Power is gained through knowledge, which is obtained by surveillance. The prison, especially within the model of the panopticon, is the distillation of this vision (Hirst, 1982, pp. 183,184).

The subjugation of memory is also linked with the concept of shame. Shame is a powerful societal factor that can reduce crime through the collective act of shaming the wrongdoer. While guilt is what is applied to the criminal, shame is the internalization of that guilt (Nathanson, 1987, p. 4). Shaming can be either re-integrative or disintegrative depending on the goal of society in regard to the criminal. Those who are permanently

viewed as outside acceptable society are victim to a sense of perpetual shame that acts as recurrent subjugation (Braithwaite, 1989, p. 55).

Subjugation of the criminal prior to the modern prison was most often performed with a means of harmful physical control. With the advent of the modern prison, new means of subjugation relied increasingly on surveillance as the means of control. This tool relies on observation as its method. Foucault postulates that it should be no surprise that the power of observation as evidenced in the nineteenth century prison is similar to the power utilized in other institutions such as hospitals, schools, and factories (Andrzejewski, 2008, p. 1). This is illustrated at Prison 2 in Figure 8 below in the way that the solid architectural style of the prison buildings could be easily adapted to other institutional uses.



Figure 9: Administration building at Prison 2

Galford, G. (2016). Bellefonte, PA.

Observation

The role of observation within the prison is tied to power. Surveillance and subjugation are traditional means of thinking about how the human gaze is conceptualized in criminal theory, but the gaze of the inmate matters as well. In Bentham's panopticon, the model is constructed as one-directional, but the gaze of the inmate back to the tower is also important. Within the cell, the rehabilitation of the inmate, especially those in solitary confinement environments, has always been tied to what is seen or unseen. Not being able to view others is one form of control, but the allowance of a visual connection to nature beyond the cell is a significant factor as well.

The development of the prison as an archetype is related to the activity of observation and the concept of surveillance. The translation from monarchical power to the power of the nation-state as investigated by Foucault and others showed a shift in how crime and punishment is conducted, judged, and executed. These steps of the process are all connected to the concept of power and how it is actualized.

The scaffold was the primary way in which the influence of the king or queen was demonstrated to the public. A public execution provided a spectacle for the population to experience the power of the monarch (Ignatieff, 1978, pp. 18,24). The visual connection to the act of execution made the citizenry a participant in this exercise of control. With the decline of monarchical systems, and the rise of democratic nations in eighteenth century Europe, this visual connection between judgement and execution evolved to a new model that utilized visual power, but in a different form. It had to be visualized as well, but the methods to be used had to align with a different set of societal standards and

goals. With the new systems of observation, the power moved from the crowd witnessing the act, to the warden exerting power through watching the imprisoned.

The panopticon was designed as a vehicle of efficiency that could be used for a variety of functions, but only became known for its use as a penitentiary. Within this circular model, the centripetal building is focused on the central tower, which contains the guard who represents the watching. His gaze is invisible to the inmates, so they never know when they are being watched. The architectonic character of the building embodies the power of the invisible gaze. The power of the panopticon is its ability to distill visual power to its essence. Its appeal to Foucault is in this distillation.

New technologies have enabled surveillance to be used in many ways that are often invisible to the passerby. Throughout much of the developed world, closed circuit television is used to promote security and to decrease the fear of crime. Cameras fill our public spaces, and now private spaces, in a way that Bentham could not have imagined. In instances such as the 2013 Boston Marathon bombing, the culprits were quickly caught due to their use, but in other ways, we have to be reminded of our own loss of civil liberties (Bauman, 2007, p. 19). In the name of security, we can easily monitor our own home through inexpensive security systems, but we are also able to invade the privacy of those inside our home without their knowledge (Galford & Peek, 2016, p. 126). All means of observation are presented as positive in their initial goals, but the blurring of the line between security and privacy has only increased in the last few decades. The image of the panopticon gave us a clear way to understand the system of surveillance. Our current system of surveillance is more a complex web of networks that is hard to

visualize (Evans, 1982, p. 4). Its importance established it as its own academic sub-discipline within sociology.

Institutional tourism was another way in which observation existed in a different form. During the nineteenth century, it was common for the average citizen to spend a weekend stroll touring either the local asylum or prison. It was seen as a benefit to all in that the inmates were visually connected to the general public so that they were not hidden from view and ignored (Miron, 2011, p. 7). Conditions at the prison or asylum were being monitored by the general public as they scrutinized the buildings. It was also a general means of inspection and it was thought to contribute to a lessening of abuse. The nineteenth century saw many nations proud of the new institutions that were brought about by changing attitudes, and the average person was curious as to what they were like and were willing to visit them to gain that experience.

This observation of the prisoner or resident was a different dynamic than that seen in the scaffold or the early prison. Rather than the general public witnessing the execution that served as the spectacle of power, or the warden or guard secretly exhibiting power through an unseen gaze, the tourism of prisons and asylums was a way for the general public to judge and be entertained. While it was good to have the prisoner remain connected to society, it also removed anonymity, which may be useful after release. Part of the decline of tourism was a belief in the ideals of rehabilitation and reform of the inmate that were seen as in conflict with the practice of putting people on display. With the realization that these institutions allowed the objectification of inmates, the practice declined (Miron, 2011, p. 135).

Observation as a form of surveillance is prevalent in most prison models. It is done without notification and has as its intent a punitive intention and acts as a defining practice of modernism. The use of surveillance represents a shift from the ritual of the medieval world to the quietly controlled forms of surveillance in the modern one (Andrzejewski, 2008, p. 4). This modern use of surveillance that began with the penitentiary has now evolved into every facet of contemporary society. It has created its own sub-discipline within sociological studies to analyze how observation through surveillance controls us more than we perceive. This translates to power that can be transparent for some and opaque for others. The guard in the traditional prison was clearly in charge, but with the more “liquid” forms of surveillance in the modern world, identification of those with the power of control becomes elusive (Bauman & Lyon, 2013, p. 12). With a more liquid form of power through observation, a more positive force that lies with the observed to utilize technologies will provide light on the actions of those who oppress as well. Open and democratic platforms of social media allow everyone to be observed and provide a new post-modern sensibility to a modern form of control (Bauman & Lyon, 2013, p. 6).

Through the prison as type, the panopticon did serve to represent, through its own architectural form, the gaze of the inspector, which translated into power. The structure of the panopticon plus this power equals subjectification of the individual (Hirst, 1982, p. 184). With post-modern forms of surveillance, personal data and behavioral actions are recorded surreptitiously. It is not merely a matter of the government watching us, but of everyone watching and recording each other such that it doesn't provide a clear physical

representation. We are clearly in a post-panoptic world (Bauman & Lyon, 2013, pp. 52,55).

Rehabilitation

Rehabilitation within the prison is linked to the concept of time. The freedom of the inmate is taken away through the punishment of incarceration and the control that is linked to it. This is in contrast to the medieval means of torture or execution. The criminal does not necessarily suffer physically but suffers through having their time taken from them. Within the prison, when extra punishment is required, the inmate has their daily routine removed and has more focus on time through removal from the general population (Andrzejewski, 2008, p. 27).

Beyond punishment, time can be used to renovate the inmate. Early theories focused on rehabilitation through penance. Positive skills could be learned and bad behaviors unlearned within the confines of the prison. The rehabilitation of the inmate was a factor in earlier European models of imprisonment but became more prevalent with the initiation of American models of incarceration. Earlier models of jails, bridewells, and workhouses in the British or continental forms often did not have rehabilitation of the prisoner as a strong focus. Crimes of violence were often dealt with by execution under a sovereign form of government (Evans, 1982, p. 2). The power of the monarch was symbolized by the ability to provide final judgment upon the prisoner when his crime was viewed as violent or subversive to the state, as the jail was a temporary situation for housing the inmate until judgment and execution was rendered. The architectural model did not embody any particular type of social model, so it was often a previously used form of municipal holding cell. The earliest criminological theories were those proposed

by Beccaria (1744) that called for an immediate and proportional punishment to the crime to act as an effective deterrent (Cullen, 2011, p. 26).

Transportation of convicts moved the prisoners far from their home, and very few ever saw their native land again. The convicted prisoner who had served his time through hard labor was now in a place where his labor was still needed and there were extensive undeveloped lands that allowed him to build a new future for himself. The constraints of class and wealth that would have hindered his progress had he returned home were not factors in his potential for a new life in the colonies. While they would have been oppressed by their overseers while serving their sentence, the opportunity for redemption and reform was available in this new context (Rusche, 1968, p. 60).

The establishment of the American nation required new systems of governmental institutions. Existing British models were not adequate, and the state and federal governments wanted to build new systems that reflected their unique status (Evans, 1982, p. 8). The states devised new systems based upon philosophical and religious beliefs. The Quaker community in Philadelphia was very instrumental in creating the Pennsylvania system which combined incarceration and religion in an environmental and behavioral model. Rehabilitation was very much a part of this philosophical framework.

The Pennsylvania system utilized a radial architectonic model that was built on the philosophical foundations of Jeremy Bentham's theories of the panopticon. Rehabilitation of the inmate was a central focus to the system of punishment. That system principally used architecture as its method. Within the Pennsylvania system, as shown at Eastern State Penitentiary in Philadelphia, every prisoner would be rehabilitated through penance for their sins. Building an environment that would induce this penitential feeling

was paramount. While Bentham's plan was focused on surveillance and observation, the Pennsylvania system was based on isolation (Johnston, 1973, pp. 29,37).

Each prisoner had his own cell and did not share it with another. Each prisoner had a cell with a skylight but no window to see human activity on the outside. He was fed through a slot in the door that did not allow him to see the guard. He was led blindfolded to chapel and was not allowed to interact with other prisoners. He was led to a private exercise yard for the one hour per day that he was outside his cell. His time was to be one of silence and isolation in order to induce penitence. Through this penitence, the prisoner would be redeemed and rehabilitated. This would prepare him to re-enter civil society.

This system provoked international interest and many foreign observers came to observe the new model of criminal justice reform. It soon became apparent that the new prison system invented by the Quakers was an expensive one to maintain with individual cells and thick stone walls to prevent communication between inmates. The quality of inmate work done in individual cells vs. shared work areas was inferior. The value of work as a symbol of productive growth was important to nineteenth century America as well (Johnston, 1973, p. 40). Of greater importance was the tendency of inmates to become mentally unstable when left in solitary confinement for lengthy intervals. The irony of rehabilitation was that a system uniquely designed for such a behavioral outcome produced an inability for the inmate to experience it due to mental illness. Without the diagnosis of mental illness, it was hard to treat it as such (Guenther, 2013, p. 136). A revision to the system was necessary.

The act of rehabilitation can happen prior to the criminal act. Deterrence is a way to rehabilitate our behavior through observation and knowledge of the punishment of

others. Citizens calculate the gain and loss from a criminal act and adjust their actions accordingly according to the classical theory of Beccaria. Pleasure from the crime is balanced against the pain, according to rational classical theories on crime (McShane, 2008, p. 6). Rehabilitation originated as a correctional philosophy developed by positivists in opposition to deterrence. Rather than see all people as equal, as in deterrence, rehabilitation was not framed by punishment but by the reformation of the inmate (McShane, 2008, p. 6).

Practices of rehabilitation became the dominant paradigm in penal theory for most of the twentieth century. It became questioned in the 1970s as important studies questioned the efficacy of rehabilitation. This was coupled with a rise in crime rates and a broader conservative political shift in the general population that favored harsher sentencing and less rehabilitative policies. Recent studies have shown that rehabilitation programs work when designed more individually (McShane, 2008, p. 7).

This shift away from the ideal of rehabilitation was very important in that it brought into question some of the foundations of modernity itself. The role of rehabilitation as a positive force within penal theory was a basic tenet of modern criminological theories (Garland, 2001, p. 8). A political shift to the rights of the victim in criminal dialogue resulted in more stringent and mandatory sentencing laws. Parole programs that were designed for rehabilitative purposes were now focused on control and risk aversion. Communities were to be notified of released offenders so that the ability to rehabilitate and re-enter society became progressively difficult (Garland, 1990, p. 12). The public trust given to professionals in penal policy prior to the 1970s and 1980s that established theories of rehabilitation was now questioned (Garland, 1990, p. 50).

This goal of rehabilitation of the inmate that was tied to the religious mindset of nineteenth century America was in agreement with the social outlook of the country at the time. This provided a philosophical and moral foundation to the development and maturity of penal theory. This remained a goal through much of the twentieth century but started to lose importance and relevance as a social goal in the last decades of the century. A move toward more conservative values, both politically and socially, and a growing lack of trust in the success of the rehabilitative goals of the American prison system led to its decline as a shared goal (McShane, 2008, p. 7).

METHODS

Introduction

While the design for this work reflects my background as a researcher, it also depends on the actual nature of the work itself. The research is intended to rely on the narrative components of the lives that are impacted by this topic. It is not intended to be a hypothetical construct but to be a work that emerges from the actual experiences of the people most strongly impacted by environments of control.

The design of this research is built around the viewpoints of stakeholders with highly different perspectives on the issue of solitary confinement. As the researcher, I want to take findings from the intersections of views on the topics and to rely on what people share from real and lived experiences. I want to view it from several perspectives, not only increasing the credibility and transferability of the work, but to also reflect the diversity of perspectives to counter bias. As the researcher, I do not want to impose my personal beliefs, especially as a novice to the correctional world, onto the work. The serious and real subject matter of the research deserves respect and dexterity in how it is handled, to ensure findings that are deserving of the data.

My critical position as a researcher must be acknowledged for the work. Three main perspectives influence my perception of the research. My father is a retired police officer, and having grown up with access to that culture, I had an easier understanding of the lives of the correctional officers. My training and experience as an architect provides me with the ability to critically view buildings for the purposes of this research. My role

as an academic provides a deeper theoretical understanding of the issues involved in this research.

Research Question

This work originated with investigations into the historical foundations of correctional design. The connection between behavioral outcomes and environmental influences is nowhere more profound than in solitary correctional environments. Prisoners experience their life within the walls in both general population housing and the more specialized and punitive solitary confinement areas. This work focuses on the architectural influence of the building and asks, through the concept of control, how prison environments affect behavior.

Research Design

The design for this research was envisioned to utilize the narrative aspects of the collected data from different perspectives to find meaning in the intersection of their stories. The work was designed to view the topic around a variety of directions according to the particular experiences of those involved. The places where those experiences overlap are ones that provide the richest opportunities for exploration.

The two correctional facilities used for this study were selected by the Department of Corrections, based on the research proposal. They chose the newest and the second oldest prisons in the system that were physically near each other for ease of research. This selection enabled the comparison of policy and behavior against very different architectural design paradigms. The newest prison was opened in 2013 and the older one began operation in 1915.

The stakeholder participants were identified not only from direct access to control in the situation, but from a range of access to the situation. The inmate is central to the experience, but the experience of the correctional officer is integral as well. The supporting services for inmates such as health care and mental health are important, and are part of the interview sample. The superintendents of each institution provided a management perspective around solitary confinement, while the architects involved with the design and construction of the new facility provided a professional perspective on current correctional design and construction standards.

These participants are part of the interview component of the research and constitute a majority of the data collection. Other methods that were used in the work include observations and graphic analysis of photographs and relevant architectural plans and sections. This work reviews the issue from several different perspectives to enable the intersection of collected data to provide salient points for further discussion.

A Model for Qualitative Research

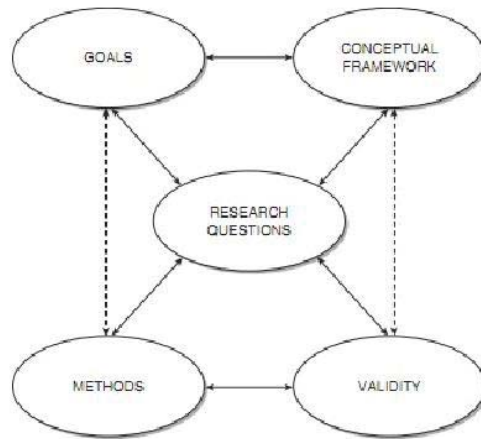


Figure 1.1 An Interactive Model of Research Design

Maxwell, J. (2008) A Model for Qualitative Research Design. SAGE Publications.

Figure 10: Maxwell's model for qualitative research

Maxwell, J. (2008). A Model for Qualitative Research Design. SAGE Publications.

Research Paradigm

Primary and secondary relationships are utilized between the different components of research as illustrated in Figure 9 above. The collected data of the research reflects the epistemological perspective of the work. The theory of the knowledge of the work is part of both its perspective and its methodology (Crotty, 1998, p. 3). The constructivist nature of the research reflects the relationship between different interpretive perspectives. The epistemological framework of the research is based on the interpretive intersections of the narrative data (Saldana, 2011, p. 82). The work is contextual rather than pre-conceived, as the meaning is obtained by looking at the intersection of the varied perspectives of the stakeholders.

This reliance on a constructivist perspective enables a method of research that supports it. Qualitative research methods are used for this study, as this approach enables my personal interpretive interactions with the relevant participants around the issue and aligns with the goals of the research methods and techniques. A case study system comprised of two aligned but different sites is utilized. The selection of the framework and methodology for this research aligns with the subsequent research methods chosen.

Allowing the meaning of the research to evolve from the data, a method of grounded theory is utilized. Due to its flexibility, theories emerge from the data rather than existing as a pre-conceived idea of a theoretical outcome as it provides for my involvement in both data collection and analysis (Saldana, 2011, p. 6). Grounded theory also does not have to be tied to one particular conceptual framework (Charmaz, 2011, p. 178). The use of memo-writing allows categories and themes to build from rich data that have as its goal the development of theory based on this reflexive style of data gathering.

The sample used for data collection in this study is purposeful in design. Due to the specific nature of the issue being analyzed and the specific roles of the relevant stakeholders, it is necessary to focus on key populations rather than a general sampling (Saldana, 2011, p. 34). Retrieved rich data is used to begin a series of coding processes that lead to specific categories, with emergence of specific themes that lead to additional purposeful sampling for subsequent work.

The employed sampling strategy is theoretical as well. This research depends on a qualitative approach that is governed by interactive methods with stakeholders that lead to new questions. The information gleaned from these participants enables me to ask new questions of targeted participants to test and advance new theories that emerge from the

research, with the understanding that transferability is not the goal (Charmaz, 2011, p. 101).

Theoretical sampling of participants is combined with a system of memo writing in the work. The memo informs the refinement of sampling to clarify and delineate new categories in the research. This reflexive approach between the sampling approach and the categorization through memos prevents ideas from being given artificial importance or premature closure (Charmaz, 2011, pp. 104,107). This investigation proceeds until a point of saturation is reached with the theoretical sampling.

Sample Identification

The executive assistants to each superintendent were in charge of obtaining the participants for the interviews. They put out a notice for staff and contacted the restricted housing unit commanders for recommendations. All officers and staff to be interviewed had to have experience with solitary confinement and to agree to two interviews. Some were active, but many had rotated off duty in the area. These officers are recruited as a team for duty in solitary confinement areas, and are transferred out as a team when it is determined that it is prudent from them to leave. I also requested diversity of positions in the interview groups, and the first correctional institution included a staff psychologist while the second institution included a staff nurse.

A request was made to the inmate housing unit block managers to recruit inmates for the interviews who had experience with solitary confinement. None of the interviewees were currently in restricted housing (solitary confinement), but all had spent time there in the past, ranging from a few days or weeks to several years. A more random

sampling wasn't possible due to the security requirements of the prison itself. The administrators in charge said that no further stipulations were made upon the housing unit managers when selecting inmates.

Credibility and Transferability

With the subject matter of this study and with the types of participants to be included, credibility is an important factor to acknowledge. With a focus on control as a behavioral factor, and punishment as its device, ensuring that responses are honest and true becomes all the more important in trying to establish an adequate level of trustworthiness in the analysis of the data. Credibility, rather than validity, is a more accurate goal within the qualitative nature of this research. Preconceptions of situations and reactions from the researcher can also skew results in the coding in ways that reduce the validity of the work (Maxwell, 2013, p. 123).

I utilized particular strategies to increase credibility in this study. With multiple interviews with participants, a rapport could be developed that lead to participants' comfort in sharing information, further leading to more rich and true data. The transcription of the data and the interpretation was returned to each participant for verification of the meaning. This helped validate the rich data, as this validation is also known as a member check (Maxwell, 2013, p. 126). By allowing the respondents to view the sorting and categorization of my memos based on the initial field notes, validity is increased by permitting open feedback on my interpretations (Creswell, 2013, p. 202). The initial field notes were organized into memos that were sorted and resorted, based on participant feedback, which allows greater validity (Corbin, Strauss, & Strauss, 2014, pp. 119,125). The use of different groups of respondents, in two separate and distinct

correctional institutions, also helps to produce a triangulation of the data that aids in achieving validity in the study (Maxwell, 2013, p. 128).

Transferability is the term used most often in qualitative work instead of reliability (Denzin & Lincoln, 2011, p. 24). This need was addressed by two strategies. One is the intention to use more than one correctional facility from which to gather information. Themes that emerge from one prison were compared against the other to extract reliable information (Silverman, 2013, p. 448).

The second factor was gained by providing opportunities for multiple interviews with research participants. This repeated interaction and the ability to build relationships with the participants provided instances to see whether obtained data was valid when viewed against a sequential background. I examined data to see if similar results for similar questions were obtained in research situations over time.

I addressed personal bias in the work by engaging in a reflexive process to identify and minimize perspectives that may diminish the validity of my work. By engaging in a process that is contemplative and thoughtful regarding my own perspectives on this issue, I gained clarity on how that may influence my work and used that knowledge to minimize preconceptions about the interviews, observations, and interpretations (Creswell, 2013, p. 186).

This reflective exercise occurred prior to my work and during the process of the research. As the work moved forward, I also used peer debriefing from colleagues with a knowledge of my topic to evaluate and discuss my interpretations. This helped to

minimize the bias I bring to the work and to increase the validity of the work itself (Creswell, 2013, p. 202).

Data Collection

The process for institutional review board approval was initiated with the Department of Corrections (DOC). Due to the sensitive nature of the research, much care and oversight was given to the research proposal with constructive suggestions and critical thought. Interest in the research proposal from the DOC was due to its unique perspective. While much research is done within the correctional system from criminological or sociological perspectives, the architectural perspective of this work was seen as unique. No one has studied the buildings themselves as devices of correctional control. This gained the interest of correctional officials and the institutions themselves, as it looks at the importance of architecture as a factor in the study of correctional incarceration and rehabilitation.

An important component of the design suggested by DOC officials was the selection of two institutions for the research that represented the newest state correctional institution and the second oldest one. This provided another layer of validity to the work as the questions and experiences could be seen through very different architectural approaches that represented different correctional paradigms. The DOC research director was helpful and constructive throughout the process.

The university officials who are responsible for institutional review of research were accessible and helpful as well. Due to the work being done with inmates, a full review of the work was necessary. An amendment to the research proposal was necessary

once coordination with the actual correctional institutions was initiated. The unique nature of the institutions and how they run requires careful design and integration of the research into the daily routine of the prison. Research items that were anticipated had to be refined once specific planning was in place.

Collection techniques used to obtain data included interviews, observations, data analysis of graphic documents and photographs, and journal entries. A range of procedures was used to collect data to increase credibility, although data from the interviews is predominant. All signed forms of consent to the research, as well as the original audio recordings and files are being kept in a secure space within my research office.

My interaction as researcher with the situations involved in the collection of the data created a need to keep journal entries within the memo system. These entries are my reactions to specific data. The stories of many inmates and officers are profound and elicited a reaction that required my reflection as researcher. Within a quantitative role, the researcher is largely neutral to the information being collected. Within qualitative research and a constructivist perspective, that emotional relationship is acknowledged (Saldana, 2011, p. 66). Journal entries chronicle the inspection and introspection of the personal interviews that are made. This focus on my personal response to the interview sessions helps situate myself as researcher in the data without being overwhelmed or negatively influenced by the rich narratives of the participants.

Observation

Observations were also made but there is less emotional connection to the memo journal entries. As an outsider to the correctional system, everything about the experience of being within the walls and fences is novel as it relates to the other data being produced. Prisons exist as their own distinct communities within our midst, but with their own culture for both inmates and officers (McShane, 2008, p. 83). This is often reflected in the physical environment and how the inhabitants interact with it. This is where most of my observations are situated. For myself as researcher, it is a way of documenting the environment through my own filter and not through the experiences of those who work and live there.

Due to the secure nature of the particular research sites, observation was used in a more circumscribed manner. It was not possible for me, as the researcher, to spend significant amounts of time in correctional spaces by myself engaged in observing inmates and officers in their daily roles. While this would have been of great value to the work, I was not able to be by myself unless in public spaces outside the security perimeter of the correctional facility. My presence within the correctional facility was monitored by a staff member or officer at all times to ensure my safety, and was a burden on staff. I took quick notes and sketches for observation purposes while inside, and I did use time before entering the facility and immediately after exiting the prison to transfer quick notes to my memo system for future elaboration.

