The Architecture of Confinement:

Positively Influencing Rehabilitation and Reintegration

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Environments for human habitation must be carefully designed to fulfill the needs of the intended occupants. There is no exception when addressing correctional institution design. This dissertation is presented on prison typology to explore what impact design has on the psychology of its users. High recidivism rates in US prisons show that our current system is not working. Learning from the effects of the environmental psychology of design, architectural spatial influences can have a positive effect on the rehabilitation of inmates. A collaborative approach between designers and environmental psychologists has the potential to lead to a powerful approach to reformative architecture for correctional institutions. The initial hypothesis is that by creating this new prison typology, through designing quality spaces benefiting a reflective environment, recidivism rates can be reduced, and a more successful rehabilitation infrastructure can accomplished through architecture. The purpose of this research is to understand and address the fundamental needs of a prison system, and analyze what improvements can be made to the system through architectural and interior design. Local, national and global precedents will be studied to gain perspective on various design solutions. The research will be balanced with an in-depth study into the psychology of the environment and its effect on human behavior. This research will aid in addressing what is the architect's social responsibility in prison design and will develop and deepen this body of knowledge to improve design solutions that may used as a new typology of correctional architecture locally here in Hawaii.

C h a p t e r   1

THE HISTORY OF IMPRISONMENT

Introduction

It is important to know how the history of imprisonment can educate future design. This chapter will build a foundation to better understand how correctional architecture got to where it is today, and build an insight into the future of where prison correctional design has the potential to change and grow. Studying these historic precedents of imprisonment will give a foundation on which to build new theories prison typology. Over the past five centuries, literature has documented considerable changes in the purpose of incarceration, structure of correctional buildings, and prison site design. The purpose of this research is to develop a theory through the critical analysis of historic information to improve the functionality, safety and innovation of prisons in the United States.

The Blood Sanctions

Death and maiming were the ordinary penalties for serious crime in the Western legal systems in the latter Middle Ages, the one punishment that could be easily inflicted by a state which had no infrastructure of prisons and penitentiaries.[1] Sanctions are the provisions of a law that enact a penalty for disobedience. At about the time that medieval sanctions were declining, they were codified in the German Empire in the Constitutio Criminalis Carolina of 1532. This statute provided typical assortments of modes of punishment, referred to as the Blood Sanctions, including being hung, buried alive, and burned, along with various other agonizing and humiliating deaths. For less grave

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[1] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 36.

offenses, the Carolina called for afflictive punishments, usually involving a bodily amputation of sorts accompanied by a sentence of banishment.2 Between the sixteenth and seventeenth centuries, modern societies transitioned form a blood sanction system to implemented civil law.

The Galley Sentence

Over the course of the sixteenth and seventeenth centuries, foundations were laid for a new penal system for serious crimes. There were two institutions that arose to serve the social purposes remote from the ordinary criminal law, The Mediterranean states introduced the galley sentence and the countries of the North founded the workhouse.[3] Contrary to the previous philosophy of punishment, these new philosophies took into consideration the exorbitant need for manpower and began to force condemned criminals to serve in the work force. For the first time, prisoners who would have been condemned to death were being commissioned by the state to serve manual labor as their punishment. With the introduction of the medieval fleets of the naval powers in southern Europe, maneuverable galleys rowed by oarsmen became important military vessels through the eighteenth century.[4] There was an excessive need for man power, requiring hundreds of

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[2] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 36.

[4] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 37-38.

[3] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 39.