The themes that emerged from the observations were similar to those major ones that emerged from the interviews, and helped to reinforce the theories that came out of the research. The findings of the observations that are presented represent my perspective

as an outsider with little prior knowledge of how the correctional world operates. The biases I brought to the situation are countered somewhat by their intersection with the interviews with staff, officers, and inmates.

The photographs taken by me, as the researcher, were part of the analysis and also supported the other methods of investigation. At times, they documented general properties of the prison, and at others they supported an item that was mentioned in an interview. These photos were always vetted by correctional staff at the end of the day before I left the institution. There could be no photographs taken of sensitive security areas within the prison. No photographic image can show the faces of prisoners, so most photographs were timed to when no prisoners were present. This gives a quality to the photographs that belie my experience of the prison.

Correctional authorities provided access to key architectural drawings of both institutions. Basic floor plans, site plans, and building sections were shared that illustrate the architectural character of both penal environments. These also support what is shown in photographs and what is described in the interviews and observations. There is a clear connection between the architectural representation of the correctional idea and how it is manifested in each prison.

The dominant data collection tool is the interview. The research design incorporates it as the major means of obtaining data about the situation as the lived experiences of the stakeholders is the primary goal. After negotiating with the two selected correctional institutions, it was decided to have groups of five inmates, with experience in solitary confinement, five correctional officers and staff, and interviews with superintendents at both institutions. Interviews were also conducted with an

architect with the Department of Corrections who oversaw construction of the new facility and the lead design architect with a private architectural firm in Richmond, VA. I determined this to represent the major perspectives of various stakeholders with the issue. Two interviews were conducted with each participant with the exception of the design architect, due to the distance involved and the two superintendents, due to their schedules.

Interviews

General and open-ended questions were asked with the intention of allowing participants to expand on the question and to provide greater amounts of personal reflection. The questions began with a description of their life before prison, and then led to their current living situation. Questions for the second round of interviews were built on themes that emerged from the initial round. All interviews generally ranged from 45-60 minutes. Due to security concerns, no computers or smartphones could be brought into the prison. Two digital audio recorders were used to record the interviews as I took notes on the most salient points. All interviews were transcribed into a digital document by an online transcription service immediately after the interviews.

The interviews with inmates were scheduled around dates when visiting rooms were not being used. Due to security needs, the family visiting areas are the best places to conduct interviews. These areas exist as liminal spaces within the institution, with their connection to the outside world through family and friend visitations. This provides a certain degree of familiarity and comfort for those being interviewed. Correctional officers, nurses, psychologists, and superintendents were interviewed in the administrative areas of their respective correctional facilities.

Initial interviews and final interviews were conducted one week apart. This allowed for the transcription and preliminary analysis of the data and for development of the follow-up questions. This also allowed time for the interviewees to reflect on their initial discussion and possibly elaborate on specific points.

Sequence

The sequence of interviews was done in a particular way to minimize disruption to the daily routine. The process originated with the initial interview with the state DOC architect and meetings with DOC officials. The second interview with the architect was conducted near the end of the process, when the interview with the design architect in Richmond, VA was conducted.

Within the prisons, the administrative assistants to the superintendents arranged all interviews. The superintendent interviews were saved to the end. The bulk of the interviews with inmates and staff were done so that only one correctional institution was disrupted at any one time. Inmates and staff at the newest institution were interviewed first. Due to the rigor of the daily routine within each correctional facility, research started promptly at 8:00a.m., and interviews took place around inmate meal schedules and officer shift changes. All inmates were strip searched before each interview, and staff arranged transportation from housing units to the visitation area. Correctional institutions maintain order through routine, so the sequence of interviews was conducted in an orderly manner.

Schedule

The process of applying for research approval for the work started after the approval of the dissertation proposal in April 2016. Due to the protected condition of the research subjects, much care had to be given to research design and approval. A two-stage process occurred in that an original proposal was submitted to the Research Director of the Department of Corrections. He carefully reviewed the submission and made suggestions that enabled the research to be done within the regulations of the DOC.

When DOC approval was given in May 2016, approval of the research was sought from the University of Missouri Institutional Review Board. A full review of the work was required with approval granted in late June 2016. With this approval, initial negotiations began with the two identified correctional institutions. Executive assistants to the superintendents were the sole contact within the prisons, and as coordination was finalized, changes to the original research proposal were required. This required an amendment to be filed with final approval for the research occurring in August 2016. This established the timeline for work to occur during mid-September 2016 through early November 2016.

Data Analysis

The interviews were transcribed into a digital document by an online service, printed into binders, and filed in chronological order. Photographs were archived by date and institution. Graphic resources were provided as digital files and were archived as well. Printed documents are being kept in a secure space within my research office.

A system of electronic memos was utilized throughout the data collection and data analysis process to record, organize, and categorize the information. This system was used to analyze the data as its focusing ability allowed for themes to emerge. A digital online software platform was used to organize the data. The memos were sorted further into categories related to the data collection technique. A series of memos dealt with recorded observations, some with the personal journal entries, and others with direct connections to inmate or correctional officer interviews. Other specific organizational categories related to architectural implications, issues of time, and specific data about solitary confinement itself. As themes emerged, new data was sorted into the appropriate category.

Digital qualitative research coding software was also utilized in the research. It was envisioned not as a primary means of coding, but as a way to check on the codes done by me. I feel that initial coding work needs to be done personally as I have the direct connection to the memory of the actual interview and can bring the whole experience of obtaining the data to the coding process itself.

The process that I used to review a large amount of rich data originated with multiple readings of the data. With the material fresh in my memory, I was able to identify and code dominant points. Subsequent reviews of the data allowed me to refine the initial codes until the data was saturated and fresh themes appeared less frequently. These emerging themes were refined again and the analyzed and developed codes helped to refine the memos being taken. Categories emerge from the data and serve as the organization system for the memos. A significant part of the research design was to provide for checks on credibility through the perspectives of very different stakeholders.

The coding process was enriched by having similar themes emerge from different experiences around a central issue from very different built institutions. Demographic diversity among all those interviewed also provided a way of triangulating the collected data.

The journal entries acted as a check on the coding exercises by providing an outside perspective on the interview material. There is a reflexive nature to these interviews and a review of my personal reactions to them through the journal process enriched the coding process by prompting memories and associations. The observations that were made also provided a reflection on the coded data as this personal perspective could be compared to the analysis of the interviews.

The themes that emerged in the data were also used as a way of analyzing the photographic and graphic information. This provided yet another check on the collected data. As this research had as its goal the view of an issue through an architectural perspective, the way in which architectural and photographic documentation was analyzed was critical. It greatly aided in the analysis to determine if the issues mentioned by the research participants were supported by environmental design. This process provided a solid tool for testing the coded items and may provide a good initial example for future and similar document analysis.

Potential Limitations

There are potential limitations on the data collected for this research. Working within a correctional system always requires revisions and amendments to any research design as the needs for security are not apparent beforehand. The design of this research

sought to anticipate as many prior problems as possible, but there are several items that affected the findings.

The sampling for the research participants was purposeful and theoretical. Key populations were focused upon and a general sampling was not relevant in this situation. I informed each of the correctional institutions of the types of participants that were necessary, as they were responsible for providing inmates, officers, and staff for the research. It was required that all inmates have experience at some time with solitary confinement. It was necessary for all correctional staff involved in the interviews to have had experience with solitary confinement as well. As the researcher, I was not directly involved with the actual selection of the participants. I was told that each housing unit manager put out a call for inmates interested in participating, and that was how participants were selected. Similar notices were put out for the officers and staff.

There were limitations regarding diversity of the research participants. The state has twenty-six correctional institutions, with only two of them housing female inmates. For logistical reasons, with the two chosen prisons being near each other, and male, no female inmates were interviewed for this research. All correctional officers were white males, mainly with a military background and of similar ages. The one staff psychologist and one staff nurse were white females. However, one superintendent was a white female and one was a white male.

The inmates themselves were more diverse than the interviewed staff as approximately half were African American, with the remainder being Caucasian or Hispanic. One had Native American ancestry. There were a variety of religious backgrounds, such as Protestant, Catholic, Muslim, Native American, etc. There was a

broad range of ages of inmates involved in the research and they were from different parts of the state, although primarily from urban areas. They were incarcerated for a variety of crimes from non-violent repeat drug offenses to multiple homicides.

Data collection was done over the span of a few weeks in the fall of 2016. A more longitudinal work was not possible at the time. Doing research such as this puts a burden on the correctional staff, and this was the limit of what I could request. Research within a prison is difficult and it is important to always understand the costs as well as the benefits. Both prisons are medium security prisons within the state's correctional system, but there was a wide range of individual security levels within the inmate sample. Another restriction is the limitation of using the graphic material as given in the actual dissertation due to security concerns. These plans made clear the architectural paradigms that produced them, but cannot be published with the text in any way that can compromise security. Diagrams of the plans are provided in the appendix for explanation without any means to provide information that would jeopardize prison safety.

FINDINGS

Introduction: Theme Interaction, Analysis of Photography and Graphic Documents

The themes that emerged in the findings illustrate distinct relationships. While all themes below are subservient to control, their relationships with each other are more nuanced. Time and routine have a primary relationship, as does sound and view. All have secondary relationships to each other. Trust is a subsidiary function of all the other main themes.

The graphic documents of the plans and the site plans of both facilities were of equal or greater use than the photographs. The physical layout of both prisons inform us about the important ways of looking at each prison. The plans are very representative of the rehabilitative or punitive ideals and reinforce the other research techniques. I was able to use the plans to document the characteristics of each that corresponded to my own notes or themes that emerged from the interviews. The interplay between the written word and the graphic analysis enriched the study as issues that arose in an interview were better explained by reviewing the plans. As an architect, the reading of plans is a natural process and their use for the work was essential. The documents illustrate the ways in which the centralized plans of a century ago still influence current prison design. The interplay between photograph, plan and written word enabled me to more effectively understand how all the details of a prison interact and how all environments within a prison, no matter how small, affect behavior. This allows my architectural skills to enhance the investigation through the connection of plan to detail to word.



Figure 11: View of Prison 1 with mountains beyond

Galford, G. (2016). Bellefonte, PA.

With the photographic findings, the display illustrates the important differences between the two institutions. The newest prison clearly shows the design factors that are important in its realization. It is comprised of efficient modules of prefabricated and precast concrete. It is designed for security and clear lines of sight. Nothing blocks the view of a correctional officer with wide open spaces as seen in Figure 10 above. Within the grounds are paths of asphalt with grass areas that are largely off limits. Everything is well lighted with no ornamentation on the buildings.



Figure 12: View of central commons in Prison 2

Galford, G. (2016). Bellefonte, PA.

The other correctional campus, as seen in Figure 11, is from the early twentieth century, and presents a prison that is almost collegiate in character. The buildings are laid out with formal lines of symmetry and balance. There is a clear hierarchy and monumentality to buildings with an emphasis on materiality and articulated detail that shows through in the photographs. The paradigm appears to be less about security than about rehabilitation. The photographs capture the original neo-classical goals of the architect that are not evident in current prototypes.

The overall site plan of Prison 2 continues that sense of balance and order that emanates from the buildings themselves. The large cellblock building that faces the public highway is extremely monumental in its presentation and its siting as it sits on a hill above the road below. Its materiality and mass suggest its importance to those driving by the prison as this is all they can see. This building has a cascading walkway to the road with an original fountain that flowed down the steps and into a basin at the bottom.

At the top end of this walkway and fountain was the original main entrance to the prison that was housed in a multistory rotunda space. The driveway to either side was a sweeping driveway flanked by trees. The overall impression of the original entrance to the prison was one of grandeur, and it had a similar urban condition to the liminal urban prisons mentioned earlier as this was the interface for the public as they crossed into the world of the prison.

The plans show that once they entered, there were cellblock wings to either side, with the administration building directly across the yard. To the left was the chapel and to the right was the entrance to the work areas of the prison. Behind the administration building was the education buildings and the cafeteria. To either side of these functions were low, two story housing buildings arranged into quads. There was a sense of order and enclosure to the building layout. The position of the functional buildings implied a campus that could have been for other functions if not for the bars on the windows. Well-maintained flower beds as seen in Figure 11 were evident throughout and attested to the care of the inmates for them. Trees had been removed prior to my visit, and their absence was related to me by several inmates, as they had constituted a significant part of the memory of the place for the inmates.

The current entrance to Prison 2 is now off-axis as the central rotunda entrance is now not used. A more modern building from the 1980s is off to the north side of the main cellblock building and provides the current entrance to the prison for outsiders. It is nondescript, and houses administrative offices on upper floors. The employees' entrance and parking lot is now to the northern side of the correctional campus near the vocational areas. A gate and security checkpoint is placed there. A perimeter road runs around the

whole campus for constant vehicular surveillance. Within this campus, the solitary confinement areas are within the main cellblock building, and not housed elsewhere. A separate building was built for solitary confinement within the last twenty years, but this has now been converted to prison populations with mental health needs.

Surrounding the secure correctional environment is considerable acreage that not only includes the forestry camp across the main highway, but also considerable lands that were formerly used for agricultural purposes. The 1915 campus was envisioned as self-sustaining, with sufficient land for plants and livestock. Inmates were used to work in these fields and the resulting crops were used by the prison with excess sold to outside communities. This is now not done, as it isn't as economically efficient as purchasing food from larger distributors.

The site plan of Prison 1 sits on a neighboring hill and is on land belonging to the Department of Corrections as well. It provides a very different feel to its campus. While the 1915 campus of Prison 2 seems almost collegiate in its design, Prison 2 is clearly designed to a different paradigm. The plans show an immediate difference in planning in that visitors and administrators are housed in a building adjacent to the parking lot that is outside the secured perimeter of the prison. This reduces risk as the prisoner is not in frequent contact with the staff, unlike the administrative areas of Prison 2.

Once within the prison itself, the buildings are laid out in a similar logical manner with most services housed in one large building that divides the housing blocks from the service areas. The educational, religious and physical education services are in a central building amidst the housing blocks. Interestingly, within this campus the solitary

confinement housing block is on the back side of the services building, away from the general housing blocks.

While there is a certain similar order between layouts of both campuses, Prison 1, being the new prototype, clearly reflects its focus on efficiency and surveillance. The photographs show that no vegetation or building ornamentation is allowed that may provide spaces for hiding of people or contraband. Spaces are open to provide maximum surveillance. The buildings themselves, due to their prefabricated construction, are identical in their construction with little clue from the outside as to their interior functions. There is a fence, versus a wall, around this campus that does allow for views beyond the prison, but there is nothing related to nature that can be directly accessed by inmates. Spaces are less compact, as the distance between buildings is greater, and there is less indication of interaction between inmate and environment than in the older prison.

Control as Finding

Control as a concept is one that reveals itself throughout the whole work, as the nature of incarceration incorporates it, and all themes within the findings are subservient to it. Within the study of criminology, the self-control of the potential criminal serves as the beginning of the process for looking at eventual crime and punishment (Akers, 1991, pp. 201-211). This work investigates architecture as the device of control, as it serves as an underlying structure for an understanding of how the themes are linked to one another. Specific data reflect the concept and how it is both conceptually and physically woven into the fabric of the penitentiary. The difference in how control was manifested in each of the prisons reflected its particular design paradigm. The older prison maintained control through a certain rehabilitative character in the campus design and layout that

seemed like a college campus, as it maintained its order through activity. The newer prison embodied its control through technology and its visual power of clear sight lines, a non-circular version of Bentham's panopticon (Elmer, 2003, p. 237).

Officers joke about the principles of the prison as revolving around care, custody and control. Their sense of how control protects them is always central to their sense of security. As an officer related during an interview, "I don't care, so long as they're in custody and we have control."

The officers' sense of danger within the prison is tied to their feeling of being in control versus one of chaos and violence. The newer prison provides them greater visual safety, but at some loss in the livability characteristics of the prison as seen in Figure 12 below. Its design, while not circular, still employs clear vistas enhanced by digital surveillance that enables control (Bauman & Lyon, 2013, p. 80). The older prison requires more vigilance on the part of the officer as the building has more places for dangerous activity to occur because of where people may become hidden.



Figure 13: View of open yard in Prison 1

Galford, G. (2016). Bellefonte, PA.

The planning of the prison revolves around the concept of clear visual lines of sight. The current prison prototype relies on the lack of obstruction to promote visual surveillance of inmates at all times. This includes the removal of any plantings; they are not seen as therapeutic or beneficial, but as a potential place to hide items for future nefarious use. This power is negated somewhat by the lack of high venues to observe inmates in the yard within the new prison. Officers mentioned that the ability to look from above, as in a perimeter guard tower, provides better security for them. This is currently lacking in the new facility, but found in the older one. This is an architectural decision that embodies control that directly affects officer security and inmate violence levels.

Control was in evidence throughout the prison facility, and was experienced in varied ways for the officer. As one related, “I have 14 years in. It’s in a lot of ways, after doing it so long, you almost feel more comfortable here than you do at other places.

Because here's a controlled environment. Other places you don't have a controlled environment. Elements of the interior environment are centrally controlled. The temperature of the air, the temperature of the water in the showers and the interior lighting levels are all pre-set with little or no ability of the inmate to change them. Inmates even report that the control of temperature was previously used as a means of punishment, as in this statement for an inmate of Prison 2, "In the past, the guards would open windows and 'would freeze you out'. Way of controlling you."

The most obvious ways in which control is evident in the prison environment is through its digital visual surveillance and locked environments. All prison environments rely on electronic or manually keyed doors to ensure security, but to an outsider, the sound of these mechanisms is initially startling. The loud and reverberating noise of the locks and alarms alerts the newcomer to the fact that they are locked in and their exit is controlled by someone in a remote location. All elements of entrance and exit within the prison are accompanied by these auditory controls, and they act as signals to those within the prison.

The digital surveillance of the prison is the quietest and most effective aspect of control. Historic ideas about visual surveillance required corresponding architectural forms (Andrzejewski, 2008, p. 16). New means of electronic surveillance allow for inmates, staff and all spaces to be surveilled quietly. This quiet and pervasive sense of control, while indicative of the modern prison, can now be found in all walks of life and is central to our public experience, as well as to our private one (Galford & Peek, 2016, p. 128).

Control: Observation

This work was activated with a desire to determine how the concept of control is actualized by architecture as the device. Entering from outside the system, the diverse ways that control was designed into daily life were apparent. A visitor to the correctional system will inevitably be struck by the structure of the institution and how it restricts and guides all behavior. The other categories of observation discussed here are subservient to control.



Figure 14: View of original solitary confinement cells in Prison 2

Galford, G. (2016). Bellefonte, PA.

The two prisons that are investigated in this work evidence control in different ways due to the time in which they were conceived and executed. The 1915 prison contained areas of both lesser and greater control than a modern facility. The most extreme form of control that was exhibited in the older prison was in its original solitary confinement spaces in the basement of both wings, as seen in Figure 13. These spaces

were below grade with no natural light sources. All construction was in reinforced concrete with solid steel doors with only a small slot for food trays and the shackling of hands. Ceilings were high with no plumbing facilities in the individual cells. Correctional officers were keen for me to see these spaces as they represented the historical idea of what a solitary confinement space had been. No one seemed to know how long they were used. Within those spaces, total darkness and acoustic isolation were achieved, and the prisoner would have no conception of time. They would have been spaces of complete control with the inmate totally powerless. These spaces were ones that had immediate punitive effect at the time, and would seem cruel by contemporary standards. They were truly spaces of a dungeon. There were other ways in which control was actualized in the older prison, but its overall feel was one of a correctional campus versus a punitive facility. The original solitary confinement spaces of Prison 2 would never be allowed by current standards, but exhibited a cruel efficiency in their ability to not only control but completely subjugate the prisoner.

Prison 1, being the newest facility in the state, exhibited its forms of control differently. My observations were that it exhibited its forms of control much more subtly. The paradigm of design was to maintain security for the officers and staff through many methods of control, both human and technological. While the systems of the older prison still had to rely on direct human control most of the time, newer systems that remove direct human contact both control the inmate and protect the officer.

Upon arrival for my visits in both prisons, I was scanned for weapons and had to surrender all goods for storage until I left. I was not allowed to bring in any electronic mobile devices; phones and laptop computers had to be left outside. All environmental

factors within the prison are controlled centrally, as all controls are taken away from the prisoner.

The command centers of all major spaces within a correctional facility are the places of control that most resemble the ideal of Bentham's panopticon. They exist at the entry points to control initial access to the secure areas, but within solitary confinement environments, they regulate all functions of the environment. I witnessed how these spaces are centrally located in a manner that they have visual control over several wings, and also have designs into their physical layout that provide layers of security. Due to security concerns, no photographs were allowed. A perimeter hallway to the command "bubble" of the officers in each residential wing of the prison provided an additional level of security to the officers.

That visual control center was also connected to the individual cells by a call button and speaker, as well as visually through the glass panel in the door. Sightlines were not perfect, as the triangular shaped commons spaces meant that some cells were oriented in a way that did not provide direct visual coverage to the glass enclosed officer command center. The guards in this "bubble" control all components of the solitary confinement cells, including both light and temperature. I observed instances where inmates had placed toilet tissue into the vents to control air flow as shown in Figure 14 below, but that was near the limit of what the inmates could do. Some officers speculated that the smearing of blood and feces on cell surfaces was the inmates' way of pushing back on these restraints as their own bodily fluids are the only area where they still have control. The process controls them. They fight for whatever controls they can find in their

life. Their ability to personalize their space is one of their few means of achieving this aim.



Figure 15: Inmate cell vent filled with toilet tissue for thermal and sound control

Galford, G. (2016). Bellefonte, PA.



Figure 16: Raised platform for officers in visiting room

Galford, G. (2016). Bellefonte, PA.

Control: Procedure

Height is a control mechanism within all prisons and its processes are dependent upon the ability to implement and monitor them. One environmental factor that directly influences officer safety is the ability to maintain visual connection with fellow officers at all times, whether inside or outside. One clear way to make this happen is through the use of elevation as a design tool. Prison 1 did not have exterior guard towers, although it was rumored by some correctional officers in their interviews that they may come in the future. Officers expressed a desire for them, and my own observations confirmed that it would increase a sense of security among those charged with maintaining order on the grounds. I did see instances of height play a positive role inside the prison for that reason. The station for officers within the visiting room, and the command centers within the housing wings, were usually elevated by several steps as seen in Figure 15. This is to help with the visual control of these spaces, and the officers seemed to appreciate them. In the exterior yard, the officers are amongst the inmates at the same level, and visual connection with other officers could be lost if hidden behind groups of inmates. Height is a symbol of hierarchy and power, and in this context, I sensed somewhat the same concern that the officers expressed. As an officer said, “An officer needs to be seen by another officer at all times.”

Height is an effective tool to strengthen your ability to fulfill procedures within the prison. I noticed, as well, the difference height made between the newer and the older prison and how they implemented correctional policy. The regulations that govern operations are designed around the physical layout of the new prototypes, as in Prison 1. This makes the working of the prison easier for all, but most correctional facilities are

still in older buildings that must be adapted to follow these standards. This is where I saw the greatest flexibility in how prisons can operate, and is a clear example of how the architecture of control really works.

Beyond issues of height, adaptations of rules must take place within certain boundaries in an older facility, and this was supported by interviews with inmates and officers. These changes, no matter how small, are an important part of the inmate's focus, and often are the means by which the officer can exert control. Small procedural slights from officer to inmate can escalate into major issues to these differences that seem insignificant from the outside. Due to frequent transfers between correctional institutions, inmates establish and disseminate the reputations of each facility, often based on how policy is enforced or not. The building, especially if historic and idiosyncratic, enables individuality to each institution, and their reputation for harshness or leniency is linked to the tradition and culture of each prison. The procedures within a prison are more than just a way to get things done. They are set by DOC policy. They are designed around the new prison prototypes, as they are meant to regulate all state correctional institutions equally. While this is true, every correctional institution is different. The design of every prison is different, so the way in which the procedures are implemented matters.

Trust

Inmates within a solitary confinement experience are often placed there due to acts of rage and violence within the general population. This can produce focused anger at the officers who guard them, with possibly mortal attacks occurring if the guards are complacent. Total control by the officer can inflame an already angry inmate (Abbott, 1981, p. 66). The power of the correctional officer invites anger and fear. This is the

localized power of a much larger governmental one that can be seen as a negative force (Wolin, 1988, p. 182). This foundation requires the trust that every officer must have of his colleagues, as everyone's life depends upon it. Correctional officers must also confront the traps of depersonalization and dehumanization of the inmate within solitary confinement environments as it erodes their professional effectiveness (Shalev, 2009, p. 180).

A theme that emerged from the data was trust, with primary input from the officers, as it encompasses a range of emotions that describe their working experience. All the officers described certain similar thoughts about their work environment. They were at times more reticent than the inmates in some of their replies, but with time, many described an outlook on their work that is unique and intense. These officers had all worked in solitary confinement environments, and had often worked together. They had been brought into the restricted housing units as a team, and were removed as a team when it was felt that a longer stay was not beneficial to them. It was imperative that they look out for each other. This was emphasized by a correctional officer who said, "Right. Not only are you looking out for yourself, but you're looking out for everyone else also. Everyone is working the same. Everybody knows, once you come through the doors, there's a possibility for anything to happen, as long as you're all working together."

Security and Safety

The personal safety of each correctional officer is built on a sense of trust. Their own lives are dependent on feeling assured that their colleagues are vigilant in their observation of each other. They are aware that the stress of their occupation requires them to constantly fight the complacency that is easy to embrace. Studies have shown

that correctional officers have higher rates of emotional disorders, heart disease and alcohol abuse than the general population. Their personal lives are impacted by this daily regimen of potential danger characterized by a routine of sameness (McShane, 2008, p. 82).

The routine of a prison is based on consistency from day to day. The repetitive structure of activities for the inmates is designed to promote good behavior and to quell violent outbursts which can lead to attacks. The role of the officer is to foster the smooth transitions of the inmate's daily life, and if successful, this can lead an officer to reduce his personal vigilance amongst the inmates. Officers are encouraged to know their inmates under their charge to foresee changes in behavior that can alert staff before a negative action occurs. Building these relationships, or just performing a repetitive daily behavior can endanger the officer as he has to remember that a violent attack can occur at any moment. While the time can seem to move slowly, a physical attack can be extremely quick. The correctional officer needs to remind himself constantly of this potential danger, and to be confident that the other officers maintain the same standards of vigilance. Officers often note that while boredom on the job can breed a certain sense of complacency, it is still preferable to a situation of chaos.

The officers who work together in these segregated housing units must accept each other without reservation. All the officers interviewed spoke of the bond between them and said similar things about having to work with each other. The qualities of trust and teamwork arose in all conversations with the correctional officers. They know that their own lives are dependent on the visual discipline of their coworkers. They must work together as a group as someone's life may depend upon it. They endure tremendous

stress, and embody a unique characteristic of the experience of time within the prison as they need a significant break between work and home. As one correctional officer related to me, “That takes the safety of everyone down because you might need that one person if something were to happen.”

The officers interviewed at both facilities were more similar than dissimilar to each other. Most all were white males of a similar age and all but two had a military background. Most were married with children. Most were from rural regions, while the majority of the inmate population was from the urban centers of the state. I noted this lack of diversity, but through the interviews, it became apparent that the intense need for trust between the officers and officers and staff contributed to the common characteristics, as was exemplified by this quote from an officer, “It was very uncomfortable. Before you can actually start.... Not that you forget. You never forget that you’re in a correctional setting. Otherwise, you put your life in danger. You always have to pay attention to what’s going on around you, who is behind your back, standing, if you’re standing anywhere, for example, I escort inmates in and out of my office.”

Segregated housing units, or solitary confinement areas, exhibit this characteristic greater for officers in the general population. Officers for this area of the prison are not chosen for these roles through seniority or other rules governed by union contracts. Roles within solitary confinement are an organizational mark of merit, and officers are brought in as a team and leave as a team to promote comradeship. The group has to work together within the units, as an officer who does not perform adequately puts the whole team at risk. For that reason, new officers are evaluated quickly as to whether they fit in with the group, and are removed if they are not accepted by the group. It’s not a personal

or discriminatory decision, but rather one based on trust and risk, as said by this correctional officer, “It’s not that they don’t like him, or that they’re uncomfortable with him. It’s that they don’t know exactly how that person is going to respond in an incident.”

The issue of trust among the officers is also affected by the buildings themselves. There were significant differences in the two correctional facilities in how they would impact trust. The architectural character of each prison impacted the way that the officers use the building as part of their procedural duties. While DOC policy is written around the newer correctional models, most officers in the system have to implement the policies in unique correctional settings that require them to interpret how they implement the rules. This has great impact on the relationship between officer and inmate, and the architectural design is the vehicle that shapes this basic daily interaction. The building provides the cues, but as each prison has its own reputation among the inmates, the actual influence of the building on these daily decisions is most likely undervalued.

The newer prototype was designed with officer safety and security being a dominant design factor. The facilities were designed to have no visual impediments in the public spaces of the correctional campus, with no trees, shrubs or flowers allowed as shown in Figure 16. Buildings were of precast construction with smooth faces that did not allow for places for inmates to hide themselves or contraband. This also allows for clean lines of sight, as a correctional officer said, “Clear vision equals security.”



Figure 17: Open lines of sight in prison yard at Prison 1

Galford, G. (2016). Bellefonte, PA.

This design impacts the ability of the officers to maintain visual control of each other. Ironically, this campus did not have guard towers which would have provided security due to visual height and would have positively impacted trust among the officers. The officers complain that they need the height of the observing guards to see over the crowd so that officers do not get lost within the crowd, They fear the lack of control within a crowd, as expressed by an officer when he said, “The yard is one of the least safe places in the jail because of the sheer numbers. As far as the way I was taught to be in the yard, was I know where you are, you know where I’m at. Try to position yourself in a spot in the yard where you can see everybody, not just inmates. I want to know where my staff is at. In the blink of an eye, you can lose sight of a staff member, especially when there are that many inmates out in the yard.”

The open and expansive spaces that facilitate this perspective require buildings that don’t provide repose or character so much as bare utility. Inmates are encouraged to

move and to not loiter, and exterior spaces and buildings are reduced to their most reduced character to enhance the sense of officer security while optimizing efficiency with the minimum of protection.

Control

Control is based on trust within the institution. A sense of trust is felt by the officers by possessing a feeling of control within the situation. All the officers spoke of the tenuous feeling of control that they have over inmates in large areas. They are a distinct minority when inmates are congregated in any large area. The officers milling throughout the inmate population in a large area require constant vigilance. All officers report a reluctance to allow any inmate to be behind them where they would be out of view, as they reported, “You always have to watch your back. You’re always keeping your head on a swivel, constantly every day.”

Officers also reported the occasional episodes of fear when realizing how severely they are in the minority. Clear lines of sight increase control within the new prototype, but the expansive campus increases distance and increases the response time from other officers in case of an attack. The mentioned lack of towers also lessens control. As a superintendent related in his interview on a large correctional campus, “Let me give you a perspective on the biggest difference that most people probably don’t want to talk about. But, when you have a fight that’s on the other end of the compound, that fight involves staff. If it’s a staff assault with weapons, the response time for your staff getting to the other end of the compound is eternity.” The design of the new prototype that provides these open spaces with clear vistas to provide for enhanced officer security

also inhibit response time. The blank spaces of visual surveillance to promote officer security can also endanger them as well.

As the open and kinetic nature of the yard may cause anxiety due to its lack of control, the interior locked and bounded spaces of the prison can reduce that fear. This can provide comfort to officers who can protect themselves more with the enclosures of the building. This constant sense of vigilance that is tied to the buildings themselves can promote changes in an officer's personality over time. All the officers reported less anxiety in spaces that allowed for visual control, whether in the prison, or in their own personal lives. That constant sense of required vigilance to ensure personal safety is directly related to a sense of dominion over their immediate environment. This impacts their personal life as well as shared by an officer at Prison 1, "Like large groups of people, I can't do large groups of people anymore. Yeah, I'm not comfortable in that environment at all. When I'm here, this is more normal to me now, as weird as that sounds."

Trust for the officer is also maintained through control by improving their listening and communication skills throughout their daily work lives. Through the conversations with the officers it became apparent that there has been a shift from previous generations of officers who focused on the punitive nature of their job, to a more therapeutic one that relies on greater communication with inmates to not only answer their requests, but to understand a small problem before it escalates into a larger issue. As an officer at Prison 2 said, "You earn respect through communication with inmates. Professional manner. They don't respond well to fake." This preventive model is a challenge to some but it seems to be consistently reinforced by correctional staff

management. This requires the officers to be in much closer contact with the inmates on a daily basis, and it is hoped that it positively impacts the living situation to avert any type of inmate riot. This shift in work habits is not yet reflected in the buildings they utilize, as prototypes are designed for security and safety but not for enabling communication.

Family and Community

The officers in solitary confinement, exhibit a specific ‘esprit de corps’ among themselves. Correctional officers are unionized within the state’s system, but the positions within the segregated housing units are not “bid posts”, but selected by merit. It is considered an honor to be chosen for the posting within the segregated units, as only select officers are asked to serve. They are brought in as a specialized team, and have distinction within the facility. It is important to bond with each other, as officers will have to work closely with each other in the RHU. Not performing required tasks adversely affects everyone else. The nature of the work activities are inter-woven in a way that collaboration and cooperation are paramount. Many of the activities are synchronized in a manner that requires a close bonding of the officers as their tasks involve dangerous situations. The officers know that even something as benign as calling in sick, called “slicing” by the staff, is problematic as someone else has to take their shift. Days off and vacations are carefully scheduled to not penalize those who have to pick up their workload for them. The officers in solitary confinement duties are tightly connected as an officer in Prison 1 attested, “The crew is basically a knitted...Everything that goes on that day revolves around that set of five or six guys. Everyone has to work together to get the job done basically. If there’s a bad apple, it’s going to throw the whole day off. Everyone has to work together...”

Within the new prototypes, as at Prison 1, they are designed around current DOC policy and procedures. Extra layers of security are built into the solitary confinement housing units through the use of an extra corridor outside the glass-enclosed command center. While the view of the wing of cells is oblique in angle from the center, the extra glass corridor outside of it provides a buffer in case of an inmate disturbance. This command center is also raised a few steps to allow height to be a positive factor in visual surveillance, although the upper level of cells is still above them. The command center has a direct hallway to the exit door to allow officers to escape quickly if necessary. The command centers in older facilities do not have this clear divisions of functions as they were not components of the original design. The individual prisons have to build unique stations to each solitary confinement or general population area, and staff it adequately to offset deficiencies in design.

Respect / Listening / Communication

An important part of the correctional officer's job within these units is to build relationships with the inmates to the best of their ability through communication. Officers relate that inmates know if they are not being honest with them, or are "dismissing" them. All the officers spoke of the need to maintain control over their anger when faced with a conflict, thereby promoting the shift from physical control to listening and to communication. An inmate at Prison 2 supported this in his statement, "They try to help you and just by them standing there, listening to you and showing an interest, that goes a long way. It makes you feel like a human being, because most of the time when you're in the hole, you feel as though that you're shit. When somebody takes the time to talk to you, then it makes you feel like a person."

The officers reported that the inmates respond to fair communication. Inmates attend classes in anger management, but they need a correctional staff that has the skills to talk them through their anger to reduce it to a manageable level. Officers are now trained to build a rapport with inmates when possible, but this shift in outlook may not always match the personality of the officers, or may be difficult when shifting from one type of inmate or group of inmates to another.

Trust: Fear

Most inmates are not violent and angry, but a small proportion of the prison population that is violent can bring harm to the officers. As an officer at Prison 1 related, “For the most part, the inmates out there aren’t trying to make waves and create a tumultuous environment.”

This sense of anger from some inmates translates to anger within the inmate general population. Anger toward the criminal justice system deters rehabilitation and situates the officer between the two (Garland, 2001, p. 9). This precarious position contributes to a sense of fear for the officer that is always something that must be countered. The presence of trust inhibits fear. Officers, especially new ones, must begin to confront their fears and be strong, but the first time an officer is put into a yard surrounded by inmates with no weapon beyond a radio, fear is always present. Trust of the other officers at that point is paramount, as your life is literally in their hands. Architecture can support this sense of trust, or enhance the fear, through the environment it provides.

As mentioned before, though officers are trained to be vigilant and know the perils of complacency, they are at their most vulnerable in an open yard inmate environment. Being on the same ground level and not being able to see over the crowd makes him more vulnerable. A violent attack can occur if a fellow officer disappears for just a second. The vulnerability is tied to the lack of control in the situation as the officer must embrace structure to avoid chaos to protect himself or herself. While prison design relies on the skills of sight, all senses must be employed for protection. As an officer said, “If it’s a day like today and you have 400 inmates out in the yard, you get a nervous feeling, a heightened sense of awareness to what’s going on. You pay attention to the groups, the cliques hanging out, and predominant gang members in large groups. You become more aware of it.”

The solitary confinement environment allows for more control, which is necessary when dealing with the most dangerous inmates. However, even within the RHUs, there are still opportunities for inmates to harm the officers. Any direct interaction with a potentially violent inmate within solitary confinement provides small opportunities for attack, such as the transfer of food trays to the inmate and the transferal from cell to exercise yard and to the showers. The stress of constant vigilance against a quick and unforeseen attack is always with the officer.



Figure 18: Sliding food box for officer safety in Prison 1

Galford, G. (2016). Bellefonte, PA.

The design of the food box, as shown in Figure 17 above, within the new prototypes typifies the way in which small design features can translate to officer trust and safety. The historic interaction between officer and inmate in a solitary confinement situation was usually relegated to the slot in the door that provided for the transferal of meals. The momentary opportunity for direct contact between the two could be the most dangerous for the officer as an inmate could use the lone architectural connecting space as a place to attack. Inmates have thrown bodily fluids through the doors, and have cut officers when a handmade weapon was available. Within a prison, any cut can also provide an avenue for infection.

The sliding food box in the new prototypes are a costly addition to the doors, but they remove this situation of contact. The stainless steel box is mounted on the door in a track with a door at the top for the officer to place the food tray. The box is then slid to

the opening in the door for the inmate to retrieve it without any direct contact with the officer. This is an example of providing elements of design as a means of reducing violence.

These small shifts in the building's design can have a large impact on the ability of staff and inmates to feel safe on a daily basis. Older buildings, designed for a different mindset, provide other challenges to integrate them into a more secure building, thereby usually requiring more officers. However, the building design of the new prototypes which have clearer lines of sight can still promote fear because administrators may be tempted to staff fewer officers to reduce costs. Having fewer officers would increase help response times in the event of a problem, hence heightening an officer's anxiety. The older prison, with its greater variety of hidden spaces, requires greater staffing and enhanced vigilance to combat fear. It has character and visual beauty, but that has to be balanced against the need for officer safety. Officers throughout their interviews typically preferred the type of facility where they were, but one officer at Prison 2 remarked, "Yeah, I'd definitely take the newer building."

View to Nature

Introduction

A view to nature is often seen as a way to enable recuperation of a patient within a healthcare setting (Ulrich, 1984, pp. 224-225). We assume that the ability to see beyond the walls of the building is important for many, but within a correctional situation with a reduction in stimuli, that inmate need is even more apparent. We associate the visual experience with the prison in terms of its need for surveillance and control, but with

different perspectives, such as the hegemonic, the narcissistic and the nihilistic eye (Pallasmaa, 2012, p. 22). The visual needs of the inmate contribute to their rehabilitation.

The discussion with inmates led to a finding that seemed important to many, although it was approached from different perspectives. Inmates felt the need to have an established view to nature beyond the prison walls. The removal of visual stimulation was a historical tenet in early solitary confinement spaces, but in both prisons, the inmates described their visual and tactile ability to connect to nature an important part of their life within the prison (Guenther, 2013, p. 162).

Life in a correctional institution necessarily reduces the outside stimuli in an inmate's life while behind bars. For those living outside the prison, the daily barrage of visual, tactile and auditory stimuli within their daily lives can keep them from seeing and appreciating the nature around them. Inmates are also kept busy through the structure of the routine, but many of the inmates who were interviewed related their current or past experiences with nature in a way that made it relevant to the whole.

Most inmates had been in the correctional system for a while, and were likely to have been transferred from other correctional institutions. They had seen a range of prisons, and especially within older ones, had often encountered correctional campuses with significant natural elements. The presence or absence of these daily connections to nature occurred in many of their interview responses.

All inmates spoke to the rehabilitative role of both the general prison and the solitary confinement environments, and how the connection to nature both calmed and anchored them. The removal of this connection, usually due to a concern for security,

produced a certain amount of chaos within them, and contributed to increased anxiety.

The ability to bond with natural elements both within and beyond the prison walls seemed to promote positive self-reflection with the inmates. It provides relief within solitary confinement as stated by an inmate,

"To see a mountain, you see snow on a mountain, you see the sunrise, and you see clouds coming over the mountain, only clouds I see is rain clouds where I'm from. It is like a picture perfect moment and then when you can just look out your window when you're in segregation, it's a relief. Just for them few moments, few minutes, few seconds, whatever it is, whatever time it is, it just helps you get through your trials at that very moment. That's why I think it's important to have window views in every cell in segregation."

Connection

The interviewed inmates indicated that the connection to the natural view beyond the prison provided a way to gain perspective on their situation, and they mentioned that the ability to see a distant mountain with the change of seasons was a way to link themselves to the world beyond the prison. This link to nature enabled them to think beyond their own problems and to think of themselves in terms of being a citizen beyond the walls, which seemed to be a calming influence. The sky beyond and birds flying around them represented a certain sense of freedom from their current situation. While life in prison is dictated by many factors, the actual situation of the buildings within the landscape, and the connection to a natural world beyond it, preserve a sense of hope for the inmates.

Within one solitary confinement unit, one side of the building faced the sally port, or service gate. Residents of one side had a clear view of mountain ridges, while residents

on the other side had a view of the service gate where vehicles entered and exited, which meant that their windows were of frosted glass with no view. While this was due to security concerns, the inmates from one side of the building to another lived a much different experience within their cells. Correctional regulations call for natural daylight, but that doesn't require a view, which seemed more important to those interviewed. The connection to a view may help with the reduction of violent activity within the prison if it helps to keep the inmate mentally grounded in a way that allows for positive self-identity. It helps them to guard themselves when in a general population setting as said by an inmate,

"Yeah. For instance, I wouldn't go out to the yard. I would look up over the buildings, and I would see the tree line. I would sit there and watch it, and look at it. To me, it would help me say 'One day, I will be able to walk through the woods, or play in the grass,' or just something. It gave you something to set your goal towards. When you are surrounded by concrete, and walls, and all that, you ain't got nothing to look at. You ain't really got nothing to look at. To you, it's gloomy, you feel gloomy."

Hope for Future

The ability to connect yourself to the view of nature goes beyond a relaxing of the soul, but for some inmates represents hope for the future. Life within the walls can be difficult, and seeing the world beyond in a positive way, through nature, seemed to balance their view of the time they would be incarcerated. This feeling is magnified when in a solitary confinement unit, as most outside stimuli have been removed. Whether a prison has a surrounding fence that allows for views, or is surrounded by a masonry wall that prevents a view has a large impact on the inmates. As a support, an inmate at Prison 1 related his thoughts on this lack of nature,

"No, here you can't touch a tree, you don't see trees, and it's too much of nothing. You just hear, and it's more stressful on you when you do your time too because then you start thinking about things. You see cars moving through the fence you'll think about the outside world and then when you start to think about the outside world it gets to you because you can't be there so you'll get depressed, you'll start stressing, and you'll get frustrated. Sometimes that makes people lash out."

Linking a view of nature with a direct connection to small animals on campus gave the inmates a way to balance the hardness of incarceration with something innocent beyond their lives. Several inmates related the feeling about having immediate access to both flora and fauna removed from them, and how much the absence of care and observation impacted them. While they were fatalistic about the removal, several noted it in a way that contributed to it being a substantial finding, as stated by an inmate at Prison 2,

"Well, that prison has a wall, but at the other one, it's the double fence, like here. When you're in the yard, you could actually see. Like up there you're on the top of a mountain. Yeah, so kind of like here you could see mountains. Up there you could actually look out and like, just like here, you could see deer, every now and then, turkeys. You know, so at least you kind of see outside the fence, especially if you're in the yard, you could kind of look around and, you know, you're looking at the woods and hills....I think it is. I think it is, I think there's a big difference between being behind a wall, because what that prison had is a wall too, so you don't see anything. You see the wall when you go out in the yard. You see the wall and the sky, and that's how it was."

Therapeutic Nature

Inmates related how access to nature promoted gentle behavior in the inmates, how the lack of nature produced stress and that removal was always done in the name of security. Some had spent time in prisons that had been adapted from other building types, such as mental asylums and tuberculosis sanatoriums. Due to those correctional facilities

being designed as therapeutic rather than punitive, they often had bucolic grounds that the inmates had inhabited. The inmates appreciated those environments and shared stories about them that promoted a sense of positive rehabilitation for them. As one said, “Looking out the window; that is a therapeutic thing back there... It just takes you to another world. It’s like an out of body experience.... You being stripped of that, it makes your stay back there a lot more stressful. Honestly.”

In their description of their lives within different facilities, it was interesting to note that a significant amount of time was devoted to descriptions of their lives on correctional campuses that allowed a direct connection to nature. Many of the inmates had been raised in urban neighborhoods, had not had significant exposure to natural environments, and were definitely impacted by it. The ability to feed and care for an animal was mentioned by more than one, and a few mentioned the removal of trees that had acted as a home for songbirds. The reduction of stimuli seemed to increase the appreciation for nature, even when the inmate was in a solitary confinement environment, they remember their time in general population with greater access to nature. As one inmate said,

“There was trees all over. The chapel is that way, so when you walk out you can probably see it there, but they literally had these two massive pine trees on each side and a hedgerow built up around it. There was trees all over, they just recently started cutting them all down. They had apple trees, I think they had 2 different type of apple trees inside the compound, that I think for a lot of us were kind of a settling factor, because you, you know, you see the birds. The birds are like, right outside. You look out your window, because the trees are pretty much a couple of feet away from your window, and there'd be birds. Hawks, and that was one of the big things guys would always be, "Yo, look out the window, there's the hawk, there's the hawk!" That type of thing, but they've cut them all down now.”

The older prison had an established forestry camp that was outside the secured prison walls across the road and toward the mountain range beyond. It was only for those prisoners who had been model prisoners and were close to the end of their sentence. Inmates performed outdoor work tasks and lived together in a log cabin dormitory designed for them by one of the interviewed inmates with a background as an architectural draftsman. This log cabin was unlike any other component of the penitentiary, as it was not built of stone or concrete. It was a one story building, of a natural material, and was set in a glen of pine trees with no view of any other building. It did not have a fence around it, had no bars on the windows, and those who lived there walk around freely. The design of the building sent cues that it was not a place of punishment, but was one of privilege by how it connected to its natural setting. It did not merely view nature but was immersed in it.

It was an honor for those who got to serve out the remainder of their term in the setting in the woods, and was recognized as such by the inmates and officers. The direct connection to nature was a reward for good behavior, as it was clearly seen as an incentive by the correctional administration. Accessing nature was the liminal space before freedom, as an inmate at Prison 2 emphasized, “Anybody on any given day, those guys are up there for a reason. A lot of time and effort goes into understanding that those inmates are one step away from going home.”

Control as a Requirement

Control is built in to the design features of a prison. All design decisions are based on the security of building users, but some may control in unanticipated ways. All environments affect behavior, but at times the smallest design configuration can take on

greater importance within a prison where the stimuli is so greatly reduced. Purposeful or not, these small decisions build or destruct trust through the way that they control the inmate.

The ability for the inmate to view the outside world from his solitary confinement cell is one of significant control, which is then entwined with the psychological need for a connection to nature. The view is used as a negotiating benefit within the prison, as good behavior results in a view versus bad behavior which results in its removal. Since views of security gates within the prison are not allowed, the design of these spaces should acknowledge their control and cells with frosted glass that prevent views should only be used for punishment. As the design architect for the facility explained,

“The other thing is views. In some cases, some jurisdictions don't want to have the inmate to have views. If you take a look at some of the special housing and segregation housing, there are no views. That's intentionally designed to try to create a form of punishment. If you have views, it becomes a fight issue too, who's got the best view. By doing that, you create an incentive that, hey, if you do very, very well here, you could have that side of the building, and try to create camaraderie that okay, they deserve it this month, and maybe it's your turn next month. I've heard situations where things like that were occurring, but I've never ever really seen it. Just talked about.”



Figure 19: Solitary confinement exercise cages at Prison 1

Galford, G. (2016). Bellefonte, PA.

Restricted views was a strong component of both institutions. How any view was accessed by the inmate made a strong impression upon the residents of the cells. As the connection to nature is so important to the inmate, how that is configured and controlled is of paramount importance. In the newer prison, some had the desired view to the mountain ranges beyond the prison, which let the prisoner connect at a deeper level to the world beyond, but this was only really visible through the exercise cages as seen in Figure 18.

The inmates on the other side of the restricted housing block had the frosted glass which prevented a view. The sunlight itself seemed less important to the inmate so the view was the control. The inmates within those cells didn't have the same opportunity to emotionally connect and this worked negatively against rehabilitation. The design architect of the facility explained the daylighting design and regulatory guidelines for these prison when he said,

“Daylight is actually an American Correctional Association requirement. If you choose to use ACA requirements to be accredited by ACA, and it's like 12 square feet per day room times 2 square foot per inmate in that day room. What you want to try to do is give the opportunity its day or night, to give them a perspective. The second part is you want to try to get daylight to the cells so they don't find themselves sleeping all day. They can use borrowed light, put skylights in a day room and use borrowed light through the cell door, and size that cell door window so that they would get light.”