[4] Paul W. Bamford, *Fighting Ships and Prisons: The Mediterranean Galleys of France in the Age of Louis XIV* (Minnesota: St Paul, 1973), 12-18.

oarsmen. The nature of the work was strenuous, dangerous, and severely disciplined; this combined with very poor wages left the fleets in desperate need for more oarsmen. Thus the practice began of forcing condemned criminals to serve as oarsmen, convicts who the state had been killing through capital punishment were now regarded as a valuable resource.[5]

The amount of criminals sometimes outweighed the need for oarsmen in a particular country, so the galley sentence was then employed for the benefit of allied fleets. For the first time, prisoners were being sent abroad to serve their punishments. The motivation for the galley sentence was exploitative of the criminals, however as recorded in the Austrian King Ferdinand's pronouncement in a patent of 1556, the galley sentence would give the criminal an opportunity to atone for his misdeeds through hard labor. While other reports stated the galley sentence as "worse than death" or, "more feared than execution", it was in general agreement that changing the capital sentences to galley sentences would continue to discourage criminals from breaking the law.[6]

The development of the galley sentence both reflected the Renaissance state's need for man power and also its new capacities and capabilities for expanding infrastructure. It was an administrative feat where convicts had to be selected, assembled, provisioned, chained, and marched to the ports. The influx of convicts had to be adjusted to the

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[5] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 40.

[6] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 41.

fluctuating requirements and capacities of the fleets, and the fleets had to be provisioned on a much larger scale than previously.[7] While the galley fleets declined rapidly in the eighteenth century as the galleys were replaced with sailing ships, their value as prisons remained. The galley system set the infrastructure and had many of the characteristics which would later be associated with the workhouse and the prison, serving a combination of purposes - to moderate the blood sanction, to eliminate criminals from the society, to exploit convict labor, and to reform offenders.[8]

The Workhouse

The institution of the workhouse was developed in the second half of the sixteenth century mainly to address social purposes somewhat removed from the ordinary criminal law, a response to "the problem of poverty and vagrancy that had reached an acuteness never before encountered".[9] Unlike the galley sentence, the workhouse system was not completely built on exploitative principles. The reformative policy was apparent from the onset of this system.[10]

> Such youth, and other as are able to labor and may have work and shall be found idle shall have some manner of correction by the parents, or otherwise as shall be

[7] Paul W. Bamford, *Fighting Ships and Prisons: The Mediterranean Galleys of France in the Age of King Louis XIV* (Minnesota: St Paul, 1973), 8-10.

[8] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 43-44.

[9] Thorsten Sellin, *Pioneering in Penology: The Amsterdam Houses of Correction in the Sixteenth and Seventeenth Centuries* (Philadelphia : Univ. of Pennsylvania Press, 1944), 9.

[10] E. M. Leonard, *The Early History of English Poor Relief* (Cambridge: Cambridge, 1900), 99.

thought good in the parish. And if they will not amend, they shall be sent to Bridewell to be reasonably corrected there.

The workhouse served to introduce the inmate to the regimen of honest labor, training him to acquire a working skillset, while reforming his character through discipline and moral instruction. Once going through this reformative process, the idea was that the criminal could be released, no longer a burden to his society. [11]

The Amsterdam workhouse was the first to combine beggars and vagrants with petty criminals, a feature that became characteristic of European workhouses through the seventeenth century. [12] The workhouse offered two significant advantages over previous sanctions for petty crime, being that it was reformative, the goal was to correct as well as punish, and hopefully the reformed man would emerge skilled and ready to work. Because the workhouse was a small manufactory, it had the opportunity to recover its costs for the care and upkeep of the inmates, in order to not burden the inadequate public revenues of the time. In addition, inmates were paid for production above the minimum required of them in return for their daily upkeep; this sum was given to the inmate upon his discharge. [13] At the Bridewell institution in London, there were 25 occupations practiced. They included trades such as making gloves, silk lace, pins, bays, felts and

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[11] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 48.

[12] Thorsten Sellin, *Pioneering in Penology: The Amsterdan Houses of Correction in the Sixteenth and Seventeenth Centuries* (Philadelphia : Univ. of Pennsylvania Press, 1944), 41-43.