Within that same cell block, which is not near the other housing areas, one area was used to treat inmates with mental health issues, a residential treatment unit. This wing, as its goal was therapeutic rather than punitive, displayed many of the perks that those in segregated housing did not receive. There were bright colors, positive mottos on the wall, inmate painted murals and televisions in the public areas.

This difference between wings promoted tension as the inmates who were being punished resented the benefits received by those with acknowledged mental health needs. Inmates with mental health needs experienced a different life within the restricted housing unit block. As a correctional officer at Prison 1 shared, “They’re all pretty standard. Maybe they vary in the amount of cells, but an RHU is an RHU is an RHU. Except here, in my opinion. This RHU is an RHU yes, but with them having the opportunity to see the mental health part of it all, it made it a little harder to....”

The older prison had the view to nature controlled in three very different ways in their segregated housing areas. The oldest solitary confinement cells were in the basement of the prison and were totally without any access to natural light, let alone view. The inmate there was totally dependent upon meager electric light to see at all, and the cells and their outside hallways felt more like a tomb than a place a human being

would inhabit. The complete removal of any outdoor view, and all natural light was very powerful in a negative and punitive manner. Very little time would be required in those cells to gain the necessary effect.



Figure 20: Solitary confinement cell with no view at Prison 2

Galford, G. (2016). Bellefonte, PA.

The solitary confinement cells on the upper floors of the older cell block did have access to natural light, but without any direct view through the perimeter wall openings as seen in Figure 19 above. The solitary confinement cells on the main floor had no direct view of natural light or view. Those cells seemed more claustrophobic due to the lack of an outdoor view, and they were also open to the cellblocks above, so sound became a distracting issue as well. The quiet and contemplative view to nature was replaced by a loud and disconcerting space with no visual stimulation beyond a masonry wall beyond the cell.

Within the older prison, there was a building that had been originally built in the 1990s as a segregated housing unit but now was being used to treat those with mental health issues. This building type was preferred by many officers. The view here was controlled as well, and was indirect, but always accessible. The building consisted of single loaded corridors with a corridor and an outside window wall beyond. While this design was not as efficient as the newer prison prototype, it had certain advantages for both inmates and staff.

As these were single loaded corridors, inmates could not see each other directly across a corridor or public space, which reduced inmate anxiety and violence. The view was there for the inmates, but it was not directly in the cell. For issues of control, the officer could shield the corridor windows with some type of window treatment, but this would provide control without danger to the officer. These windows admitted significantly more light than the new prototypes, and the corridors and cells were always in bright light.

These spaces were also safer for the officer. There were less lines of sight to the officer when not near the inmate's cell, with the sound of the approaching officer the only way for the inmate to know when his cell is being approached. He could feel safer while doing his daily rounds along the corridor, including the delivery of meals to the inmate who would not have visual surveillance of the process until the food delivery cart was directly in front of his cell, decreasing his ability to plan an attack.

The view in this facility was not a designed one, but the placement of the building wings could be designed in a way to give the inmate the desired rehabilitative view without promoting enhanced danger for the officer. This model was more expensive to

build and maintain, but ultimately the controlled view could positively rehabilitate and could serve as a model for future segregated housing units.

Sound

The history and theory of surveillance looks at the issue of corrections with an ocular perspective. The power of the gaze and how it exists as a tool of control is common through the literature (Andrzejewski, 2008, p. 5). From the design of Bentham's panopticon, to modern surveillance, the sense of sight is the one most employed. Within this work, one of the significant findings was the way in which other senses, specifically sound, are a defining feature of the prison. As an inmate shared, "In the hole, being there is the hardest. Sound is the second hardest." Sound exists as an environmental marker almost as profound as sight. As the visual experience is constrained, sound then becomes the sense that makes up for that lack of stimuli (Abbott, 1981, p. 66).

Observation

The difference between the different facilities regarding their sound quality was something that was initially apparent to me. I was aware of how sound as a significant factor was different in each facility. Inmates mentioned that they could identify an unseen officer simply by the particular sound of his keys jangling as he walked. This unique way in which sound acted as an identifier was also stated by officers who noted the unique nature of facilities and how it impacted how their job performance. As an officer said, "COs adapt to the character of the building. They adapt their work habits to the older prison. Quirks of buildings thwarts complacency. The building challenges you to do your

job. Older structures make a better officer. Still, other factors such as personal security are more important.”

The issue of sound was one that struck me initially when I entered the correctional facilities. Due to the secure nature of the environments, most materials chosen for inclusion in these buildings are of an acoustically hard nature. Only in the dining hall in Prison 1 did I see the addition of acoustic panels high on a wall out of reach of inmates. Throughout both prisons, the reverberant nature of the sound frames how you experience the buildings. Similar to a soundtrack in a movie, sound is a clear way to set the tone and character of the prison.

The material choices that are required for a high security environment directly affect the acoustic nature of the facility. The massive nature of materials which prevents the escape of the prisoner is also the one that prevents the transmission of low frequency sounds within the prison. This helps to capture noise and not transmit it when the environment is totally enclosed, as in a solitary confinement cell (Cavanaugh, Tocci, & Wilkes, 2010, p. 5). This situation changes dramatically when the prison environment is not totally enclosed, but with open steel bar doors, as you find in the general population of older prisons. The newer prototypes enclose and contain sound while the older prisons have a greater acceptance of higher noise levels, which can reach into uncomfortable decibel levels.

The intensity of sound is measured as the multiplication of the frequency of the sound against its wavelength (Cavanaugh et al., 2010, p. 4). The peculiar nature of the design and material choice of a prison can make this situation worse due to the fact that most incorporated materials have a hard surface that prevents absorption of sound waves.

This situation is exacerbated by the contained nature of the spaces themselves, which prevent broad wavelengths, with the resulting forceful short ones. This makes the experience of sound moving in a prison more painful when there is a large amount of inmate noise.

There are different ways to deal with the strategies of sound. One is to install sound absorbent panels in spaces where inmates cannot access them, and the other is to install materials with acoustic cavities, as you would find in a gymnasium. This is problematic in a prison as the acoustic spaces would provide spaces for hiding contraband, and would create a great security risk

The clearest indicator of this is the way in which I experienced the sound of doors locking and unlocking while moving through the correctional facilities. As a visitor, you cannot open any door yourself, and all doors either require a specific key, or more likely, a remote electronic control from the officer command center. You must stand in front of all doors and wait for your request to be acknowledged. The electronic locks are very loud, and that sound of unlocking to allow your entrance and locking to secure your position within the prison makes a strong audible statement to emphasize your lack of control. As the correctional architect said to me in an interview, “Once inside the wall, you’re not coming out unless someone lets you out.”

Due to the design of both the new and the old prison, I experienced sound in different ways in both facilities. The newer prisons tended to have some acoustic treatment in their commons spaces, and weren’t as overly oppressive in terms of sound quality. The older prison, Prison 2, as seen in Figure 20, had large open cell blocks that were four to five stories tall. There was a large vertical open area between the cell blocks

and the exterior window wall. In this space, I experienced a certain level of cacophony as all inmates were lounging in their cells with music or television. There were no acoustic materials in these older, traditional spaces as seen in Figure 20. The tall narrow space left little room for the acoustic waves to dissipate and increased reverberation (Cavanaugh et al., 2010, p. 11).

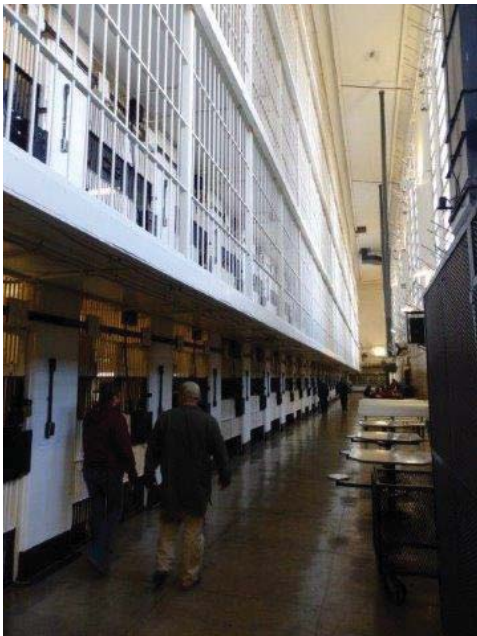


Figure 21: Cellblock at Prison 2 with no acoustic treatment

Galford, G. (2016). Bellefonte, PA.

Within solitary confinement spaces, inmates complained of white noise from the air vents and I saw how some blocked the vents, as seen in Figure 14, page 98. The solitary confinement spaces within the newer prison are constructed off site to minimize any cracks or leaks that may contribute to a security risk. This also seals the spaces acoustically and prevents the transmission of sound, except by flanking, which is the leaking of sound through such cracks (Cavanaugh et al., 2010, p. 19). The sound through the ventilation ducts is the only way for sound to travel from one cell to another.

My experience with these restricted housing environments was that they were usually quiet during the days, as their acoustic chaos was reported to occur at night. I did encounter this one time as inmates saw me within the common space by myself and asked me questions and made requests of me. This woke everyone up and I did experience in a small way what the officers would encounter most nights. The collective nature of men yelling behind thick glass at those outside the doors was overwhelming. Sound in that instance felt like a weapon to me, and would definitely cause emotional stress for the officers.

Boundary

The security needs of a prison dictate most of the materials used in its construction. The durability of materials is paramount, and normal types of inexpensive construction used in other building types would not withstand the use from the inmates, and may provide a security risk for the whole correctional institution. The corrections department specifies what types of materials are to be used in particular situations due to their impregnable character. This prevents the transmission loss of the sound through the actual walls themselves (Cavanaugh et al., 2010, p. 15).



Figure 22: Dining room at Prison 1 with acoustic wall treatment

Galford, G. (2016). Bellefonte, PA.

Due to the solid nature of the building materials, the majority of spaces throughout both the new and the old prisons are considerably louder than typical spaces outside the walls. Acoustic treatment was observed in a few instances in the new prison in areas such as the dining hall, as shown in Figure 21 above, visiting room and other spaces with high and inaccessible ceilings. In all other spaces, ceilings were generally concrete and reflected sound back into the spaces. This creates an acoustic environment that could be deafening during any time of inmate chaos. For inmates that inhabit these spaces, the characteristics of reverberation can be deafening, and defeat the goals of quiet calm that would induce penance and rehabilitation. The quality of sound in these spaces is largely determined by the inhabitants themselves, but sound waves bouncing off hard and close spaces would greatly increase the velocity of the aural experience (Cavanaugh et al., 2010, p. 4).

Within the prison, the sound character of the space defines boundary for the residents. The prison is a series of locked spaces from the inner spaces of the segregated housing units to the general housing units to the outdoor yards themselves. You can see the enclosure around you, but there is a definite audible nature to the opening and closing of portals that always signals the locked boundary of the room you inhabit. This loud locking noise from the electric door locks announces the arrival and exit of everyone who enters any space. Control is evidenced by sound in a way that approximates that of sight. As a correctional officer shared, “Especially when you hear a door lock behind you. You know in your head what that means. I can’t just walk out that door. Someone’s got to open that door for me to get out that door.”

The noise within a prison is also desired at times. Sound is also security. While large noises can seem chaotic within a prison, for the correctional officer noise can be a safeguard to alert of danger when visual control is compromised. Too much acoustic control can deaden the sound of a space to where a violent attack could more easily occur as mentioned by officers. As the architect who worked for the correctional system shared with me,

"I would say that at least as far as the new institutions, we don't specifically design a RHU or housing units with an eye on a lessening of the noise. Think of it, from a security standpoint, if it's too quiet, you don't know what's going on sometimes. Or if there's noise over here but not noise over there, this noise could be masking something."

Sound indicators within a bounded spaces could prevent an attack, or give an officer sufficient time to protect himself or radio for help. Officers noted in their interviews that the absence of sound in a situation with a group of inmates often indicated

an imminent attack of some sort. Boundary within the prison is signified by both an excess of noise and the absence of noise. As an officer at Prison 1 shared, "Silence equals imminent threat." The reverberation of sound between hard surfaces that is detrimental to an inmate can also keep an officer safe. There is always a balance between materials that have a high noise reduction coefficient, as would be desirable in other environments, and the security that the smallest of decibel levels provides (Cavanaugh et al., 2010, p. 12).

Movement

Sound is an indicator of movement throughout the prison. As every space is through a locked barrier, the noise of locks openings and closing in succession indicates someone moving through the prison. Within the prison, only those officers within the command center, through closed circuit television, can really see the overall movement of people throughout the facility. For many, due to the locked nature of all spaces, the way to alert people of the approach is through their audible movement. This can be a positive and routine movement of an officer and inmate, or can be a furtive movement of an inmate who is moving where he or she should not. The sound of movement in the prison reinforces that structured routine of the facility and is connected to time in that the regular sound of movement at particular intervals simulates the ticking of a clock. This was supported by the design architect for the newer prison as he said, "Sound is a very important aspect in terms of daylight and noise."

Attention and Communication

Sound within the prison is also the way for inmates to communicate with each other and to gain attention from the correctional staff. This occurs most especially when

forms of visual control prevent an inmate from seeing their neighbors, but through sound, they can establish social connections with people they cannot regularly see, as the architecture prevents a visual connection, as shown in Figure 22. Due to the solid nature of the doors within a new facility, inmates must shout with regularity to be heard, as there is little chance for the flanking of sound through other means (Cavanaugh et al., 2010, p. 19). The conversations between inmates often occur at night with positive and negative relationships formed by the sound of voice without seeing the other person. This obstructs the original value of solitary confinement, as an inmate related, “So really the power of segregated, the hole, is being removed. If you can hear somebody, you’re not removed.” All inmates reported that solitary confinement environments reached the peak noise levels at night. As an inmate at Prison 2 shared, “Holes are quiet by day and loud by night.”



Figure 23: Solitary confinement wing at Prison 1

Galford, G. (2016). Bellefonte, PA.

For some, these loud living situations can be disturbing and impede the desire for penance and rehabilitation that the idea of solitary confinement originally sought. Many inmates discussed their time within the restricted housing units as a time to “reset” their behavior and to allow themselves the time to reflect on their actions and to contemplate their goals for the future. This positive goal can be undermined by the distraction of a discordant environment that disrupts focus and meditation while fomenting anxiety in the inmate (Richards, 2015, p. 93). As an inmate said, “A lot of times, you’ll have others feeding off of that, because someone’s getting attention that someone else wants.”

Inmates also discussed the distraction of radio communication. The smaller wings of the newer prototype were seen as easier to audibly control than the large open blocks of the older correctional facility. On a positive note, the attention given to wildlife, such as birds, through noise, was seen as a positive issue. The ways in which sound is experienced within a solitary confinement environment directly impacts the efficacy of the situation. As an inmate at Prison 2 said, “Loudness in an RHU can drive you crazy. Noise works against finding peace. Noise works against penance and rehabilitation. At Prison 1, doors are glass to help with noise, but at Prison 2 the RHU can still hear the noise of the adjacent general population cells which works against the effect of the RHU.”

Control

The sound of a prison controls the prison in a variety of ways. As we view vision as control, the sound of the prison actually is an almost equal part of the environment. A prison is full of people living and working in stressful situations where the sounds can be positive and communicative or chaotic and debilitating. How those environments are

audibly controlled exerts the power of the prison. The control of sound is also linked to the routine of the prison. As the design architect of Prison 1 related, “Designers are aware of noise and don’t want to design for acoustic control due to perceived security concerns.”

Control of sound is also one that illustrates the subtle power plays within any correctional institution. Inmates can hear from cell to cell, specifically through HVAC vents. These same air grilles are often filed with tissue due to both the temperature, and the sound of the system. Privacy can be compromised by the building design through the ventilation system. A correctional officer at Prison 2 related, “Inmates complain that they could hear somebody talking. I had inmates complaining that they hear voices from the vent. That’s because they can hear people talking in another cell through the vent system. Now that’s not good.”

The subtle communication of an officer with an inmate who needs someone to listen may not disturb anyone else, but the power of being attentive to the need of an inmate may help to dissipate any anger or anxiety that can escalate into a larger problem. As inmates at both Prisons 1 and 2 related, communication and sound are very important within the solitary confinement environment. Much of the time sight is restricted, whether it’s inmate to officer or inmate to inmate. The sound of someone’s voice takes on even greater significance as the visual connection is diminished. As they said,

"They try to help you and just by them standing there, listening to you and showing an interest, that goes a long way. It makes you feel like a human being, because most of the time when you're in the hole, you feel as though that you're shit. When somebody takes the time to talk to you, then it makes you feel like a person."

“But you build a dialogue through the doors. You never see this man. You don't know what he looks like. You don't know nothing about him. You don't know why he's in the hole. You just build.”

As noted previously silence can control by representing the sound of imminent danger. When the usual levels of sound are not present, their absence sends a signal to the guard who is in imminent danger of losing control. As guards are always keenly aware of being outnumbered, especially in a public yard situation, they listen for cues of irregular types and levels of sound. Their vigilance to the slightest difference in the quality and quantity of the noises around them can affect their personal safety in profound ways. The sound of the prison can be as important to them as the visual cues. Sound acts as the chime as the routine of the prison progresses through the day, with silence being the lack of control.

Routine

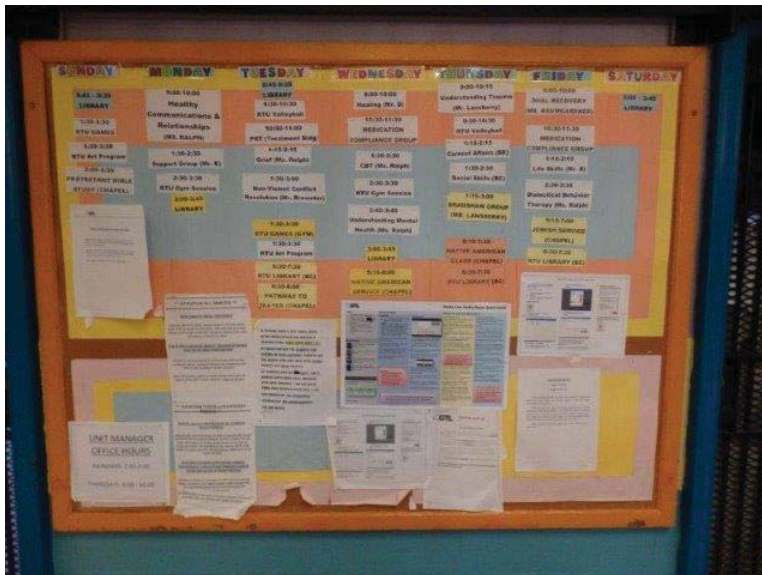


Figure 24: Schedule of routine activities at Prison 2

Galford, G. (2016). Bellefonte, PA.

Routine is a regular and habitual process or procedure. The use of routine is very pervasive in both correctional institutions as seen in Figure 23. All of us are participants in some type of daily routine. Our lives are structured around the varying ways that we use a daily sequence to achieve goals. There are differences in how it is used as a device by different people and different groups, but it is a concept that we all understand. Routine organizes all our lives to some extent, but everyone has a base definition of what it means to them.

Within a prison, the nature of routine takes on a deeper meaning (Reiter, 2016, p. 25). With its relationship to time, it is less a useful tool than a necessity for maintaining order, as routine acts as a reward. The schedule keeps everyone moving throughout the day. Its goal is to promote activity and movement that follows a strict schedule that does not allow idleness. It can bring positive focus to the lives of inmates in a way that promotes rehabilitation. Progress is measured by the orderly movement of daily tasks that add up to the passage of time for the inmate. It is predictable and structured, which is a goal of the administration versus chaos and disorder. As an inmate at Prison 2 said, “The routine keeps you sane. I guess it keeps you mentally focused to the point where you’re able to deal with your environment, deal with your situation, because being in the hole is not easy to deal with.”

The success of the routine directly affects the state of anxiety of the inmate within the correctional institution. When that routine is removed within the solitary confinement environment, a different focus must be confronted. As an inmate at Prison 1 related, “They say God don’t put nothing in your path that’s not beneficial to you. That was an

obstacle that I had to overcome, but would I have had the same time and focus in population? Probably not. Probably not.”

As the inmate follows the structured path designed for them, they perform work tasks and attend classes in a way that still follows the principles of the Auburn plan of the nineteenth century. While they no longer have to be silent, we associate the order of their daily activities with one of subjugation of the criminal will of the inmate (Andrzejewski, 2008, p. 4). Even within the solitary confinement environment where standard daily routines have been removed, most inmates discussed finding a way to develop a personal routine that helped them endure their time within that environment, As an inmate at Prison 2 said,

“So, sometimes it's better with or without, but to pass time it's better to have one, cause that way you can bid with them, you can talk, but I was in segregated, I was in by myself. I did 145 days and I was by myself. Got me through it, I read the Bible, I got up, and I learned a routine: when to get up, when to lay down and take a nap. Get up, pray, work out, you know, it just varies. Everything's routine here so like, you just fall into the routine.”

The schedule of the prison is a way of visualizing meaning to the day. The correctional officers shepherd inmates through these activities and adhere to the strict schedule. Deviation from the schedule promotes a sense of disorder in an environment that always strives for conformity and order. The centralized plans of most prisons are essential to the maintenance of the order of the facility. The variation among prison designs can cause policy to be implemented in different ways at different facilities which can lead to inmate stress. As a correctional officer at Prison 1 related,

“Yes. That way, officer A is doing it the same way officer C is doing it. In addition to that, if officer A and C are doing it the same way, that means

inmate 1 and inmate 4 are having the same rules enforced. Because if inmate 1 says, "I'm not going to take off my boxers, I'm just going to shake 'em out for you", and inmate 4 is told, "Hand over your boxers so they can be searched too", then, "Why are you making me do it? You didn't make him do it". It creates tension."

The buildings are designed to promote the stability of the system. The transition from open city jails of the eighteenth centuries to the centrally planned jails of the nineteenth century exhibited a shift to a visual surveillance paradigm for the physical form of the prison. Control versus torture became the rule. Routine as experienced through the form of the building was a way to conceptualize the passage of time.

Education and work are always linked within the life of the prison. The form of the nineteenth and twentieth century prison centered on these areas as a means for the inmate to be productive and to remain relevant. The current prison has to cope with the need to remain relevant, even in an era of decreased funding. It now also has to cope with the mental health requirements of many inmates who are no longer under the care of established mental health institutions. The prison that uses form as a way to reinforce routine now needs to view it with a different lens. Adaptations of current prison designs that reinforce routine are more difficult for a population with different needs than inmates of the past.

Schedule and Structure

The routine that is so prevalent within the general population is one that is absent within the solitary confinement environment. The general prison marks time with the consistent use of routine. When the inmate is moved from the regular housing blocks to the segregated ones, they are now locked within their cell for 23 hours per day. While we

associate the punishment of the solitary confinement area to be one of reduction of human contact and socialization, it is also the loss of the daily routine that is punishment for the inmate. They must confront the potential boredom of the situation. Routine is the way to manage time, and the stay within solitary confinement forces the inmate to confront time. As an inmate from Prison 1 related, “You’ve got to have a routine. Without a routine, you’ll get bored. Routine kills boredom in prison. If you don’t have that.....”

With their daily activities removed, the inmate is forced to focus on their time with a removal of activity and stimuli. If the routine is the vehicle to see the movement of the prison, then the cessation of access to it is the real punishment of the situation. For those inmates who are now in solitary confinement, they must find ways to establish a routine for themselves, no matter how small, to cope with their situation, as you can see in this passage from an inmate in Prison 2,

“It goes back to mental. To a mental aspect of the person. Everything starts where you have to accept your situation. If you don't accept you're going to be in that situation, then you're never going to have a routine. In order for a person to have a routine in segregation, the first thing that has to happen, you have to set this is where I'm going to be, and then your routine starts with your comfortability. If you don't get comfortable, never get comfortable, you're not going to have a routine. Even though it's segregation, you get comfortable in segregation. You get your property. I get a couple guys I can talk to. I get books from the library. You can get comfortable in segregation, but it's up to that individual. You got guys that don't want to get comfortable in segregation, they time going to be hard. Whenever a person develops a routine in segregation, what he's doing, he's making his stay comfortable. He's making his day as easy as possible.

You got guys, they routine be they stay [inaudible 00:32:18], they talk all day. Everybody develops they own routine, but whenever you come up with your routine, it's the same thing like not being in segregation. You're killing time, that's all I'm doing. All I'm doing is killing time to get past these twenty-three hours a day in segregation, where I don't want to be

here, I can't get out of here, and so what's the best way of dealing with it? Come up with a routine to get you through the day.”

Within the general population, the movement of the routine throughout the day requires a high degree of synchronization among the staff and the inmates. One activity meshes with another to keep the inmates moving from activity to activity. The goal for officers is to make that routine efficient and seamless. When the routine is offset in one area, it causes a rippling effect in other areas. Desired benefits, such as phone calls to the outside, can be disrupted when one delayed activity upsets the daily order of the prison. Beyond the familiarity with the structure of time, there are real reasons to keep things moving in an orderly fashion. A day of frustration for all inmates can lead to situations of discord within the whole prison that if ignored over time, can lead to violence. As an inmate from Prison 2 explained,

“Yeah, the people get upset because they want to get on the phone, there's phone activities that go on. People get on the phone and then there's showers and then, on my block there's 400, almost 500 inmates, so there're 500 inmates, 10 showers, so you know, depending on how long a person takes - cause a person can be in there 10 to a half hour in the shower, washing their clothes, shaving, you know doing what they need to do. Then they want to get out of there and get on the line for the phone.

Phone calls are 15 minutes apiece, so 15 minutes for 500 inmates and there's only 10 phones. Is there ten or eight? I think there's 10, 10 phones for 500 inmates at 15 minutes a pop. Not everybody gets a chance to get on, especially if you get bullied, like if you don't get but everybody has a designated phone that a group of people use, and no other outsider use their phone, so to get on it would be a bitch.

If you don't know somebody that's connected to a phone, you're not getting on, unless you sign up with the guards throughout the day when there's no population out in the yard. I mean, in the dayroom. So, you know everything has its ways of working out for everybody.”



Figure 25: Showers at cellblock in Prison 2

Galford, G. (2016). Bellefonte, PA.

Order Versus Chaos

The routine of life within both the segregated housing units and the general population is based on the desire to maintain an ordered environment to avoid chaos and violence. The elements of all routines, both large and small, can cause agitation among the inmate population. Routines are also functions of policy, and how a set of rules is implemented at one prison may be different than another. With the frequent transferal of inmates between institutions, they would be aware of these changes in routine, often decided by an officer or the correctional administration. The difference in how routines are implemented from institution to institution also reflects the variations in culture that are established in each facility. With the establishment of new facilities, this definition takes time. Officers are often brought from other institutions within the system to a new prison, and a new superintendent and staff is brought in as well. As the officers are all

used to a particular way of implementing policy, it takes time for a new culture around a new procedural style to emerge. As an officer at Prison 1 said to emphasize this point,

“I think it's still evolving. It has become much more stable, it has become much more cohesive. We are able to, for the most part, work through a lot of things. Again, difference between facilities. At the facility I was at, there wasn't really an us versus them mentality when it came to the correctional officers versus management. We all had a job to do that, at the end of the day, everyone's job is done. We're all good.

At this facility, there's still a lot of tension between the workforce and management. There's ... Some of it is caused by just different opinions and how some people feel it should be done. Some of it is caused by changes in policy, why other prisons closed. Certain staff had it really well, really good, where they used to work. They had everything they wanted, every way they wanted it. Here, it's, "No, you're going to do it our way. This is the line, you don't cross it."

Routine can also be a dangerous force in the prison as well. The chaos and order of routine is also served by the way in which the officer performs his duties. Not only is safety maintained by keeping inmates on an even schedule of activities, routine can also be threatening for an officer who performs his duties in exactly the same way every day. As the duties are much the same from day to day, most people would habitually repeat how they do them. For the correctional officer, this can be very hazardous, and requires vigilance and awareness. Officers need to perform their duties in different ways, and bring variety to the way in which they perform their tasks. Inmates who know the movement and actions of an officer against the variable of time can plan violent attacks on officers or other inmates. It is imperative to vary the daily routine as much as the officer can manage to keep inmates guessing at their schedule. Tweaks to their daily routine with extra benefits to an inmate can protect them as well. As a correctional officer at Prison 1 shared,

"Every inmate knows what you're doing. If you're that guy that does every round the same way, you're setting up a pattern to where you can put yourself at harm. You could cause someone else hard as A, they know you're going to be over here because you go over there at this time every day. It's hard not to be complacent sometimes, especially when everything is going smooth...."

Meaning

Life for the inmate is a struggle to retain a sense of relevance inside the confines of the prison. All inmates know that as time passes, their connection to the outside world diminishes. Technological and societal changes are happening for those not in prison and they are mere observers of the change. To combat this feeling of irrelevance, and to reduce an inner feeling of institutionalization, the daily activities, religious services, educational course and vocational training help to lessen that fear as seen in Figure 25.

RELIGION	TOTAL	THIS WEEK		LAST WEEK		YEAR TO DATE		PERCENT
		IN	OUT	IN	OUT	AVG	LOW	
CATHOLIC 11 %	230	66	66	66	66	AVG 72 LOW 49 HIGH 88	36%	
ISLAM 22.6%	468	200	200	200	200	AVG 22.112 LOW 2.10 HIGH 246	100%	
JEHOVAH'S WITNESSES %	15	8	11	8	11	AVG 11 LOW 9 HIGH 13	5% 73%	
JEWISH 1.2%	8	4	4	4	4	AVG 5.5 LOW 3 HIGH 8	4% 68%	
NATIVE AMERICAN %		19	19	19	19	AVG 2.5 LOW 2.2 HIGH 2.6	1.1% 50%	
PROTESTANT 23.5%	483	244	263	244	263	AVG 271.8 LOW 1.58 HIGH 300	13% 5627%	
NAME		IN	OUT	RHU	LUNCH	OTHER		

Figure 26: Schedule of religious services at Prison 1

Galford, G. (2016). Bellefonte, PA.

Staff members reported their opinion that the inability to function outside the institution occurred after seven years or so. As a correctional officer from Prison 1 shared, “Yeah, if it’s any more than 7 years, like 10 12, 18, 25, 40 years of incarceration, they’re getting out, they know they’re going to get out, they are so scared. They say it. I don’t know how the world is functioning anymore. I don’t know what is out there and they don’t. If you think computers change every 2 years, some of them never saw one.”

The complete structure and order of the prison, as defined through routine, leave few decisions for the inmates. What courses and trades that are available to them help them to feel connected outside the prison, but inmates reported that there were not enough courses or the ones offered were not current in their content or technology. Even with these complaints, the activities helped to provide meaning to everyone’s daily lives.

Other activities enables meaning through the care of the prison. The older of the two prisons had extensive landscaping that provided opportunities for the inmates to tend to the lawns and flower beds. The superintendent reported that inmates were eager to begin these activities in the early spring, as the care of these things provided a daily meaning in people’s lives. As all inmates reported a strong desire for a connection to nature, stewardship of these items provided comfort. This positive use of routine is essential within the prison. The superintendent of Prison 2 stated as much when he said,

“But with a 100 year old facility, my theory's always been if your front porch is clean, the inside of your house is clean. If the grounds are groomed well, then whether it exists or not, the tendency is that the inside of the unit buildings are as well kept as the grounds. The other thing it does, is it keeps inmates busy. Those inmates will have those marigolds out there as long as they possibly can. They were cutting grass in March. When we had that mild ... They were cutting grass. They couldn't wait to cut grass. I think we have ... There's history here. They converted a ... They used to do all their canning here. Used to do a meat processor.”

Inmates who are at the lowest risk for violence or insubordination also participate in training of service animals as seen in Figure 26. The ability to connect to nature can also be extended to those who train and care for animals. The routine of training an animal is seen as a mark of a good inmate, and few get to participate in these activities. All inmates spoke positively of access to animals, generally with the access to birds and small animals on the older correctional campus or other ones where they had been incarcerated. Due to the lack of nature at the new prototypes, the ability to care for either plants or animals as part of a daily routine has been largely removed. The benefit of this unplanned activity seems to be overlooked. As an inmate shared, “Guys was gentle towards the chipmunks, probably looked at them as friends. That rakes your mind away from being in jail, especially if you are a person that’s really trying to rehabilitate yourself. I think that’s a way to help.”



Figure 27: Low risk inmates training service dogs

Galford, G. (2016). Bellefonte, PA.

Rehabilitation

Meaning and rehabilitation are connected for the inmate through routine. Many of the inmates have been incarcerated since their youth. They may have never held a full-time job, or been responsible for keeping up with a schedule and having responsibilities similar to the workplace. As an older inmate at Prison 2 said in his interview, “Young guys who never had a job. They never worked in their life. You understand? That’s half the battle of getting out of jail and having a job.”

The architecture of prisons is designed around the daily execution of a peaceful routine. The building designs focus on order, hierarchy and clarity to aid officers to surveil inmates and to protect themselves. The complications within respondent interviews was when the design of the building did not match its necessary function and did not facilitate necessary routines. The structure provides a way to translate the idea of routine to the inmate and officer. The daily routine of the prison provides the necessary organization, and the officers provide the guidance that many may not have had before. As another inmate at Prison 2 shared,

“Nobody wants to leave. I mean most of these kids never had a job in their life, you know. They don't know what it is to work, pay bills, when all that, when they actually hit reality, when reality hits them in life, they're gonna be like ... It's gonna be hard. No savings, don't know how to save up for nothing or pay nothing other than a \$50 phone bill. There's no way in hell they're gonna survive.”

At the same time, inmates fear that the structure and routine of their rehabilitation may still not be current or relevant when they return. The routine is helpful to give order, but does it gives them what they need, as their path diverges further from the outside

workplace? With time, the adherence to routine can work in the opposite manner, by locking the inmate into a structure that rarely changes and isn't flexible enough to work with a workplace that is changing quickly. While the architecture exerts its total control on the inmate, it also takes away choice. The adherence to an unquestioning routine, can complicate issues for the inmates when he leaves the prison. As an inmate said about routine,

"All right, I want to be different. I want to make a change." What's the next thing? They're like, "You did everything," Now you're scratching your head. Suddenly you just sit and that's when I think people become institutionalized. Now it's like you're stuck in this routine, you know?"

Time

Time is the overall theme that drives all conditions within the prison. Since the prison is a community that is among us, but completely separate from our daily lives, it exists as a type of alternative universe, with its own set of rules and procedures. Fechner (1943) describes our conception of time in three stages, continuous sleep, sleeping and waking, and an eternal waking that correlates to our understanding of the phases of life. The prison both embodies and challenges this framework (Fechner, 1943, p. 23). Within this alternative place, how the concept of time is realized is also similar but very different.

Within these findings, categories of ways to view time emerged. All inmates are 'doing' time in one way or another. How they structure their lives to engage with their sentences of time matters. Another aspect was a view to time as historical, as a view to the past, and how that was illustrated by the personalization of cells by inmates to link

them to their outside lives. One was a liminal space of time between inside and outside environments. The need to transition between worlds is an important function of time. Most typically, time moves at different speeds in a prison, as it moves quickly, or it moves interminably slow.

Life within a prison is difficult to understand. While all categories within the findings are germane to the experience there, the concept of time and how it influences the lives of those within solitary confinement as a subset of the general prison gives us the most insight into how to approximate our understanding of the lives that they live. For those of us outside the prison's walls, we measure life by experiences and relationships. The communities within solitary confinement exist, but are yet different than ours. As an inmate in Prison 2 shared to emphasize this point,

"Life in here. The only difference from life in here compared to society is that you guys are free. You guys have bills to pay. You guys have a family. The difference is that we don't have no bills to pay. We have a whole lot of time on our hands, free time on our hands. Some things that go on in here are very similar that what goes on in society. This is just a community that's inside. It's behind walls and iron gates, but things still happen in here that happen in society."

‘Doing Time’

How the inmate spends the time of his sentence varies greatly between the housing units of the general population and the cells of solitary confinement. The daily routine of the general population allows the inmate to fill his time significantly to avoid focusing on his time as much. The use of routine enables the inmate to build a life with activity, goals and relationships that are suspended when they are sent to a solitary

confinement cell due to some infraction. The routine that filled their time is now removed, and a different relationship with time is now experienced.

The attitudes about how to approach their sentence varies from those who are young and new to the system, to those who are older and want to spend their sentence peacefully. Officers reported that most of the violent outbursts coming from prisoners are from those who are new to the correctional world, and have not come to terms with the new character of the period of time in front of them. Inmates with long sentences discussed how to remain relevant to the greater society when they were released, and worried about how they would return to the outside world and would they be able to function in it. Many cannot function outside the walls, and commit a crime again and return to prison. As a correctional officer at Prison 1 shared, "We have lots of guys who are our 'frequent flyers' who come down, they'll get out, they'll be out for maybe a couple weeks, and then they go right back."

Older inmates, especially those with longer sentences with little real hope of release and fewer family connections on the outside, seem to have accepted their life within the prison, and built their lives within it. They wanted to do their "time easy" and wanted to avoid conflict. They had little desire for a chaotic life behind bars. As an officer shared, "There's so many kids out there playing their stupid games." Life for them was decided and they didn't seem attracted to strife. They didn't want to associate with those who were new and more violent, and seemed to want to live as peacefully as possible. Since they accepted their home within the prison, they didn't worry about relevance to the outside society.

Being sent to the “hole”, or solitary confinement, is a very different way to confront the time of your sentence. All those interviewed had spent time within solitary confinement with a range of reactions to it. Some had spent it with a “cellie” to share the cell, and others had been by themselves. Either way, they had spent twenty-three hours a day within the cell, with only one hour outside within a small exercise area. Their loss of the routine of their daily lives, as well as the majority of their personal items that represented their home, had an obvious impact on them. The loss of the items that represented your home within the prison as well as the ability to move through the facility allowed the architectural power of control of the cell to be all that more impacting.

Most inmates discussed their particular method to deal with confronting the time of solitary confinement. Many were able to use the strength of religious faith to help them with it. Others established a semblance of a daily routine that mimicked their general population one, to help them confront the days. Everyone discussed time in a different manner regarding life in the “hole”. Everyone seemed to have an opinion about the length of time to sufficiently punish the inmate. From a few weeks to a few months, many seemed to know for themselves when a threshold had been crossed that represented the point at which they could not control their reaction to the environment. As a correctional officer at Prison 1 said,

"I'd say less than 6 months is definitely short term. There are some people that are in there for a year, a year and a half. I'd consider that moderate. 2 years or more, and you're probably looking at staying down there for a significant amount of time, whether it be this facility or another facility. Probably not leaving the RHU. We have one individual down there that has a hole time until 2027. He's going to be down there for, probably, his entire stay."

Several spoke positively of the time within solitary confinement as a way to achieve the historical goal of the spaces through penance and reflection. For those inmates, solitary was the space away from other inmates that forced them to face their own inadequacies, and to begin to embrace a way forward on their own conduct. They wanted to see their path forward without stays in solitary confinement and viewed a return as a personal failure. As an inmate at Prison 1 shared, “Sometimes you need it though, because you’re in population and now you’re in the hole, you have time to reflect and think on what you want to do.”

Past

Time within solitary confinement also meant a removal from their items of personal belongings. Inmates within these spaces were only able to bring a few photographs and one to three books into the cell for the week. Only material related to legal issues wasn’t restricted. This is all that they are able to bring with them. Many inmates discussed the significance of these personal items as they allowed them to define a sense of home within the prison. The photos and mementos from family members helped them to maintain an emotional connection to family members on the outside. Having a space that was theirs and was dedicated to the items of importance in their life was important to them. The removal of these in the solitary confinement environment was remarked upon by many.

Inmates discussed their connection to their belongings with significant importance. The personalization of their general population cells seemed very important throughout the interviews. The personal photographs, the artifacts from a family, the

items that referenced an outside loved one, or an important component of their ‘outside’ personality represented more than nostalgic pieces to them. It was their connection to an outside life with deep meaning to them, and was their only way to really establish a home within the prison. It is their way to connect their past with the present in a positive way (Bal, 1999, p. 37). As a prisoner in Prison 1 related,

"When you don't have anything in your cell, it's like it really hits you that you're all alone. That there's nobody that cares for you. You can't have your personal letters or none of that from your property. It just you've got to try to keep your mind busy. You've got to read books and stuff like that. If you can personalize your cell, like maybe put up a couple of pictures, or have family photos, and stuff like that then that would make time a lot easier to do in the bucket."



Figure 28: Solitary confinement cell in Prison 1

Galford, G. (2016). Bellefonte, PA.

When anyone is sent to solitary these items are boxed, and stored for them until the inmate's return. The absence of these things, which represent a sense of comfort for

the inmate, adds to the punishing aspects of the cell as seen in Figure 27. The inmate cannot take solace within his belongings, and avoid facing the time in front of him. Time has to be faced divorced from the security of the few items that symbolize their personality in a system that seeks to erase that individuality. Their ability to personalize their cell within the general population is a strategy to deal with time. As this inmate from Prison 1 explained,

"Customize seems like it's not a punishment but personal belongings. That's what I really want to stress, because that's what hurt me. To different people, yeah. I mean some people are happy with the TV. Some people are happy with their radio. Some people are happy in the cell with just books. They pace all day, talk to themselves but then there's people like me that need the surroundings to something to look forward to when you go out and come in, or when you wake up in the morning, you know what's going on. You know what I'm saying? You feel like you're supposed to be there. I don't know. It's weird to me to explain it. I just can't sum up the feeling that you get. Instead of dreading waking up in the morning, you don't mind waking up in the morning. You look forward to the day."

Eventually, most of those interviewed discussed reaching a point where the punishment of isolation and removal from the order and structure of their daily lives became unbearable. The lack of socialization within the world of solitary confinement affected them negatively, some more than others. Being within the prison requires a new way to conceptualize time, but the space of solitary confinement requires yet another calibration, one that is ultimately too much to absorb.

Decompression

Inmates are clearly affected by the time that they must spend in a solitary confinement environment, but that same space also affects the correctional officers who must work with them. While the solitary confinement environment is more controlled than the open yard situations that require constant vigilance, the inmates within the restricted housing units are often the most violent within the institution. Fear of violent attack from an inmate is constant and the officers must not leave any situation to chance.

The work roles within these areas are prescribed, and usually with the help of another officer to protect them against violent attack. While most residents may not be violent, and daily life can be calm due to most sleeping, nights are often loud with the possibility of being chaotic.

Against this backdrop, the officer must be consistently careful and watchful. This put stress on the situation, and correctional officers typically have a shorter life span than many due to these issues. While current correctional policy may generally encourage enhanced communications skills, and in these areas they are paramount as well, solitary confinement also requires firmness and control in their professional demeanor. As an officer said, "It's the same way. Once again, I'm probably going to misquote it. I hate to even bring it up. Look up the average life span for a corrections officer. If I'm misquoting, I'm misquoting, but I think its 57 or 58 years old."

An example of the precaution that must be taken within the solitary confinement housing units are the cages that are positioned in each one, as seen in Figure 28. They are typically used to house inmates when they are meeting with psychological services or any

other service that doesn't require human contact. These cages, with inmates within them, are startling to outsiders, but they are necessary in the routine delivery of psychological services. They are also a reminder of the ways in which staff have to think about their environment to remain safe within it, to preserve time with safety.



Figure 29: Inmate cage for psychotherapy sessions in Prison 1

Galford, G. (2016). Bellefonte, PA.

Initial discussions with officers revealed that many had significant commutes to work, especially those working in the new facility. Most had transferred from other correctional sites that had been closed, and now had to commute an hour on average to get to work. This initially seemed to be a stressor on the situation, but subsequent questions elicited discussions that it was not resented. Officers and staff who work in these areas need the time to decompress from their jobs. Everyone related evidence of the

difficulty in dealing with the most dangerous prisoners throughout the day and having to immediately encounter family life. As a correctional officer at Prison 1 explained,

“How? It's hard, but it's nice for a lot of us up here, we do travel from work. A lot of us do travel 45 minutes to an hour, sometimes more. You have that time to decompress. If you want to talk to people about what happened throughout the day. You can do that. It is hard. You go home. You might have had a bad day. Somebody set you off in public, wait a minute you can't treat them like an inmate. You can't, "Hey go walk in your cell." You can't handcuff them. It's a little more dangerous on the street.”

This was a different way to look at time as a variable, as the in-between space between worlds. While a wall or a fence can narrowly mark the division between the prison and freedom, in this situation time is a necessary buffer that gives the officer an interval to adjust their emotional selves from contexts of their lives that are diametrically opposed. For the health of the officer and their family, they need the time to adjust so as to not bring their work demeanor into their home.

Fast

Beyond this decompression, there are the more typical ways to think of how time passes. The purpose of a prison is to remove freedom though time, so the slow movement of time is how we initially think of it. The occasional fast movement of time is the one that is the most critical, as it is the one that incorporates violent attacks.

Officers constantly must battle with habits of complacency and repetition to maintain a sense of watchfulness in their daily lives. The nature of the repetitive routine of the work makes it very easy to perform their duties in the same way every day. This is dangerous and officers reported a need to vary their routine whenever possible. The two

prisons had significantly different architectural layouts that would require the officers to implement correctional policy in unique ways.

Within the architecture of the building, there are distinct zones of operation that threaten the officer with the fast conception of time. Within the solitary confinement environment, movement is the most restrictive, so attacks can occur any time that a guard is not completely attentive to the task at hand. The most dangerous time for an officer is when an inmate must be removed from their cell, whether peacefully or when they must be forcefully extracted. The design of the solitary confinement environment is set up to protect the officer from these quick attacks. The glass in the door to prevent fluids from being thrown at the officer, or the extra corridor in front of the raised command center are all ways to protect the officer. The previous description of the sliding food box attached to the doors is an example of an additional design solution to protect the officer from a quick, but potentially destructive, attack.

While all prisons have spaces of hiding, the newer prototypes are designed to reduce that possibility as much as possible. The older prisons, though, were designed to a different paradigm, and through their unique design attributes, can provide spaces for attack. The vertical nature of the cellblocks at Prison 2 require a lot of time to be spent in vertical circulation, whether through stairs or elevators. Officers mentioned to me the danger that this presented to them, and how they have to increase staffing and remain vigilant in such situations, as it would be possible for an inmate to be above them in a stairway situation partially hidden from view.

In the open areas of the prison, there is freer movement but also the ability of inmates to use the architecture as a weapon by utilizing its idiosyncrasies to hide and

attack. While the open yard areas provide greater area surveillance due to the lack of building obstructions or interior controls, assembly of large numbers of inmates make it particularly dangerous. Officers must gauge their own reaction to time by maintaining a discipline of vigilance. As an officer at Prison 1 related, "If it's a day like today and you have 400 inmates out in the yard, you get a nervous feeling, a heightened sense of awareness to what's going on. You pay attention to the groups, the cliques hanging out, and pre-dominant gang members in large groups. You become more aware of it."

The open yards present a particular challenge to the officers in both the new and the old prisons due to the free movement of inmates in the yards. Inmates are using the time for recreation or social time. In these situations, the guards are severely outnumbered, and are keenly aware of their vulnerability. They know to remain vigilant and look for other environmental cues to imminent danger. A day where certain inmates are in different locations, where inmates are quiet or acting strangely, or movement that is unique and suspect are clues that an attack is imminent. At these times, the officers must maintain visual surveillance of their colleagues and beware of attacks that they cannot see. They know if an attack is to happen, it will be fast. The slowness of normal time can change instantly, and a quick and vicious attack can be fatal. The fast movement of time within all environments of the prison is one associated with danger, and possibly death. Correctional officers must rely on instincts in these situations. They have to question whether the building layout is allowing for everyone to be seen and whether the clear expanses are keeping other officers at too great a distance to provide timely help. As an officer said, "Okay, What are they upset about? This is how many people signed up. What's going on? Something doesn't feel right. It's just that sixth sense, if you will."

While the danger of a quick attack is always in the mind of every officer, and in the minds of some inmates, the majority of their time within prison is one that is inverse to that in that it moves somewhat more slowly than beyond the prison walls. As said previously, the slow nature for the officers can be one that induces complacency. The architecture of the prison can reinforce this through monotony. This can degrade job performance which can lead to a susceptibility of violence. The slow nature of many of their days as an officer is a frequent challenge to the quality of their output. Combating a slow movement of time is necessary for vigilance. As a correctional officer at Prison 1 shared,

“Because, like I said, a lot of the guys out, they just want to do their time. They're not going to do anything 99% of the time. When you're introduced into corrections, when you're going to the Academy, it's drilled into your head, this job is 98% boredom, 2% terror. It does create a lot of complacency. You become uncomfortable in your environment, population. You let your guard down a little bit, because it's not as likely that something is going to happen out there. You still have to enforce the rules. There are still people that get upset when you do. You heighten you guard a little. For the most part, the inmates out there aren't trying to make waves and create a tumultuous environment.”

The inmates live within a slow movement of time as most typical decisions of daily life have been removed from them. The free choices and selection of what you eat, what you wear, where you go and what you do is largely controlled for them. While activities can fill some of this time in the general housing areas, it is always a struggle for them to deal with expansive areas of time. Their punishment is the removal of their freedom, and while daily routines are helpful, it is always a struggle to confront a long sentence of time and how to endure it.

Within the solitary confinement areas, the slow movement of time is the most punishing. While it is intended to be an area of removal of socialization as penance, the removal of the daily routine with few resources to help with that slow passage of time punishes the inmate further. Its space is truly one of punishment by subtraction of stimuli. The banality of the restrictive nature of the architecture punishes further. Time moves that more slowly, and within the solitary confinement areas, time punishes by making the inmate face their situation. Some embrace the time to focus on rehabilitation without distraction, while some return to the area frequently. Time is the enemy within the solitary environment. It has to be embraced, and struggled with to keep the inmate from losing self-control within the most challenging of punitive environments. The connection between nature and time is always evident.