[13] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 49.

tennis balls.[14] The workhouse satisfied many concerns, both humanitarian and practical. It serviced relief for the poor, preventative criminal justice, as well as reforming way-ward youth, while still supporting itself by the lucrative benefits of the labor of its inmates. In light of its success, it is no surprise that the workhouse system would be widely adopted throughout Europe.[15]

From the middle of the seventeenth century, workhouses for the poor began to receive inmates who had been convicted of serious crimes. By the end of the century specialized institutions were in operation for serious offenders that were confined for long terms of hard labor, who would have previously been subjected to the blood sanctions. The workhouse transitioned from the Dutch word *tuchthuis* to the German word of *Zuchthaus*, a word that lost the meaning of "workhouse" for petty offenders and acquired the modern sense of "prison" or "penitentiary" for serious offenders. This new movement was seen as opportunity for industries that could establish prisons to take advantage of the abundant convict labor available. This system served many purposes, not just to exploit forced labor, but also to render criminal sanctions more humane. To save the lives of skilled workers who could contribute to the mercantilist state, to eliminate criminals from society, and of course to reform the offenders.[16]

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[14] E. M. Leonard, *The Early History of English Poor Relief* (Cambridge: Cambridge, 1900), 100.

[15] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 50.

[16] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 51-52.

Church Use of Imprisonment

When the idea of imprisonment first came about, prisons were meant to detain and not punish, consisting solely of pretrial detention to keep custody of the accused while the court decided to acquit him or her, or punish with a blood sanction.[17] This changed, however, with the influence of the Catholic Church because the ecclesiastical courts did not sanctify the blood sanctions.[18] Even when ecclesiastical proceedings led to a death sentence, for example in the heresy inquisitions, the church courts released the case to the secular authorities for the imposition of capital punishment.[19]

Penal imprisonment, confinement used as a mode of punishment, first appeared in the Middle Ages in the legal system of the Catholic Church because the church was incapable of employing these blood sanctions. They had a considerable incentive to develop an alternative to this type of punishment.[20] Notions of the potential for change and redemption were more widely accepted with in the Church, which acted as a separate and parallel society with in its justice system to handle transgressions.[21] The Catholic Church's response to misdeeds was not necessarily gentle; suffering was a necessary component of penitence. It was however the first institution in the West to use

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[18] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 38.

[19] Henry Charles Lea, *A History of the Inquisition of the Middle Ages* (New York: NY, 1888), 534.

[20] Henry Charles Lea, *A History of the Inquisition of the Middle Ages* (New York: NY, 1888), 534.

[21] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 21.

imprisonment consistently for any purpose other than detention.[22] The Church provided

the first structures resembling individual cells, which were called anchorites. These were

small rooms attached to church walls that penitents might spend years or even decades.[23]

The church had the administrative capacity that imprisonment requires, and would

construct and maintain places of confinement and care for those incarcerated.[24]

This type of penal imprisonment began to enter the secular legal systems in the late

Middle Ages for petty crimes, such as inability to pay fines, while blood sanctions were

maintained for the more serious crimes.[25] By the middle of the eighteenth century,

demands for total abolition of capital punishment were made and the death penalty had

everywhere ceased to be the exclusive punishment for very serious crimes.[26] The first

comprehensive criminal code that completely abolished capital punishment was the

Leopoldina of 1786, which was circulated by the future Austrian Emperor Leopold II.

Although some of the punishments were familiar, including flogging (beating severely

with whip), pillorying (public humiliation), and banishment, the Carolina's blood

sanctions had disappeared.[27]

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[22] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 14

[23] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 21.

[24] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 38-39.

[25] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 38-39.

[26] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 37-38.

[27] John H. Langbein, "The Historical Origins of the Sanction of Imprisonment For Serious Crime." The Journal of Legal Studies (January 1976); 37-38.