DISCUSSION

Introduction

Within this work, life within the solitary confinement environment is discussed in comparison with life in the general population. For this research, all inmates and officers have experience with both situations, and their responses to questions are reflective of this circumstance. Solitary confinement is a prison within a prison, and the relationship that most inmates have is one that reflects both as part of their correctional life. Rehabilitation of the inmate is ostensibly the aim of that life, but the main purpose of solitary confinement is of punishment (Abbott, 1981, p. 37).

The themes that emerged within the findings illuminate concepts that expand beyond buildings, but still maintain a connection to their architectural situation. It is the purpose of this discussion to understand the relationship between the categories and the buildings that illustrate them. These buildings frame the lives for everyone, and decisions made about their layout reflect the perspectives of the stakeholders who have power within the situation.

The underlying framework for this research is based on a constructivism that engages with human behavior and the environment, as the prison is a mass of human interventions based on control. At the same time, the prison relies on a reduction of stimuli to punish those who live there. The stimuli that remains become that much more impactful. A phenomenological perspective aids evaluation of the themes discussed here as their authenticity and intentionality within an extreme environment of control gets to the essence of the experience (Crotty, 1998, p. 78). Looking at sensory experience

without prejudice is essential (Merleau-Ponty, 1962, p. xiv). The lived experience of the prison presents a unique opportunity to view life through a reduction and redefinition, and requires a fresh interpretation of this occurrence, especially within a controlled environment. This leads to a deeper understanding of the experience and brings insight to future correctional design (Husserl, 1931, p. 43).

Of the five themes, two have a more obvious architectural linkage than the others, but all have a connection between the building and the inhabitant. The categories of sound and view have clear implications to the design of the buildings, but the themes of trust, routine and time are also grounded in their built environments. Their connections are just as obvious, with serious implications, but must be conceptualized in a different manner, as the buildings themselves and their architectural design help us to visualize the ways in which the stakeholders experience their surroundings.

The work has implications for the future of correctional design while having limitations as well. The incorporation of mental health services into the state's correctional system, and their attempts to address that need have obvious impacts. The shift from a punitive model of incarceration to one that incorporates strategies to deal with mental health needs has been growing for decades due to the decrease in large-scale institutions (McShane, 2008, p. 185). This state has closed most of its traditional mental health campuses, and with time, many of those who were institutionalized are now incarcerated. One former institution in this state was converted to a correctional facility, and its physical qualities of recuperation versus security were mentioned frequently in inmate and officer interviews. That facility was eventually closed, and was recently sold by the state, but the difference in focus of the campus physical environment obviously

made a difference. Dr. Kirkbride's nineteenth-century plans for these institutions reflected his belief in how the architectural form could be used to heal rather than to punish, and this was intuited by the inmates who had served time there (Yanni, 2007, p. 14).

This shift in how officers and administration deal with issues of mental health needs is current and ongoing. It was apparent that everyone was attempting to reconcile former correctional perspectives with ones that incorporated mental health practices. This is a result of growing inmate needs, where a significant amount of prisoners take some type of behavioral medication. This change in DOC policy became apparent during the interview component of the research.

While one of the prisons represented the current prototype that is being built throughout the state, most of the prisons currently in use are much older and embody former models of prison design. The range of historical correctional types within the prison system provides the opportunity to re-evaluate some of the previous religious and rehabilitative goals to determine if some of the accompanying architectural characteristics can be re-envisioned for a new generation of prisons. Many of the findings speak to qualities of prisons that were more common in historic models and implies more investigation should be done to re-evaluate design strategies that are more focused on redemptive goals than punitive ones (Carroll, 2014, p. 2).

Newer strategies are being explored by many state and local governments to not only deal with criminal punishment differently, but to also reduce some of the fiscal burden of long-term incarceration (McShane, 2008, p. 8). With increased expensive surveillance technology, and an industry that still requires significant human labor, the

financial outlay for prisons requires decreases in funding for other social requirements. Reasonable options need to be found to accommodate this need, while balancing the goals of the system against the desire for fiscal efficiency.

The surveillance of a prison relies on both electronic and human means of vision. This sense is the most dominant within the design and daily operation of a prison, although other senses are invigorated in unanticipated ways. Architect and writer Juhani Pallasmaa (2012) utilizes an architectural approach that focuses on the phenomenological experience of buildings. As professionals, we conceptualize that approach to design through a positive aesthetic experience, but the correctional environment, especially for those housed in solitary confinement, illustrates that a designed sensory experience can be utilized for other emotional goals.

Pallasmaa (2012) discusses the way in which we utilize our vision into three categories. The hegemonic eye seeks domination over cultural production and weakens our capacity for empathy, compassion and participation with the world. The narcissistic eye views architecture solely as a means of self-expression, and as an intellectual and artistic game detached from essential mental and societal connections. The nihilistic eye deliberately advances sensory and mental detachment and alienation. It is this eye that currently frames how we view our design of penal environments, but future prisons need to look more deeply at how we use senses, including and beyond vision, to shape the behavior of inmates (Pallasmaa, 2012, p. 22).

The two themes to be discussed first are those of sound and view. These are directly related to our senses and the design of a building can easily respond to them. The ability to view for the concerns of security and the beneficial view to nature for inmates

are related to how the prison is designed and constructed. Sound is slightly more complex, as acoustic design is something that we focus upon in buildings which need stringent sound control, such as a symphony hall. The inhabitants of the prison could not be more different, but the findings show a strong relationship between how the building engages with sound and how it functions.

Sound

Within his works on madness, Michel Foucault (1961) discussed the relationship between power and sound in the context of an institution. While either a prison or an asylum is one that we associate with sound, he also saw power in the spaces of silence between the spaces of action. Sound within the prison, or more specifically the solitary confinement experience, can take many forms, but the original design of these spaces in nineteenth century correctional design got its power from the silence of the inmate. The non-existence of noise provided the space for reflection and penance, while the absence of sound within these environments was the manifestation of power and control (Foucault, 2006, p. xviii).

Its use within the prison is also one clearly of control. Bauman (2007) discusses at length how systems of visual surveillance are utilized in all realms of modern life, not just within correctional systems. Building upon the arguments of Foucault, fear within society is utilized as a mechanism by governments to exercise control (Bauman, 2007, p. 26). This control is maintained by the pervasive use of visual technology which defines much of our modern experience. Within a prison, the freedom of movement is constrained and control is operationalized in a different manner, which then contributes to a different

balances of the senses. Risk and safety are often reliant upon senses of sound, as the visual sense may be blocked. Developing a heightened sensitivity to what is heard in a space can protect, and the building defines the way in which it is experienced.

As sound within the prison encompasses competing roles, the design of how it is utilized within the prison need to be more customized throughout the facility. Solitary confinement and how it utilizes sound is an even stricter subset of the whole prison. Chaotic periods of screaming at night may punctuate the peace, but the overall environment is one of unending periods of silence that can alter your perceptions of reality with long term exposure (Abbott, 1981, p. 49).

Spaces of necessary loudness are often encountered where inmates are in movement and officers must be made aware of all inmate locations. All officers relied on their ability to hear an inmate approach, and did not desire spaces with total acoustic dampening. The loud noise of the electronic doors locking and unlocking provide a sense of boundary that announces the arrival and departure of everyone from a space. This aural alert provides information to everyone about who is in any space with them. The issue of trust is related to the officer's ability to acoustically as well as visually control their environment. Acoustic chaos needs to be avoided in large areas of congregation, but within the areas of movement the prison needs to announce all arrivals and departures.

Within the solitary confinement environment, vision is highly controlled for the inmates, and somewhat for the guards. Within the newer prototypes, most doors are solid steel with vision panels of unbreakable laminations of polycarbonate, acrylic and glass. Their small windows to the outside would be of similar materials. Inmates within these

environments have to rely on their sense of sound even more acutely. Interviewed inmates often discussed the quality of their life there through sound. They discussed making friendships through voice, when they could never see the face of someone in an adjoining cell. All discussed the quiet of the daytime environment being in great contrast with the occasional to frequent noise disruptions at night. These vocal outbreaks by inmates were a way to incite others, and to bring attention on themselves from the officers. These occurrences would disturb most if not all of the other inmates on the cellblock, and are also ways to combat the torturous boredom of unending spaces of silence (Guenther, 2013, p. 239).

For the inmate, the space of solitary confinement provides little or no stimuli. Sound can sometimes be heard through a vented heating and cooling system, but otherwise most sound is the human voice. The flanking of sound through open barred doors is usually not an option within a new prison and impacts the sound isolation of the inmate (Cavanaugh et al., 2010, p. 19). The quality of disruption through voice in these spaces often kept other inmates unsettled and unfocused. The original idea of a solitary environment was to provide a space of quiet contemplation to induce a sense of religious penance (Melossi, 1981, p. 4). Uncontrolled noise within these spaces disrupted that for others, as the inmate in these living spaces control little beyond their voice and their bodily fluids. The implications of sound within the solitary environment and the general population areas of the prison are profound. The lack of routine and human contact can make silence hard to endure.

As the inmate returns to the general population, spaces must be designed for security, but also use sound as a system of reward for positive behavior. The open

cellblocks within the older Prison 2 provided no means for reverberant sound to be absorbed. The combination of materials and building configuration contributed to the greater velocity of sound (Cavanaugh et al., 2010, p. 4). While inmates were to use headphones for entertainment, the possibility for chaotic noise was always present, but was also evidence of community. Prisons are designed with spaces of varying levels of risk according to the behavior. The acoustic quality of a space can be designed to reinforce that idea of environment relating to behavior. Spaces of movement, spaces of security, spaces of control and spaces of reflection can all be designed with an appropriate acoustic approach that reflects the risk level of the inhabitants.

View to Nature

Bender (1987) refers to liminality when he discusses the development of the prison by its location near the city walls. Its presence there gave a signal to those who entered the city that this was a part of their urban life and reminded them of the outcomes of their own behavior (Bender, 1987, p. 64). Our collective memory of the outside of a prison is defined by its walls and this division. This liminal situation helps to conceptualize the need for an inmate to connect to nature from inside the walls. While being able to tend to animals and plants directly was important, the ability to see nature and life beyond the prison walls and fences seems of major importance. It provided a way for the inmate to conceptualize an alternative to their physical location and to think of themselves and their future with a sense of relevance and hope.

Views on punishment and rehabilitation of the inmate come from many philosophical perspectives. Durkheim stresses a moral and social view, Marxism focuses on crime through the prism of class, while Foucault focuses on the subjects from a belief

in power through knowledge (Garland, 1990, p. 13). All have a position on how the prison influences the inmate. Looking at the identified themes through the intersections of these differing theories can be a useful method to define future directions. The themes identified here can all be viewed through these perspectives to assess their utility for change. The ability to hope through seeing is a strong tool to guide the action of the inmate.

The view to nature was as important to the inmates as the clear lines of sight was to the officers. As with sound there is both a general population dimension to the situation, as well as a more controlled solitary confinement one. Both relied on the sense of vision, and both were very dependent on the decisions of architectural design. The view to nature is also discussed by the inmates in both near and far dimensions. The far view is directly impacted by the decision to surround a prison with a traditional stone wall or a more modern fence. The wall prevents most views of nearby landscape and prevents the inmates from visually connecting to the outside world. With a fence, as at Prison 1, the inmates were able to see nearby roadways and vehicular movements in the landscape. They could see the mountains and with it the flight of birds and movement of deer and other animals. This was remarked upon by several interviewed inmates. The ability to see the life and changes within the near and far landscapes helped them feel connected to the outside world, and in a way to retain a sense of relevance. This prison was situated in a rural location that allowed for open views, as there were few security risks from the adjacent landscape. This situation would be different if it was in more urbanized landscape with more risk. However, the view to an outside world remains a

positive influence in the design of a prison. Designed view corridors that allow for inmates to visually access nature would be a productive part of future prison design.

One location within Prison 2 was the forestry camp that sat outside the prison walls. Its role was one of reward and transition for inmates of exemplary behavior who were soon to be released. Due to the extensive undeveloped property of the prison, this building sat undisturbed in nature. It looked not like a prison, but like a cabin in the forest. It helped the inmate to begin to redefine themselves as they initiated their planned journey to be released. The ability to use the natural environment as a rehabilitative tool was easy to see. Unfettered access to nature was the tool to acknowledge reformative behavior, and can serve as a useful tool in other correctional designs.

Within the controlled solitary confinement environment, it is a similar situation with less access. Within Prison 1, the restricted housing unit had a unique design situation that provided different levels of sight. One side of the building faced the mountainous landscape with clear vision through the windows, while the other faced the 'sally-port' and had frosted glass to prevent inmate's view of the access gate. Regulations only require access to daylight, but not to view, as the focus is on the physiological needs of daylight versus the psychological needs for an outside view (Wener, 2012, p. 203). An inmate is being punished while in solitary confinement, as it is expected to reflect and rehabilitate their behavior. This is difficult to accomplish when they cannot connect with the outside world.

The view to the inside of the housing unit is through a small window that prevents visual communication with the other inmates. The exercise cages as well are often surrounded by a wall that blocks visual connection, and doesn't provide a view beyond

the sky directly above. Most of the inmates did not seem to value this one hour of exposure outside their cell, as the exercise cage itself and the lack of view prohibited a real sense of visual value to the experience.

Within the previous solitary confinement units at Prison 2, inmates face a single loaded corridor that looked directly to the outside to a vegetated area as seen in Figure 32 on page 197. This is a less efficient layout from a planning point of view and requires greater circulation spaces for the officers. The officers interviewed did seem to prefer this layout, although it was now used for those with mental health needs within the prison. While there was still a security corridor outside the cell, the inmates was always directly connected to daylight and a view to the outside with significant areas of glass. They remained connected and the daylight from the corridors filled the adjacent cells with natural light during the day, enabling a more traditional sleep cycle. The ability to see outside, whether with near or far visual connections seems to be especially important to the inmate. The design of this view, through varying levels according to behavior, should be part of the solitary experience. While sound and view correlate with basic senses, others such as touch and smell could be designed as part of the solitary and general prison experience as a means both to punish and to reward good behavior.

Other themes from the findings relate to the built environment as well, but with less obvious architectural connections. These themes are more conceptual in nature, but are generally shaped by the physical environment in which they happen. It is important to not only evaluate the clearly connected themes, but to realize that with more inspection, that all the ideas that emerged from the findings connect behavior to environment in significant ways.

Trust

Within the prison, many dualities exist that confront the officer or the inmate. For the officer the issue of trust has dual meanings and must be integrated with their experience in the building. A focus of surveillance or rehabilitation is often at odds with each other, as illustrated by the two correctional campuses in this study. Solitude within both correctional types is intended to reform the soul and to reduce violence (Evans, 1982, p. 5). The prison is a network of power relationships, and this inherent tension puts the correctional officer in a dual interpretation of trust as he or she must act according to the positive aspects of trust through listening and communication or through the need for it amongst officers to acknowledge the constant state of anxiety that the job entails (Hirst, 1982, p. 182).

Current trends in correctional theory shift the character of the job of the officer to a more rehabilitative one than in the past due to the increased number of inmates with mental health needs. This requires a shift in the skill set required for the performance of the job, and is one that hopes to reduce trauma and increase positive memory through its use (Bal, 1999, p. 41). Confronting the memory of past violent events requires courage to reexamine, and links power to memory in a way that increasingly defines the role of the officer (Bal, 1999, p. 49). While the asylums of the nineteenth century were built with these rehabilitative goals in mind, neither the rehabilitative nor punitive correctional building models are designed to assist the officer.

For the officer, security is linked to trust due to the fears for their own personal safety. While there has been increased expertise of the correctional profession in the last several decades, there has also been an increase in violence among inmates (Herman,

2001, p. 9). Increased standards of safety for the officer help, but the role of violence within the prison requires constant personal vigilance and trust that colleagues are doing the same. The “esprit de corps” exhibited by the officers, who exhibit this trust for each other, is the inverse of shame, which has power within this culture. Shame, or shame anxiety, is the fear of disgrace and represents an attitude of respect to the values of the culture (Wurmser, 1994, p. 67). Many interviewed officers exhibited scorn for those who disrespected those shared values, and that code represents an antidote to constant anxiety.

Surveillance is the method to support trust for the officer through its role as knowledge translating to power (Hirst, 1982, p. 172). The surveillance between officers to build trust within the prison is one that forms a network panopticon. Bentham’s original design of efficiency and hidden surveillance is now one that is a network of surveillance, both digital and human. We are able to surveil in places that Foucault would never have imagined (Lyon, 2007, p. 23). The removal of visual barriers throughout the new prototypes enables this visual surveillance, but at the cost of the rehabilitative goals of the institution. Bentham’s original goal of an efficient architecture designed to its primary goal should be updated to accommodate modern systems of technology and current building practices. The modern prison needs to be designed for multiple, and often conflicting needs, but the architecture of surveillance can be designed to enable security for the officer without sacrificing the potential of inmate reform.

Trust is the one category that was established primarily from the interviews of the correctional officers. While social trust refers to the manner in which the community and the prison interact to make decisions about the philosophical direction of the penal

system, for the purposes of this paper, trust deals solely with the particular emotions of the correctional officer (Carroll, 2014, p. 65).

The idea of clear sight lines was mentioned in the importance of view, but the way in which trust continues to be an ongoing quality related to the risks borne by the officers deserves increased attention. The officers build their shared feelings of trust based on their belief in the responsibility and duty of their colleagues. This is largely a human quality, but it is supported by the framework of how the buildings incorporate features that either enhance or depress that trust.

This feeling works at both the general population level and at the level of solitary confinement. The large open cell blocks of Prison 2 are indicative of past ideas about how to house large groups of inmates. This architectural layout creates increased density and issues of height where prisoners can use their elevated position to endanger the officers below. Vertical circulation within these environments provides an opportunity for violence and reduces trust while increasing anxiety for the officers.

Two items related to the current prototype that emerged in the interviews with officers were that there was no situation of height in the outside yards. It was speculated that guard towers were originally specified but not constructed due to cost. The absence of officers in a heightened position to view the crowds of inmates and officers was commented on by several officers. Issues of height and security always seem to be connected throughout the prison.

The larger campus of Prison 1 was meant to decentralize housing and services and provide necessary open spaces. A superintendent mentioned to me a contrasting problem

in that the large open spaces keep other officers at a greater distance when necessary and can increase the sense of isolation that officers feel when they are monitoring large crowds of inmates when outdoors.

The older campus of Prison 2 illustrated a different historical outlook and how that translated to trust for the officers. The campus was composed of a combination of buildings laid out in a symmetrical and traditional form that resembled a college campus. Buildings had ornament, the campus had trees and other vegetation. Flower beds and grassy lawns were being tended by inmates. The large cellblock building was vertical in its planning. The interviews showed that these buildings and this campus, while more visually accommodating, was also more difficult to oversee and to staff. It was related to me that officers here could not be complacent, and had to adapt their work habits to the architecture of the campus. The efficiency in the other campus was not in as much evidence, but officers did not seem to mind the extra care to monitor these spaces. It had spaces of vertical circulation, and a violent attack on administrative staff member had occurred in the recent past. While this campus seemed more visually aligned with traditional goals of rehabilitation, it required more staffing to attain the same level of trust for officers.

Trust through security and communication was evidenced in different ways in the solitary confinement environments of both prisons. In the older prison prototype, the solitary confinement cells were on the lowest levels of the main cellblock with little natural light, bars with open doors and no acoustic separation from the cells on upper levels. This requires more staffing, and puts the officer at risk as there is a greater

possibility for direct contact. They must rely on their colleagues even more as the building was not designed for the current solitary confinement use.

Within the newer prototype, officer safety was obviously paramount in the design of the units, but still ways must be found to protect the officers. There are ways in which the officer has been helped by the design and other design features that are still lacking. The doors to the cells themselves are of solid steel with an unbreakable glass panel for observation. The only previous contact with inmates was the distribution of food trays as previously discussed. The solution in the new prototype is the sliding “food box” that eliminates direct contact.

Even the small detail of drain locations takes on greater significance within an environment of reduced stimuli and violence. An officer suggested in his interviews that one critical design feature that affects officer security is the flooding of cells. Officers are put at risk when an inmate floods a cell and must be relocated. The drains that accommodate these situations cannot be in the cell due to security needs, but are more centrally located in the break area and therefore cause flooding throughout the housing unit. They need to be placed on the exterior of inmate doors, as this minor oversight in design puts the officers at greater risk.

Routine

Foucault discusses the way in which governments exert power by placing individuals under observation and by controlling knowledge. The institutions of the state are mechanisms designed to maintain those relationships of power. He surmises that it is no wonder that the school or the hospital in form resemble the prison, as all have similar

duties within the nation-state. All have particular roles within the knowledge and power relationships, and often their architectonic character reflects these similarities

(Andrzejewski, 2008, p. 1).

These institutions are based upon the use of routine. The power of knowledge within these institutions is the organized and procedural use of the knowledge. The processes that regulate this knowledge utilize some form of routine to operationalize that power. All rely on the use of visual gaze to maintain their routine (Andrzejewski, 2008, p. 30). The prison relies on this framework of movement and meaning to maintain itself, and as a way to engage different perceptions of time, whether fast or slow. When it is removed in the housing of solitary confinement, its absence is dearly felt by the inmate as their punishment of time must be faced without distraction. The absence of routine in these environments can contribute to dehumanization of the situation between officer and inmate (Shalev, 2009, p. 180). Its use was mentioned by all, as it sets the rules for all actions and interactions within the prison, and it has always been linked with rehabilitative goals. As the Pennsylvania model of solitary confinement gave way to the Auburn model, which was based on work through silence through routine, it became the predominant method of conceptualizing order within the correctional institution.

The daily routine of the Auburn method was intended as a way to command power over the inmate, and to use the power of silence in conjunction with the routine of work to obtain the goal of rehabilitation (Rothman, 1971, p. 82). The architectural form supported the societal goals of corrections and reflected its needs at the time. Routine now needs to be conceptualized through the needs of current inmates that reflect present

and future aims. The punitive focus of the last few decades has created problems that require fresh thinking and new solutions to the role of the inmate (Garland, 2001, p. 8).

Solitary confinement is the absence of routine, and with time, its efficacy has been questioned (G. M. Sykes, 2007, p. 6). Its necessity within the prison as a tool for punishment will remain, so its use must be rethought as well. Within a prisoner's life in the prison, most want a peaceful existence, but a few must be removed from the general population until their behavior is modified. Instances of positive routine, however small, could be re-introduced as warranted.

Routine is also served as well with the layout of both prisons, albeit with different aims. The older campus of Prison 2 was built to a more rehabilitative mindset which is evident in the scale and character of the buildings and campus. It was designed to be a working campus, with inmates working in an adjacent large farm and the industries of the prison which sit at the corner of the campus. The grounds must be maintained by inmates as well, and the whole campus was designed to utilize the use of routine to facilitate a culture of work, as exemplified by the Auburn plan.

The use of human labor to perform tasks not only for the prison, but also for the outside world was a way of connecting the prison back to society. Routine was the way to maintain order while approaching a goal of redemption through work. The solitary confinement environment at Prison 2 has had three iterations. With solitary confinement removing routine from the inmate's life, the original solitary cells achieved that goal with a version that seems life-threatening to us now. The inmate not only had the tasks of his daily life removed, but all physical stimuli was removed as well. The wide use of routine

would have magnified the effect of suffering as the total sensory deprivation would have made it even more extreme, requiring little time to exact its power of punishment.

The solitary confinement environments at the new prototype of Prison 1 still utilize a removal of routine as punishment, albeit in a more humane environment. The cells are still small, but with adequate light, ventilation and sanitation. The general population areas of Prison 1 are also designed to facilitate routine but with a different perspective. There is no adjacent farm upon which to work, and there is no maintenance of the grounds. There are educational spaces and a good library for the inmates, but the sense of work through routine is not as evident, except in the laundry facilities of Prison 1. Aspects of routine seem more focused on movement and control with the focus on surveillance. Routine is dedicated to a different goal in some ways. Within this prison, the issue seems entwined with trust, as the security of the officer as a goal is in more evidence than at the older Prison 2.

This different use of routine as evidenced in both prisons speaks to how we should envision its interaction with architectural design. Routine is the structure of order within the device of the buildings. The buildings themselves send cues to the inmate and officer as to the expectations, whether that goal is one of punishment, rehabilitation, or both. As a visitor to the campus, I experienced how routine performed in both places. Within the newer prototype, routine seemed to be about movement, with clear passage from one destination to another to minimize the possibility of chaos. In the older prison, guards and inmates seemed to intermingle more, much as students and faculty would physically interact on a college campus. This would require more officers to be staffed and to remain vigilant to prevent violence. The discussion over the purpose of routine

within the prison reflects broader correctional goals, and should be examined as it will influence the architectural design for future prisons.

Many inmates take advantage of the libraries on their campuses as well as other educational opportunities. There was also much evidence of the use of religion in the lives of inmates. Religious services rely upon routine as part of any service, so this positive structure easily translates to other aspects of an inmate's life. Routine can be supported by a clear interaction with the care of the building and grounds, while balancing against the constant need for security. Recreational activities within prisons are also in evidence, especially in the newer facility. Even more enhanced physical routine could fulfill rehabilitative goals, while balancing against security needs.

What routine means to the next generation of prisons is important as it defines the same expectations for the inmates themselves. The issue of relevance was raised by many inmates, as they feared their own institutionalization. Routine can be used as a means of helping the inmate to reflect and rehabilitate when possible. That will not work for all, but its enhanced positive use will also have the effect of making the solitary confinement experience more meaningful as the activities associated with routine will take on greater importance to the inmate and their absence will be all the more potent. Enhancing the rehabilitative use of routine though the built environment can be a positive force for the future.

Routine is linked to the broader concept of time, and the building is the device used to mark its passage. The punishment of any prisoner is the removal of his freedom and is measured through time. The concept is the basis for all thinking of how to understand the experience of incarceration. While everyone is measuring their own life

through the use of time within a prison, the definitions of lived experiences surround the controlled use of the term.

Time

Memory intersects with time in a prison, as the collective memory of the prison combines with the individual memory of life before the prison. Halbwachs (1992) writes that the collective memory operates as a framework that always interacts with individual recall. (Cairns, 2012, p. 327). The role of memory within a prison exists in an environment that measures time in different ways. Kundera (1979) wrote that “The struggle against power is the struggle of memory against forgetting.” This explains why artifacts from the inmate’s personal life beyond the prison are more prized, and their absence more powerful, as they are tools to retain positive emotions in an environment where the routine can remove them. Power and memory are linked, and are served by time (Bal, 1999, p. 49). As routine establishes the tempo of the experience of life within the prison, time is measured consistently but at a different pace from society beyond its walls (Levine, 2008, p. 3).

John Howard’s seminal book on the status of prisons in 1777 originated the process of shifting the model of punishment from one of torture, transportation or execution to one of time and routine. As time became the device of punishment, it was connected to religion for moral support for its methods. His work was influential in the development of the Penitentiary Law of 1779 that introduced solitary confinement, labor and rehabilitation to punishment (Markus, 1993, p. 19) This influenced new American prisons, as it combined the need for punishment with current religious views. The assessment of imprisonment and rehabilitation led to new correctional theories as

Howard's view of sin was combined with Bentham's view of reason to build a device that punished with time (Ignatieff, 1978, pp. 52-58).

As time is the measure of punishment, the building is designed solely with that focus, utilizing the monastery as the model for solitary confinement (Wener, 2012, pp. 14, 21). The inmate must deal with life in prison, especially within solitary confinement, as an engagement to maintain a sense of time in a place that suspends a normal outside conception due to the lack of everyday life roles and responsibilities. An inmate who marks time on a calendar is not marking days until release, but trying to hold onto the memory of the current day (Richards, 2015, p. 85). Solitary confinement makes this experience all the more present.

The inmates and officers had many different ways to express the experience of their lives within the walls, but the reduction of freedom, movement and stimuli promotes a more close examination of what time means. The way in which the environment defines their experience reflects the paradigmatic goals of the institution. Within the two correctional institutions surveyed, time would be experienced in different ways due to the cues that the buildings provided the residents.

Within the newer prison, with its focus on surveillance and security, time is experienced as one of movement and routine. The removal of most extraneous stimuli makes the focus on the passage of time all the more strong. The consistent architectural language of the facility provided few clues as to how to build meaning into the life lived there. The solitary confinement environments within the new prison were uniform, clean and provided little stimuli as intended as shown in Figure 27 on page 154. The job of these cells is to humanely punish through removal of routine and socialization in order to

focus upon time. The original goals of the American solitary confinement cells emerged from a religious background and reflected the view that the focus on time was served by the reduction of sensory and tactile stimuli, especially human interaction. The negative psychological effects of these environments are well documented, but their initial religious goal of reformation and penance through the focused use of time still has merit, and should be incorporated into future solitary environments, with a more nuanced use of personal artifacts to connect memory to time to behavior.

Within the older campus, the aim of rehabilitation was more apparent in the architectural character and layout of the prison as it resembled an educational campus as much as a correctional one. Building your life within the walls of the prison requires a mindset that is framed by the architectural environment that you engage every day. Buildings define routine through functional layouts, but they also define through visual clues.

The solitary confinement environments within the older prison provided three variations of how to deal with time in a solitary environment. The current area of the prison used for solitary is an extension with no visual connection to the outside or other cells, but with an auditory connection that enabled inmates to remain connected. The goal of punishment through a focus on time was limited due to the true lack of removal from the general population.

Time would be experienced differently in the building constructed as a solitary environment that is now used for mental health needs. This building, with its single-loaded corridors allowed the inmate, who has no visual connection to the other inmates to view the outside from the window in his cell door. The time in these cells can provide

isolation, but at least with a view to daylight and nature, possibly enabling reformation through a natural cycle of time.

The original solitary confinement cells of the older prison, as shown in Figure 13 on page 91, are ones that most clearly illustrate the punishing use of time within an architectural environment. The cells, with no visual connection to daylight, solid concrete walls and steel doors that do not allow for audible interaction, would be terrifying in their focus on the passage of time in the most extreme, as the inmate would have no natural measures of time to frame the experience. The removal of all stimuli would leave the inmates disoriented, and time would be the instrument of torture, and architecture would act as the device of control.

All these themes that emerged from the findings are linked by the concept of control, as the very nature of a correctional institution relies upon it. The design of the building reflects that outlook and the architectural design can respond to a range of paradigms in how it impacts its residents. The traditional concept of control within a prison, as related to surveillance and security is now evolving to include the mental health needs of the inmates. This is producing an operative shift in the definition of control for administrators, officers and inmates (Carroll, 2014, p. 195).

How control includes mental health needs will influence how future prisons are designed. The needs of a therapeutic and a punitive outlook will now have to be balanced by the environment that they all inhabit. The innovation of housing units within the currently used prototypes may include on site mental health professionals as suggested by some of the officers. The mental health professional within a prison may integrate further into the officer team and the architectural design will reflect their presence. Technology

can enhance this integration, but the architectural design will reflect these needs as well. The panopticon was designed as a means of surveillance, but future needs may adapt it for mental health counseling with the therapist, as well as the correctional officer, being at the center.

CONCLUSION

Timeliness

American correctional design in the nineteenth century had specific goals of reform, redemption, and rehabilitation (Rusche, 1968, pp. 60, 63). This framed how we viewed the role of corrections throughout much of our national history, and served as a foundation for this research. This work originated with the goal of looking at how correctional environments affect the behavior of the inmates within solitary confinement. There has been increased focus on those who inhabit these spaces to determine what is humane regarding the length of time they are there. These spaces exist for a reason, but with little societal access. Renewed focus on the criminal justice system and its interaction with the broader society has been increasing in recent years.

Solitary confinement within a prison is a tool to punish inmates for unacceptable behavior. This is the predominant tool for correctional authorities in a system where capital punishment is being challenged, as its use is controversial and problematic but still exists (McShane, 2008, p. 67). This is an emotional issue with many focused on the loss of victim's families while other advocates point out that mistakes are made in conviction, especially for those with less financial resources. The US is still in contrast with its peers on this issue, but has slowly been decreasing its use. Against this backdrop, there has been a steady decline in the support of state execution by the public. The absence of this tool as a deterrent influences correctional authorities' perception for the need of solitary confinement.

The families of inmates are impacted as well, as the location of many prisons affects the connection to inmates. Due to factors including cost of land and cost of labor, many correctional facilities are located away from the populations they generally serve. The rural locations of many prisons allows the prisons to enhance security through their remote locations. This is in contrast to historic locations of prisons at the edge of cities, which served as a visual deterrence for lawful citizens (Carroll, 2014, p. 1).

The rural locations of correctional facilities also allows them to have a labor pool with fewer job opportunities than those located near urban centers, which permits lower pay for correctional officers; although, this varies widely from state to state. The rural locations also generally allow for a lower cost of services to be provided to the prison. In addition to being more cost effective for the facilities in rural settings, they provide a benefit to less economically advantaged parts of states (McShane, 2008, p. 30).

When a facility houses inmates from urban areas and correctional officers from rural areas, it can create a dis-connection between the background and values of the inmate population and the officers who guard them. Breakdowns in communication that lead to inmate stress are enhanced by the difference in norms. This stress is also enhanced by the financial burden on families that must travel to remote rural locations to visit inmates. Many inmate families are less economically advantaged and the frequent travel and lodging required for remote prison visits inhibits the connection to the inmate. This broken connection impacts rehabilitation and recidivism rates (Travis, 2006, p. 5).

The future of correctional design is a function of the political context in which it resides. Social issues ranging from inadequate mental health care to addiction and immigration issues are all affected by an ever-growing income inequality in the US, and

speak to a weak safety net as compared to European alternatives (Carroll, 2014, p. 203).

The American correctional system reflects societal problems beyond its walls, and the inevitable change in attitudes of a younger generation as it matures will affect the way we think about the future role of corrections within the country.

Qualitative and Grounded Theory

A goal of this work was to connect to the research participants in a deeper and more meaningful way. My background is in qualitative research, and the narrative experience of this work was appropriate for me. The linkage between the researcher and the participant was strengthened by the ability to converse freely about issues of simple and profound importance to those whose lives are shaped by the correctional environment. The goal was to let the stories and opinions of the inmates and officers emerge in a natural way that would not be served by an impersonal survey. The inmate looks at their life differently than those outside the walls, with an almost metaphysical introspection that must be respected (Fechner, 1943, p. 23).

The use of grounded theory is a natural outgrowth of this approach. Listening to those within the prison allowed their reactions and recollections to merge at times to allow themes to emerge from the data (Saldana, 2011, p. 6). The nature of the institution, with its general position outside mainstream society, can lead to misconceptions about what life is really like within the prison's walls. For a researcher without significant and direct correctional experience, the opportunity for preconceptions about life in a prison can prejudice the work.

Approach

The architectural approach to this work is one that is both unique and useful. The small variations in correctional buildings influence changes in policy implementation that have great affect. Within these environments, architectural influence upon people's lives is greater than we acknowledge. Life within the prison is a world that is both the same as ours and yet very different (Paez i Blanch, 2014, p. 28). Other disciplinary frameworks for analysis of crime and incarceration are more common, but the role of design is very important in the evaluation of success. The connection of building design to its purpose is nowhere more evident than in correctional design. Within the most restrictive of correctional environments, architectural form determines behavior of both inmates and staff (Shalev, 2009, p. 175). The architect or designer needs to always be part of the evaluative process within theory and policy. As architecture is the means of control, the professional perspective of architects and designers must be included, and should not just be the applier of codes and regulations. Architects need to be involved with the development of theories that act as the conceptual foundations for the buildings themselves.

Findings as Environmental Factors

The work looks at the architectural attributes of solitary confinement spaces. Specific issues of room size, color, furniture, temperature, daylight, and other characteristics were the initial focus. Spending time with staff and inmates made me realize that the issues of the environments they inhabit do incorporate these items, but that the categories of discussion are broader and more conceptual. Their physical

environment shapes their lives, but how that physical environment is used to serve those conceptual needs was a stronger component of the outcome.

The broader categories of time, routine, sound, view, and trust are all served by the physical parameters of the prison, but they act as a conceptual foundation for how those spaces are experienced. These categories were not anticipated but arose out of the interviews and the observations. All are interconnected, and even with the different roles of the stakeholders, all experience the same spaces, albeit from different perspectives of power. The range of reactions from these stakeholders speaks to the need for the study. The users of a prison have incredible amounts of interaction with the building and their reactions to its success matter greatly for future use. Standard evaluations of occupancy may only deal with the perspective of one group. This work is to provide richer findings through the intersections of everyone's experience. This work has provided that and illustrates how research can inform design in a way that can improve future models of corrections.

Findings Illustrate Power of Environment on Behavior

Some of these architectural changes are larger ones that affect broad approaches to design, but some are small design interventions, such as food tray boxes, that can impact safety on a small but very important scale. Even issues of drainage can matter as inmate cells are frequently flooded and easier ways to clean them would help. These small changes can then add up to larger ones that address the more existential needs of the inmate and officer in a meaningful way.

The inmate and the officer interact with their environment on both the large and the small scale. So many of the interactions of the day between the two are measured by small details that can either impede or exacerbate violence. Small changes in design that lead to small changes in routine can have large effects. All are directed by the larger architectonic nature of the building.

The form of the prison illustrates the decisions made by both architects and the larger society. We typically focus on the attitudes and behaviors of the human inhabitants of the spaces, but the building can reflect attitudes of punishment, surveillance, rehabilitation and reform. The message that the building sends to the user instructs everyone how to respond to their roles within the prison. Inmates interviewed for this project behaved differently when in solitary confinement as they viewed their time there as playing a role. The boredom of time spent in these spaces with the removal of most stimuli contributes to violent acts (Guenther, 2013, pp. 197, 239). Buildings send cues, and with less outside stimuli than those beyond the walls, architecture has even greater influence and always acts as a way to control.

This work contributes to the dialogue that will engage the next generation of prison design. As the infrastructure of our correctional system continues to age, replacements of historic prisons will continue to happen and should require a re-evaluation of current prototypes. Lessons that can be learned from the history of prison development should also include historic works on asylum design with its different therapeutic design to promote a new model that acts as a type of hybrid that reflects the needs for solutions for the twenty-first century. The next models of prison design, at least within the current American context, will need to engage with the large number of

inmates who require some level of mental health counseling. Historic models of asylums and prisons were actually quite different due to different outlooks regarding mission, but this combination will now need to be examined (Yanni, 2007, p. 3).

Findings Show Need

This state correctional system is now struggling with these changes in mental health needs within their inmate population. The de-institutionalization of the mental health system over the past few decades has not served those with the least resources and the greatest need. Many have no support and many end up in the correctional system. This system was designed to a different paradigm where newer punitive goals are more apparent than previous therapeutic ones, as staff psychologists struggle to work within an environment that was not designed for their work (Clear & Frost, 2015, p. 2). The development of the historic nineteenth century asylum occurred at much the same time as American correctional theories were developed. Despite the similarities, the resultant architectural forms were very different. Bridging that formal divide will be the goal of the next generation of prisons.

Families and friends who provide support for the inmate occupy certain spaces of the prison. Visiting rooms are generally the liminal spaces where inmates can interact with their loved ones. My experience with the inmates for this work was that the ones with the strongest outside ties are the ones most likely to be successful beyond the bars (Richards, 2015, p. 61). These spaces need more study and need to be viewed not only from a vantage point of security, but also from the perspectives of family members, both adult and child. Providing spaces that encourage positive interaction with those outside the walls may help encourage the successful rehabilitation of the inmate. A greater

variety of spaces for interaction, including conjugal, could help keep the inmate connected to the outside world and ensure greater relevancy to society when he or she is released.

The findings also point to a need for environments that help address the enhanced stress levels of the officers who work there. Prisons are usually designed with surveillance and security in mind, but there are also times that a lack of revenue eliminates designed components that make the work environment less dangerous. Issues of clear sight, height, removal of hidden places, integration of views with nature, careful modulation of sound, and other points of security can help with the performance of a difficult occupation.

Relevance

Recent police events have highlighted the longitudinal outcomes of the mandatory increase in sentencing laws (Herman, 2001, p. 24). The dramatic increase in correctional residents has strained systems, and the corrosive effect that it has had on communities outside the walls has been recognized. New solutions to old problems are being sought as the rejected ideas of rehabilitation are being revisited as a result of public demand for criminal justice reform (McShane, 2008, p. 48).

With these potential options for the next generation of prisons, correctional systems still want to retain the use of solitary confinement. The research shows that while particular characteristics of the architectural components have improved over time, the need for correctional administrations to have a tool of punishment within the prison still exists. The reflexive dialogue between the need to punish and the desire to make that

punishment more humane has still not solved the problem of its use. The most immediate environmental qualities of the spaces themselves have been standardized in terms of space, temperature, light and air. What emerges from the work is that a deeper level of understanding in regard to environmental characteristics of such spaces is needed and requires more study. This can act as a catalyst for future design and production.

The next American prison will be influenced by current work done in other areas and that should be incorporated into upcoming investigations. While smaller and more homogeneous countries may be responding to different criminal population needs, they can still inform our research moving forward. Prisons in Austria and Norway have been featured in American media and have challenged many of our perceptions of what a prison can be, but they operate within a social model very different than our own (Carroll, 2014, p. 65). At times, they challenge our notions of what constitutes a prison. These experimental models reflect a stronger focus on the reduction of the rates of recidivism and less on change through punishment. This shift from a punitive model to a rehabilitative one is something that may take time, but with many federal, state, and local entities looking for new solutions, the influence of changes abroad can be a positive influence on what is designed in the future American context (Ferguson, 2014, p. 28).

Next Generation of Correctional Models

Many issues are impacting the correctional world today that challenge current designs and will force changes in the future. There are social and demographic shifts in society that will influence the next generation of correctional design as well.

While globalization has likely influenced correctional design less than it has influenced other building types, the experiences of other countries and how they are addressing these issues is more readily available than in the past. New models from certain countries may seem more progressive than acceptable in the current American context, and may not always be applicable due to their smaller national size and greater homogeneity (Carroll, 2014, p. 65). However, they still influence how we view our own incarceration models, especially as we revise them to meet our unique needs and perspectives. The burden of increased costs, balanced against the need for public security, will continue to be influential factors in the future. Other beneficiaries of government spending have vocal stakeholders who will continue to put fiscal pressure upon correctional systems to lessen costs.

In the future, prison systems may have to rely more extensively on technology to be more efficient. While current models rely heavily on it for surveillance and security, there may be other ways that new systems of robotics and artificial intelligence will be adapted to the future needs of the prison. While most will be viewed through cost, there may be instances where its use can serve to reduce danger to correctional officers and staff and to increase the rehabilitation of the inmate (Bauman & Lyon, 2013, p. 87).

REFERENCES

- Abbott, J. H. (1981). *The Belly of the Beast*. New York: Vintage Books.
- Akers, R. L. (1991). Self-Control as a General Theory of Crime. *Journal of Quantitative Criminology*, 7(2), 201-211.
- Andrzejewski, A. V. (2008). *Building Power: Architecture and Surveillance in Victorian America*. Knoxville, TN: Univ. of Tennessee Press.
- Bal, M., Crewe, Jonathan and Spitzer, Leo, editors. (1999). *Acts of Memory: Cultural Recall in the Present*. Hanover, NH: University Press of New England.
- Bauman, Z. (2007). *Liquid Times: Living in an Age of Uncertainty*. Cambridge, UK: Polity Press.
- Bauman, Z., & Lyon, D. (2013). *Liquid Surveillance*. Cambridge, UK: Polity Press.
- Bender, J. (1987). *Imagining the Penitentiary: Fiction and the Architecture of Mind in Eighteenth-Century England*. Chicago and London: The University of Chicago Press.
- Braithwaite, J. (1989). *Crime, shame and reintegration*: Cambridge University Press.
- Cairns, C. G., Cairns, Stephen and Heynen, Hilde, editors. (2012). *The SAGE Handbook of Architectural Theory*. London: SAGE.
- Carroll, E. (Ed.) (2014). *Re-imagining Imprisonment in Europe: Effects, failures and the future*. Dublin, IR: The Liffey Press.
- Cavanaugh, W. J., Tocci, G. C., & Wilkes, J. A. (2010). *Architectural acoustics: Principles and practice*. Hoboken, NJ: John Wiley & Sons.
- Charmaz, K. (2011). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. Thousands, Oaks, CA: SAGE.

- Clear, T. R., & Frost, N. A. (2015). *The punishment imperative: The rise and failure of mass incarceration in America*. New York, NY: NYU Press.
- Clemmer, D. (1940). *The prison community*. New Braunfels, TX: Christopher Publishing House.
- Corbin, J., Strauss, A., & Strauss, A. L. (2014). *Basics of qualitative research*: Sage.
- Cox, S. (2009). *The Big House*. New Haven: Yale University Press.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage publications.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*: Sage Publications Limited.
- Cullen, F. T., Agnew, Robert. (2011). *Criminological Theory*. New York: Oxford University Press.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research*: Sage.
- Elmer, G. (2003). A Diagram of Panoptic Surveillance. *New Media and Society*, 5(2), 231-247.
- Evans, R. (1982). *The fabrication of virtue: English prison architecture 1750-1840*. Cambridge, UK: Cambridge, UK.
- Fechner, G. T. (1943). *Life After Death*. New York, NY: Pantheon Books.
- Ferguson, R. A. (2014). *Inferno: An Anatomy of American Punishment*. Cambridge, MA: Harvard University Press.
- Foucault, M. (1995). *Discipline & punish: The birth of the prison*: Vintage.
- Foucault, M. (2006). *History of Madness*. New York, NY: Routledge.

- Galford, G., & Peek, G. (2016). A contextual view of surveillance with implications for the home environment. *Housing and Society*, 43(2), 126-137.
- Garland, D. (1990). *Punishment and Modern Society: A study in Social Theory*. Chicago, IL: University of Chicago Press.
- Garland, D. (2001). *The Culture of Control: Crime and Social Order in Contemporary Society*. Chicago: University of Chicago.
- Gottfredson, M. R. (1990). *A general theory of crime*. Palo Alto, CA: Stanford University Press.
- Guenther, L. (2013). *Solitary confinement: Social death and its afterlives*. Minneapolis, MN: University of Minnesota Press
- Herman, P. G. (2001). *The American Prison System* (P. G. Herman Ed. Vol. 5). New York: H. W. Wilson Company.
- Hirschi, T. (2004). Self-control and crime. *Handbook of self-regulation: Research, theory, and applications.*, pp. 537-552.
- Hirst, P. (1982). Constructed space and the subject. In R. Fardon (Ed.), *Power and Knowledge: Anthropological and Sociological Approaches: Proceedings of a conference held at the University of St. Andrews in December 1982* (pp. 216). Edinburgh: Scottish Academic Press, Ltd.
- Howard, J. (1777). *The State of the Prisons*. New York: E.P. Dutton & Co.
- Husserl, E. (1931). Ideas (WR Boyce Gibson, Trans.). *London: George Allen &.*
- Ignatieff, M. (1978). *A Just Measure of Pain*. New York: Pantheon Books.
- Johnston, N. B. (1973). *The Human Cage: A Brief History of Prison Architecture*. New York: The American Foundation.

- Levine, R. N. (2008). *A geography of time: On tempo, culture, and the pace of life*. New York, NY: Basic Books.
- Lyon, D. (2007). *Surveillance studies: An overview*. Cambridge, UK: Polity Press.
- Markus, T. A. (1993). *Buildings & Power: Freedom and Control in the Origin of Modern Building Types*. London: Routledge.
- Matthews, R. (2009). *Doing time: An introduction to the sociology of imprisonment*. New York, NY: Palgrave Macmillan.
- Maxwell, J. A. (2013). *Qualitative Research Design: An Interactive Approach* (Vol. 41). Thousand Oaks, CA: SAGE.
- McShane, M. D. (2008). *Prisons in America*. New York: LFB Scholarly Publishing LLC.
- Melossi, D. P., Massimo. (1981). *The Prison and the Factory: Origins of the Penitentiary System*. Totowa, NJ: Barnes & Noble Books.
- Merleau-Ponty, M. (1962). *Phenomenology of Perception [Phénoménologie de la Perception]*: Routledge & Kegan Paul.
- Miron, J. (2011). *Prisons, Asylums, and the Public: Institutional Visiting in the Nineteenth Century*. Toronto, Canada: University of Toronto Press.
- Morris, N., & Rothman, D. J. (1997). *The Oxford history of the prison: The practice of punishment in Western society*: Oxford University Press, USA.
- Nathanson, D. L. (1987). *The many faces of shame*: Guilford Press.
- Paez i Blanch, R. (2014). *Critical Prison Design*. New York, NY: Actar Publishing.
- Pallasmaa, J. (2012). *The eyes of the skin: architecture and the senses*: Wiley.
- Reiter, K. (2016). *23/7: Pelican Bay Prison and the Rise of Long-Term Solitary Confinement*. New Haven, CT: Yale University Press.

- Richards, S. C. (Ed.) (2015). *The Marion Experiment*. Carbondale, IL: Southern Illinois University Press.
- Rothman, D. J. (1971). *The discovery of the asylum: Social order and disorder in the new republic*: Aldine de Gruyter.
- Rusche, G. K., Otto. (1968). *Punishment and Social Structure*. New York: Russell & Russell.
- Saldana, J. (2011). *Fundamentals of Qualitative Research: Understanding Qualitative Research*. New York: Oxford University Press, Inc.
- Shalev, S. (2009). *Supermax: controlling risk through solitary confinement*. Portland, OR: Willan Publishing.
- Shaw, C. R. M., Henry D. (1942). *Juvenile Delinquency and Urban Areas*. Chicago, IL: University of Chicago Press.
- Silverman, D. (2013). *Doing Qualitative Research* (Fourth Edition ed.). Thousand Oaks, CA: SAGE.
- Spierenburg, P. C. (1984). *The Spectacle of Suffering: Executions and the Evolution of Repression*. Cambridge, UK: Cambridge University Press.
- Sykes, G. M. (2007). *The Society of Captives* (Second Edition ed.). Princeton, NJ: Princeton University Press.
- Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: A theory of delinquency. *American Sociological Review*, 664-670.
- Travis, J. (2006). Families left behind: The hidden costs of incarceration and reentry.
- Ulrich, R. (1984). View through a window may influence recovery. *Science*, 224(4647), 224-225.