Enlightenment and Reform

Two elements distinguished modern prisons in the eighteenth century, one being the notion of imprisonment itself as punishment, and two being the intent to use the sentenced period to change the behavior of the involuntary guest. Prison time as a punishment was particularly appealing due to the rational that could be followed with a quantifiable metric of degree of punishment. The worse the crime, the longer the term allotted. For instance, at Eastern State Penitentiary, "the normal sentence for common crimes such as horse theft, larceny and burglary, was two and a half years. The normal sentence for murders and kidnappers was 21 years." That kind of social scaling has elements of precision, fairness and objectivity regardless of how arbitrary or subjective the decisions may be.[28]

Around the mid-18th century, Europe started taking a closer look at the conditions of their penitentiary systems. A man strongly associated with British prison reform by the name of John Howard, High Sheriff of Bedfordshire, pushed for the state to take responsibility for the quality of life and conditions of confinement in British institutions. Howard demanded the state take responsibility for the quality of life and conditions of confinement in which these institutions harbored. In 1773, Howard conducted a three year tour of British prisons and later expanded to many foreign sites. One particular site that had an influence on his research was the papal juvenile prison of San Michelle in

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[28] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 20.

Rome, built in 1704. The prison was built to support a program where discipline was used to correct bad behavior, which included routine whippings. The design was meant to provide for easy visual surveillance to maintain order.[29] Howard's description of individual cells helped to create awareness of this option for the modern prison.

According to Howards published accounts, he was appalled by the conditions he found in nearly all British jails. These published accounts led to awareness and public concern for prison conditions, which later resulted in the Penitentiary Act, a bill proposed to construct two national penitentiaries for reform of inmates, one male penitentiary, one female. The goal of the bill was to not only abolish the widespread practice by which jailers lived on fees from inmates, but also provided for improved inspection, sanitation, and work programs. These were based on Howard's observations of Dutch houses of correction. Although the provisions were not implemented immediately, Howard's work has a huge impact on public opinion. [30]

Quaker Influences

The American Quaker community played a significant role in the design of modern prisons. A confluence of events and philosophies came together to create the prison as one of the most ambitious social experiments of its time. The Quakers were familiar with

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[29] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 28-30

[30] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 21-22.

the work of Howard, and were horrified by the common use of corporal and capital punishment as the only available sanctions for criminal acts. They sought a progressive response, a state sanction that could be more effective for dealing with crime as well as more humane for the inmates.

While capital punishment was the standard in British law, Pennsylvania's Great Law of 1682 provided for death only for the reason of murder or treason. The law substituted remaining crimes with a punishment of imprisonment in the house of corrections or hard labor. The model was influenced after a similar house of corrections that was observed by William Pen in Holland that allowed for separation of male and females, as well as debtors and vagrants. Inmates were paid for their work and provided with seclusion for reflection. The Quaker community was able to hold these laws in effect until 1718 when the American colonies were forced to adopt British legal codes. Soon following American independence, support was built in the state of Pennsylvania to reject the British penal system and replacing it with something more distinctly American. Most of the pressure was coming from the Quaker reformers in the Pennsylvania Prison society. In 1788 the society proposed a law that substituted private or solitary labor in place of corporal punishment. The law passed in 1790, making the Walnut Street Jail available for all Pennsylvania inmates. It also called for the construction of a new cellblock for the more serious convicts, which served as the first penitentiary.[31] The Walnut Street Jail was built as a solution to overcrowding in the house of corrections. Its layout was typical for its time, a U shaped building where inmates were held in large, congregate rooms. There

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[31] Blake McKelvey, *American Prisons: A history of good Intentions* (Montclair: NJ, 1977), 36-37.

was a small cell block constructed with in the jail yard known as the "Penitentiary House" as a response to the 1790 law. This area was constructed of stone in 6ft by 8ft by 9ft individual cells. The walls were designed to let a sufficient amount of light in without encouraging communication.[32]

These early penitentiaries were meant, quite literally, to be places for sinners to serve penance, to be penitent. The intent was to substitute isolation, repentance, and the uplifting effects of scriptural injunctions for capital and corporal punishment. "Inmates might be brutal beasts, dangerous to the public, to other inmates, or to guards, but this was because they had lost contact with their spiritual nature."[33] Through a kind of forced monasticism, living in total isolation, they could search their souls in self-reflection. The design was created "to produce by means of sufferings, principally acting on the mind and accompanies with moral and religious instruction, a disposition to virtuous conduct. The only sure preventative is to impress so great a dread and terror, as to deter the offender from the commission of the crime".[34]

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[32] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 23.