Wener, R. (2012). *The environmental psychology of prisons and jails: Creating humane spaces in secure settings*. Cambridge, UK: Cambridge University Press.

Wolin, S. S. (1988). On the Theory and Practice of Power. In J. Arac (Ed.), *After Foucault: Humanistic Knowledge, Postmodern Challenges* (pp. 201). New Brunswick, NJ: Rutgers University Press.

Wurmser, L. (1994). *The mask of shame: Jason Aronson Northwale, NJ*.

Yanni, C. (2007). *The architecture of madness: Insane asylums in the United States*: University of Minnesota Press.

APPENDICES*Recruitment Script – General***Recruitment Script - General**

My name is Greg Galford. I am a doctoral student at the University of Missouri in the Architectural Studies Department. I am interested in how people live in extreme housing environments. I am also interested in how control and surveillance impact how people live. This research study wants to examine the effects of architectural design decisions on inmates living in segregated residential units. It questions the link between these environments and how they affect people living in them. It wants to gather the opinions of all those who are involved. This includes inmates, correctional officers, administrators and correctional designers. There will be no immediate benefit to research participants. This research may help with the future design of correctional environments. There is only minimal risk involved with this research. If you choose to be involved, you will participate in two to four interviews. These will be one hour each. These will be at least two weeks apart. These will be conducted in an area selected by the correctional institution. These will begin in the summer of 2016 and be done by early fall of 2016. You must have experience with the segregated residential units. You must be 18 years of age. If you are interested, please contact me at 412-780-4800 or at galfordmizzou@gmail.com.

*Recruitment Script – Inmate***Recruitment Script-Inmate**

My name is Greg Galford. I am a doctoral student at the University of Missouri in the Architectural Studies Department. I am interested in how people live in extreme housing environments. I am also interested in how control and surveillance impact how people live. This research study wants to examine the effects of architectural design decisions on inmates living in segregated residential units. It questions the link between these environments and how they affect people living in them. It wants to gather the opinions of all those who are involved. This includes inmates, correctional officers, administrators and correctional designers. There will be no immediate benefit to research participants. This research may help with the future design of correctional environments. There is only minimal risk involved with this research. If you choose to be involved, you will participate in two to four interviews. These will be one hour each. These will be at least two weeks apart. These will be conducted in an area selected by the correctional institution. These will begin in the summer of 2016 and be done by early fall of 2016. You must have experience with segregated residential units. You must be 18 years of age. If you are interested, please contact your CSA, your counselor or the unit manager in your housing unit.

Interview Questions – Inmate

Galford – *Control through Architecture: The environment of isolation and how it affects behavior*

Sample Interview Questions – General and

Open-Ended Initial Questions:

1. Tell me about your life prior to being in the correctional system.
2. Describe your first correctional living experience.

Intermediate Questions:

3. Describe your first experience in a segregated residential unit.
4. Describe the characteristics of the room.

Ending Questions

5. Are there things you want to say that I haven't asked you?

Clarifying Interview Questions

6. Describe segregated residential units in terms of personal belongings and ability to customize.
7. Describe segregated residential units in terms of length of stay.
8. Describe access to daylight and outside views in segregated residential units.
9. Describe how segregated residential units affect rehabilitation and remaining relevant.
10. Describe how routine affects your sense of time.
11. Describe how sound affects your stay in segregated environments.
12. Describe how a strong inner or mental strength helps in segregated environments.

Interview Questions – Correctional Officer

Galford – *Control through Architecture: The environment of isolation and how it affects behavior*

Sample Interview Questions – General and Open-Ended

Initial Questions:

1. Tell me about your life prior to working in the correctional system.
2. Describe your first work experience with correctional living environments.

Intermediate Questions:

3. Describe your first experience working with inmates in a segregated residential unit.
4. Describe the characteristics of the room as you witnessed them.

Ending Questions

5. Are there things you want to say that I haven't asked you?

Clarifying Interview Questions

6. *Describe how segregated residential units affect security and personal safety.*
7. *Describe how segregated residential units affect teamwork.*
8. *Describe how segregated residential units affect inmate mental health.*
9. *Describe how the concepts of respect and communication affects an officer.*
10. *Describe how the efficiency of the buildings versus the character of the buildings affects you.*
11. *Are there things you want to say that I haven't asked you?*

Interview Questions – Architect

Galford – *Control through Architecture: The environment of isolation and how it affects behavior*

Sample Interview Questions – General

and Open-Ended Initial Questions:

1. Tell me about your life prior to working in the correctional system.
2. Describe your first work experience with correctional living environments.

Intermediate Questions:

3. Describe your first experience working with inmates in a segregated residential unit.
4. Describe the characteristics of the room as you witnessed them.

Clarifying Interview Questions

5. *Describe how segregated residential units affect security and personal safety.*
 - a. *How does the design of SRUs/RHUs, affect officer security and personal safety?*
6. *Describe how segregated residential units affect teamwork.*
 - a. *How does the design of SRUs/RHUs affect officer teamwork?*
7. *Describe how segregated residential units affect inmate mental health.*
 - a. *How does the design of SRUs/RHUs affect inmate and officer mental health?*
8. *Describe how the concepts of respect and communication affects an officer.*
 - a. *How do buildings facilitate these concept of respect and communication?*
9. *Describe how the efficiency of the buildings versus the character of the buildings affects you.*
 - a. *What are the roles of efficiency and character in prison design?*
10. Describe segregated residential units in terms of personal belongings and ability to customize.
 - a. *How important do you think the ability to personalize a space should be?*
11. Describe segregated residential units in terms of length of stay.
12. Describe access to daylight and outside views in segregated residential units.
 - a. *How important do you think outside views and day light are in SRUs/RHUs?*
13. Describe how segregated residential units affect rehabilitation and remaining relevant.
14. Describe how routine affects your sense of time.

Missouri – IRB Approval

Institutional Review Board

University of Missouri-Columbia

190 Galena Hall; Dc074.00 Columbia, MO 65212

573-882-3181

irb@missouri.edu

July 21, 2016

Principal Investigator: Gregory A Galford, Masters of Architecture/Doctoral Candidate
Department: Human Environmental Sciences -PHD

Your IRB Application to project entitled Control through Architecture: The environment of isolation and how it affects behavior was reviewed and approved by the MU Institutional Review Board according to the terms and conditions described below:

IRB Project Number 2005825

IRB Review Number 216159 Initial Application Approval Date July 21, 2016 IRB
Expiration Date July 21, 2017

Level of Review Expedited

Project Status Active - Open to Enrollment 45 CFR 46.110.a (f) (6)

Expedited Categories

45 CFR 46.110.a (f) (7)

Risk Level Minimal Risk

Type of Consent Written Consent

Internal Funding Personal funds

Protocol Version/Date N/A - N/A -

The principal investigator (PI) is responsible for all aspects and conduct of this study. The PI must comply with the following conditions of the approval:

1. No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date.
2. All unanticipated problems, adverse events, and deviations must be reported to the IRB within 5 days.
3. All changes must be IRB approved prior to implementation unless they are intended to reduce immediate risk.
4. All recruitment materials and methods must be approved by the IRB prior to being used.
5. The Continuing Review Report (CRR) must be submitted to the IRB for review and approval at least 30 days prior to the project expiration date. If the study is complete, the Completion/Withdrawal Form may be submitted in lieu of the CRR.
6. Maintain all research records for a period of seven years from the project completion date.
7. Utilize the IRB stamped consent documents and other approved research documents located within the document storage section of eCompliance. These documents are highlighted green.

If you are offering subject payments and would like more information about research participant payments, please click here to view the MU Business Policy and Procedure: http://bppm.missouri.edu/chapter2/2_250.html

If you have any questions, please contact the IRB at 573-882-3181 or irb@missouri.edu.

Thank you,

MU Institutional Review Board

Missouri – IRB Amendment

MU Office of Research eCompliance

IRB #2005825 C

Project number 2005825

Project title Control through Architecture: The environment of isolation and how it affects behavior

Project status Active Open

to Enrollment

Principal investigator Galford, Gregory A

Expiration date 07/21/2017

Amendment Form #218907

Submission date: 08/25/2016

1. Project Information

1. Project Title

Control through Architecture: The environment of isolation and how it affects behavior

2. Principal Investigator / Contact Person

Principal investigator

Galford, Gregory A

Job title Graduate

Department Human Environmental Sci PHD

Division

Business unit University of Missouri

Primary contact , Galford, Gregory A , Job title Graduate

Department Human Environmental Sci PHD

Division , Business unit University of Missouri

3. Study Staff

User Role Department

IRB training date

Primary contact

Consent personnel role

Veterans personnel

Galford, Gregory A , Principal Investigator

Human Environmental Sci PHD

05/12/2016 • Authorized to Obtain Consent

Schwarz, Advisor Architectural Studies

07/05/2016

Schwarz,Benyamin Advisor Architectural Studies 07/05/2016 , Non Consenting Personnel

4. Project Approval Information

Level of risk - Minimal Risk

Consent types

Written Consent

5. Project Status - Active Open to Enrollment

6. Date of Original Project Approval

07/21/2016

7. Project Expiration Date

July 21, 2017

8. Does this study involve subjects from the VA (Harry S. Truman Memorial Veterans' Hospital)

Please send a copy of your updated protocol to the VA investigational pharmacist.

No

9. Are you requesting to add external investigators not affiliated with the University of Missouri Columbia to this study?

No

10. If yes, identify the investigator(s) and their institution and describe their role in the study.

Specify if the external investigator(s) will interact or intervene with the participants in the study or have access to their private identifiable information. Also, clarify whether they will obtain informed consent from participants.

11. NOTE: If this study is funded by the Department of Defense and the Amendment is considered substantive, please upload a letter from your chair or designee certifying scientific merit.

2. Study Information

1. Enrollment Information

Enrolled is defined as those individuals who have signed the consent, met eligibility criteria and who are approved to begin study related procedures. Please note that study randomization is also considered to be a study related procedure.

A. Projected Enrollment At This Institution

NA

B. Projected Enrollment Study Wide (if applicable)

C. Current Enrollment At This Institution

NA

D. Current Enrollment Study Wide (if applicable) *(For multisite studies only)*

NA

E. Number of Onsite Participants on Active Study

If this is a database or equivalent type study, participants are considered on active study.
NA

F. Number of Onsite Participants in Follow-up NA

G. Number of Onsite Participants Completed NA

2. Protocol/Consent Information: Health Sciences IRB Studies Only

A. Revised Protocol/Amendment Number (if applicable):

If this amendment revises the approved protocol, please enter the new version number and date here. NA

B. New Protocol or CIDB Number/Version (if applicable):

If a new protocol or CIDB has been submitted, please identify the version number and date here. NA

C. Informed Consent Version Date

Leave blank unless you have a sponsor provided version date/number in the footer of your consent. NA

3. Amendment Changes

1. Please fully describe each amendment below. List the current item followed by the new or revised item and end with the reason or justification for the change (e.g., Current: eligibility age range is 30 to 50 years; Revision: revise to 30 to 60 years; Justification: insufficient numbers being recruited).

Amendment Change Current study is 10-15 part...

1. Current

Current study is 10-15 participants, two minimum visits with two weeks between visits. This is for a total of 1-2 months, with eight to ten visits total with a site visit of 1-2 hours at a time.

2. Revision

Proposed study is 20 participants (10 per correctional institution), two minimum visits with two weeks between visits. This is for a total of 1-3 months, with ten to twelve visits total and with a site visit of 6-8 hours.

3. Type of Change

Study Treatment/Procedures

4. Justification

I am now arranging actual visits with the two correctional institutions, which are 3 hours away. This slightly increases participants and more efficiently uses my time while there. This minimal change has been approved by all correctional authorities.

4. CIDB Changes (Health Sciences IRB Studies Only)

1. If you do not have a CIDB (Clinical Investigator Drug Brochure) for your study, this section does not apply to you.

5. Re-Consent

1. Informing Participants

A. Will enrolled participants need to be informed of the amendment? No

B. If yes, explain the procedure to inform them:

6. Comments

1. Please list any additional comments below:

This minor change in the actual procedures at the research site (two correctional institutions in PA) came about through discussions with them. The initial IRB had to be filed before actual discussions had happened with the facilities. I was working with the research director for the PA correctional system, but couldn't begin talking to the actual sites until the IRB was approved. Everyone involved with the research sites, and my adviser, have approved these changes.

7. Completion of Sub-Forms

1. Mark the item(s) that are being revised/added as a result of this amendment request.

Request an additional WAIVER OF DOCUMENTATION of consent (i.e. waiving the signature requirement)

Request an additional WAIVER or ALTERATION of CONSENT (Note: Alteration is often used for studies involving deception where the consent does not fully disclose all the required elements of consent)

- Add short form consent (including the occasional, unexpected non-English speaking subject)
 - Collection of tissue/fluid/blood
 - Add the administration of a drug or biologic which was not in the current approved protocol
 - Administration of a Supplement (i.e. vitamin or mineral)
 - Add a device that was not in the approved protocol
 - Add any new tests that involve radiation, a MRI or laser
 - Add the use of VA patients, VA resources, VA space, or time of VA personnel in a study which was NOT previously approved

 - Add the use of a biohazard or transfer of genetic material that was not in the approved protocol
 - Add a sub-study to the approved project (HSIRB Projects Only)
 - Add impaired decision making subject
 - Add non-English speaking subjects
 - Add children
 - Add pregnant women or fetuses
 - Add neonates that are non-viable or of uncertain viability
 - Add prisoners
 - Add audiotapes, videotapes, or photographs
 - Add new or update subject compensation
 - Another IRB is requesting to rely on the MU IRB approval
2. Add federal support and/or sponsorship from one of the following:

IRB – Use of Prisoners in Research

Use of Prisoners in Research

The IRB recognizes that research involving prisoners raises the issue of whether the subject's situation prohibits the exercise of free choice to participate in research and whether or not the prisoner's confidentiality will be adequately maintained. When reviewing research with the use of prisoners, minimal risk is defined as the probability and magnitude of physical or psychological harm that is normally encountered in the daily lives, or in the routine medical, dental, or psychological examination of healthy persons.

The IRB shall determine the following:

- a) Have IRB staff assure that the person designated as the prisoner representative, (see IRB membership SOP), reviews all materials pertaining to the research and documents the information utilizing the reviewer checklist.
- b) The research MUST fit into one of the four categories:
 - i. Category I: Studies of the possible cause, effects, and processes of incarceration and criminal behavior, and involves no more than minimal risk with no more than inconvenience to the subjects;
 - ii. Category II: Studies of prisons as institutional structures or of prisoners as incarcerated persons, and involves no more than minimal risk no more than inconvenience to the subjects; ;
 - iii. Category III: Studies on particular conditions affecting prisoners as a class; (for example, vaccine trials and other research on hepatitis which is much more prevalent in prisons than elsewhere; and research on social and psychological problems such as alcoholism, drug addiction, and sexual assaults) provided that the study may proceed only after the Secretary has consulted with appropriate experts including experts in penology, medicine, and ethics, and published notice, in the FEDERAL REGISTER, of his intent to approve such research; or
 - iv. Category IV: Studies involving a therapy likely to benefit the prisoner subject: Research on practices, both innovative and accepted, which have the intent and reasonable probability of improving the health or well- being of the subject. In cases in which those studies require the assignment of prisoners in a manner consistent with protocols approved by the IRB to control groups which may not benefit from the research, the study may proceed only after the Secretary has consulted with appropriate experts, including experts in penology, medicine, and ethics, and published notice, in the FEDERAL REGISTER, of the intent to approve such research.

- c) Any possible advantages accruing to the prisoner through his or her participation in the research, when compared to the general living conditions, medical care, quality of food, amenities and opportunity for earnings in the prison, are not of such a magnitude that his or her ability to weigh the risks of the research against the value of such advantages in the limited choice environment of the prison is impaired;
 - d) The risks involved in the research are commensurate with risks that would be accepted by non-prisoner volunteers;
 - e) Procedures for the selection of subjects within the prison are fair to all prisoners and immune from arbitrary intervention by prison authorities or prisoners. Unless the principal investigator provides to the Board justification in writing for following some other procedures, control subjects must be selected randomly from the group of available prisoners who meet the characteristics needed for that particular research project
 - f) The information is presented in language which is understandable to the subject population
 - g) Adequate assurance exists that parole boards will not take into account a prisoner's participation in the research in making decisions regarding parole, and each prisoner is clearly informed in advance that participation in the research will have no effect on his or her parole; and
 - h) Where the Board finds there may be a need for follow-up examination or care of participants after the end of their participation, adequate provision has been made for such examination or care, taking into account the varying lengths of individual prisoners' sentences, and for informing participants of this fact.
- (i.)The Board shall carry out such other duties as may be assigned by the Secretary.
- (ii.) The institution shall certify to the Secretary, in such form and manner as the Secretary may require, that the duties of the Board under this section have been fulfilled.

Department of Corrections Approval

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF CORRECTIONS

1920 Technology Parkway

Mechanicsburg, PA 17050

May 31, 2016

Prof. Gregory Galford 1434 N. St. Clair St. Pittsburgh, PA 15206

Dear Professor Galford,

I am pleased to inform you that the Department's Research Review Committee (RRC) has approved your research study titled "Control through Architecture: The environment of isolation and how it affects behavior." This approval gives you authorization to tour and interview inmates and staff and meet with Bureau of Operations staff and review documentation associated with correctional facilities.

Please contact me at your earliest convenience concerning points of contact.

Please note that approval of your proposal is contingent upon the following conditions:

- University of Missouri Institutional Review Board approval is required prior to beginning research involving inmates or staff.
- Participation by staff and inmates in the study is purely voluntary. If individuals choose not to participate, they cannot be required to participate and may withdraw from the study at any time.
- All participants must receive an informed consent briefing in accordance with your Institutional Review Board's guidance.
- Staff and inmates may not receive any incentives or compensation for their participation in this study.
- While the facility superintendents have given approval for you to conduct your research, superintendents retain the authority to postpone or terminate facility participation at any time without prior notice.

- All research activities must be scheduled at the convenience of the institution to minimize the disruption of normal operations.
- Favorable completion of a Centralized Clearance Check is required before researchers can be granted access to any facility. All members of your research team must complete the attached Centralized Clearance Check Information Request form and return it to this office by post or fax at (717) 728-4180. We recommend completed forms not be transmitted by email as they will contain sensitive personal information.
- Prior to proceeding with research, please sign and return the attached "Research Ethics and Policy Guidelines and Conditions." Your signature will imply your acceptance of the terms and conditions of the Department's Research Policy. This signed form will be maintained in our files for the duration of your project.

I wish you the best in your research. Please forward this office a copy of your final report and any interim reports. If you have further questions, you may contact me at (717) 728-4054.

Sincerely,

Joseph V. Tomkiel

Research and Evaluation Manager Chair, Research Review Committee

Encl

cc Supt. Ferguson

Supt. Garman Dir. Bucklen

Dir. Tassin Dr. Bell

Ms. Boylan

Mr. Rackovan File 2016-04

Doc Research Ethics and Policy Guidelines

SUBJECT: Research Ethics and Policy Guidelines and Conditions

TO: All Parties with Approved Research Proposals

FROM: Joseph V. Tomkiel

Research and Evaluation Manager Chair, Research Review Committee

This memo addresses some specific conditions in the Pennsylvania Department of Corrections Research Activities Policy (02.01.02) that must be adhered to by all investigators (including anyone involved in a project) conducting approved research within the DOC. The DOC Research Review Committee (RRC) reviews all research proposals submitted to the department. When a proposal is approved, the investigator agrees to abide by all terms and conditions established in the DOC Research Policy, as well as any special conditions imposed by the RRC, which will be communicated in writing to the investigator. The investigator agrees to these conditions for the duration of the project.

In order to avoid confusion, this memo highlights some of the most frequently asked questions about the policy and addresses conditions that are of special importance.

- Departmental support for research is conditional on the investigator's adherence to terms and conditions of the research policy or stipulated by the RRC.
- Prior to commencing a research project, investigators must provide the RRC with confirmation of appropriate IRB approval. Ongoing adherence to the research protocol approved by the IRB is expected.
- Investigators must not disclose to any other parties any inmate specific data (e.g. data runs) provided in connection with their research project, unless special permission is granted by the RRC. Data runs must be safeguarded at all times and destroyed when no longer needed.
- Provision to inmates or staff of any sort of monetary or non-monetary payment for participation in research as research subjects is strictly prohibited.

- Recording of interviews with inmates or staff (audiotaping, videotaping, photographing, etc.) is strictly prohibited, unless special permission is granted by the RRC and facility superintendent.
- Investigators shall not engage in personal correspondence with inmates. Any correspondence with inmates must be on official letterhead (e.g. university), professional in tone, and demonstrably germane to the research project.
- Violation of any conditions of the research policy or other stipulations may be grounds for revocation of approval.

This form must be signed and dated by all primary investigators upon notification of approval of research, and returned to this office prior to the commencement of research (please keep a copy for your files). Your Signature below implies acceptance of the terms and conditions outlined here.

COMMONWEALTH OF PENNSYLVANIA

Department of Corrections

Bureau of Reentry, Planning, Research, and Statistics Ethical Research Guidelines

When conducting any type of research, investigators must always strive to respect the rights, dignity and trust of participants (both inmates and staff), and must be careful not to compromise their own credibility or the broader image of research in applied policy settings. Researchers must also be careful to observe agency rules, regulations and conditions, as well as the terms of their own research protocols. Due to increasing concerns regarding ethical practices in research, a commonly agreed upon set of basic standards is needed. Establishing guidelines for all research projects approved by the Pennsylvania Department of Corrections is important to ensure all researchers conduct themselves in a professional and ethical manner. The following is a list of general principles of research ethics, developed by the American Psychological Association. These provide a good ethical foundation for all research projects conducted within the department.

- **Competence:** Researchers should use only those research techniques they are qualified for, either through education or formal training.
- **Integrity:** Researchers should always be fair, honest, and respectful of others. They should always strive to promote integrity in their field by making only truthful statements about their research.

- Professional and Scientific Responsibility: Researchers' moral and ethical conduct should not compromise or reduce the public trust in their field.
- Respect for Peoples' Rights and Dignity: All researchers must respect participants' rights of privacy, confidentiality, self-determination, and autonomy. Researchers will not discriminate on factors such as race, sex, ethnicity, socio-economic status, physical or mental disability, and religion.
- Concern for the Welfare of Others: Researchers must always consider the welfare of the participants when doing research. When conflicts arise, they try to solve them responsibly without harming the participants.
- Social Responsibility: Researchers should always attempt to advance human welfare with their science and try to avoid misuse of their work.

All investigators conducting research within the department are expected to keep these principles in mind. Not only does your work reflect on the Pennsylvania Department of Corrections, it speaks to your reputation and to that of your field. More specific and detailed research guidelines can be found at the American Psychological Association's website: <http://www.apa.org/ethics/>

Pennsylvania Department of Corrections Research Activities Policy, 02.01.02, can be found at the following link:

<http://www.cor.pa.gov/Administration/Statistics/Pages/Research-Review-Committee.aspx>

VITA

Gregory Galford has a Bachelor of Architecture degree from Virginia Tech. After his undergraduate study, he worked for three years in various firms in Philadelphia before returning to graduate school. He obtained a Graduate Diploma from the Architectural Association in London with a focus on History and Theory. He obtained his architectural licensure after returning from graduate school.

He worked for a variety of architectural firms in New York City, obtaining a wide range of professional experiences, before relocating to Pittsburgh, PA in 2001. His work from project architect to project manager enabled him to manage international design teams in both Pittsburgh and Dubai. During this time he became a graduate of the Leadership Pittsburgh program. He has also served, and still serves, as a board member for various non-profit organizations in the Pittsburgh region. He is also a board member for an academic organization devoted to housing education. He is also a LEED accredited professional.

He became a full-time faculty member at Chatham University in 2010 after serving as an adjunct faculty member. At Chatham, he has taught a variety of courses in design, theoretical and technical categories. He became involved in activities sponsored by the Institutional Institute of Education to promote teaching and research in Indonesia. He has taken several groups of students there and has made several more trips devoted to outreach and research. Due to this work, he was named both a Global Fellow and the Global Focus coordinator for the university. He is also involved with committees devoted to assessment and diversity and inclusion. Greg is a member of AIA, IIDA, IDEC, HERA and EDRA.