[33] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 25.

[34] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 24-25.

The Pennsylvania Model

A response to the overcrowding experienced at Walnut Street Jail, the construction of Eastern State Penitentiary in 1829 represented the first full expression of the Pennsylvania model of total solitary confinement and the world's first penitentiary to serve a broad region.[35] Architect John Haviland employed a hub and spoke design, not uncommon in Europe. The guards could view up to seven tiers by looking down the length of the hallways from their station in the rotunda at the hub. The radial design served as a physical representation of a well-ordered environment, its symmetry and pattern demonstrated a logical rational of organization of space.[36]
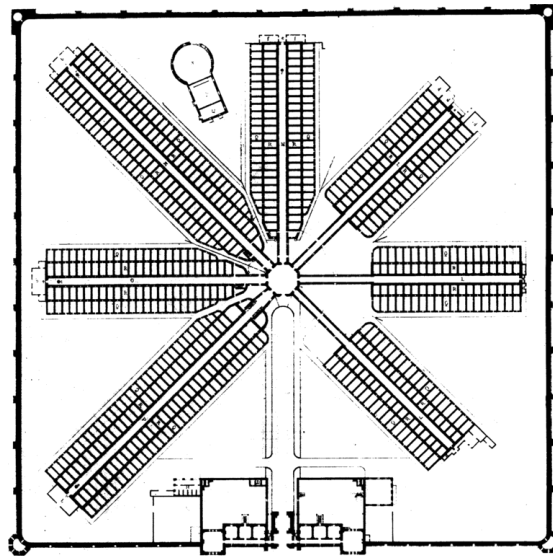
Figure 1: Eastern State Penitentiary, Courtesy of the Library
Company of Philadelphia,
http://www.easternstate.org/contact/press-room/photos/1836-plan

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[35] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 67

[36] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 25-26.

It was the first prison of this scale to have centralized heat and indoor plumbing, at an age when the White House neither had running water nor was heated with coal-burning stoves.[37] Built to house just one prisoner, the cells were bigger than what most modern institutions offer. Each was built 12 ft. by 7 ft. with an 8-inch window for light and 16 ft. high ceilings and an attached private exercise yard.[38] This arrangement allowed inmates space to live their lives in the cell and get fresh air without ever coming into contact with another inmate, or guard for that matter. When prisoners entered Eastern State, they were brought to their cells blindfolded after being given a number which was their name until the day they were released. The inmate would eat, sleep and when rules permitted, worked alone in the cell. Absolute silence was the rule of the institution.[39] "In their cells, seen but not seeing, the prisoners' isolation and shallow personalities were turned terribly against them in a setting that could have been an ossuary for the living".[40]

The regime and design at Eastern State Penitentiary were characterized by two different realities. First, the intentions of its designers and organizers were considered benign and idealistic. Although planners knew that the sentence of isolation would be difficult, it was not designed to cause pain beyond the degree to which they felt hardship was a necessary part of reformation and moral change. There was a desire to find a way to change the

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[37] "History of Eastern State Penitentiary, Philadelphia," Eastern State Penitentiary, accessed January 26, 2015, http://www.easternstate.org/learn/research-library/history.

[38] Mary Bosworth, *Encyclopedia of Prisons and Correctional Facilities* (California: Thousand Oaks, 2005), 695.

[39] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 26-27.

[40] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 10.

essential nature of the criminal toward becoming a better member of society. The second reality is the harshness of the extreme measures taken to isolate inmates from human contact. The enthusiasm of these well-intended reformers can be seen in the degree of discipline used to enforce inmate isolation.[41]

Prior to Eastern State Penitentiary, no public institution had created such a harsh regimen to be imposed on involuntary subjects for their own good on such a large scale, nor had any state spent such large sums of money to deal with criminals for reasons other than retribution or punishment. The back to back interior cell houses, arranged in tiers and enveloped in enormous blocks, emphasized twentieth century America's industrialized response to crime and offending, denying the inmate any individuality in the face of pervasive authority.[42] For many nations, Eastern State Penitentiary's distinctive geometric form and its regimen of isolation became a symbol of progressive, modern prison principles.[43] The uniqueness, strength and purity of this grand experiment drew visitors from many countries, curious to see if such reform was possible. Many were greatly impressed by what they saw, possibly from the enthusiasm of the reformers, or the calm quiet and order in the institutions, which marked a contrast to the atmosphere in most prisons of the time. [44] A debate grew about the effectiveness and compassion of solitary

[41] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 27-29.

[42] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 10.

[43] "History of Eastern State Penitentiary, Philadelphia," Eastern State Penitentiary, accessed January 26, 2015, http://www.easternstate.org/learn/research-library/history.

[44] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 29.

confinement. Charles Dickens recounts in his 1842 visit to Eastern State Penitentiary in his travel journal, under a chapter titled *Philadelphia and its Solitary Prison*: [45]

> In its intention I am well convinced that it is kind, humane, and meant for reformation; but I am persuaded that those who designed this system of Prison Discipline, and those benevolent gentleman who carry it into execution, do not know what it is that they are doing.... I hold this slow and daily tampering with the mysteries of the brain to be immeasurably worse than any torture of the body; and because its ghastly signs and tokens are not so palpable to the eye... and it extorts few cries that human ears can hear; therefore I the more denounce it, as a secret punishment in which slumbering humanity is not roused up to stay.

The critics eventually prevailed and the Pennsylvania system was abandoned in 1913. The principles of this system, however, would live on to influence elements of modern European prison design in a more refined application.

The Auburn Model

The Pennsylvania system was idealistic and ambitious, though certain flaws encouraged alternatives to appear. In spite of the impassioned and reformative intentions, it was not an obvious or immediate success in reforming prisoners.[46] The competing prison model arose in New York at the state penitentiary at Auburn. The Auburn model was developed

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[45] "History of Eastern State Penitentiary, Philadelphia," Eastern State Penitentiary, accessed January 26, 2015, http://www.easternstate.org/learn/research-library/history.

[46] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 29.

in response to its disastrous experience in using the solitary system influenced by the Eastern State Penitentiary. In less than a year of total isolation in Auburn's tiny cells, five of the eighty three prisoners had died and many of the rest were diagnosed to be ill or insane.[47] This was understandably disturbing to the New York State officials and caused them to look for other options. Another deciding factor was the high cost and economics associated with the Pennsylvania system, with a design that required large exterior cells accompanied by an outdoor space. This would require quite a bit more space and made it difficult to stack cellblocks to create huge multi story facilities.

Another economic issue was that the Pennsylvania system did not generate income revenue to offset costs. Due to the solitary nature of the system, the inmates were not able to create a sufficient income to have any impact on the bottom line.[48] The model that developed at Auburn aimed to address these issues without sacrificing the benefits of order that was achieved by the Eastern State Penitentiary. Instead of embracing complete isolation, the philosophical approach they put forward stressed the curative powers of manual labor. This also changed the financial dynamic as the inmates were able to successfully generate enough income to reduce the costs associated with incarceration. The inmates slept alone in small cells, but they were expected to spend their day working

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[47] Hans Tosh, "The Contemporary Relevance of Early Experiments with Supermax Reform," Prison Journal, vol. 83 no. 2 (2003): 221-228.

[48] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 30-31.

in large congregate spaces. The theory was that salvation came not through penitence, but through the development of industrious habits under strict discipline.[49]

Auburn did however maintain a strict enforcement on silence between inmates, which was made much more difficult in to enforce in congregate spaces. Silence, in the Pennsylvania model, was meant to help the inmate focus on internal issues, and was considered necessary for moral change. "Auburn replaced solitude with silence, introspection with labor".[50] Auburn pioneered the use of inside cells, providing back to back rooms of 7ft by 7ft by 3.5ft rooms, with no sunlight, fresh air or views.[51]
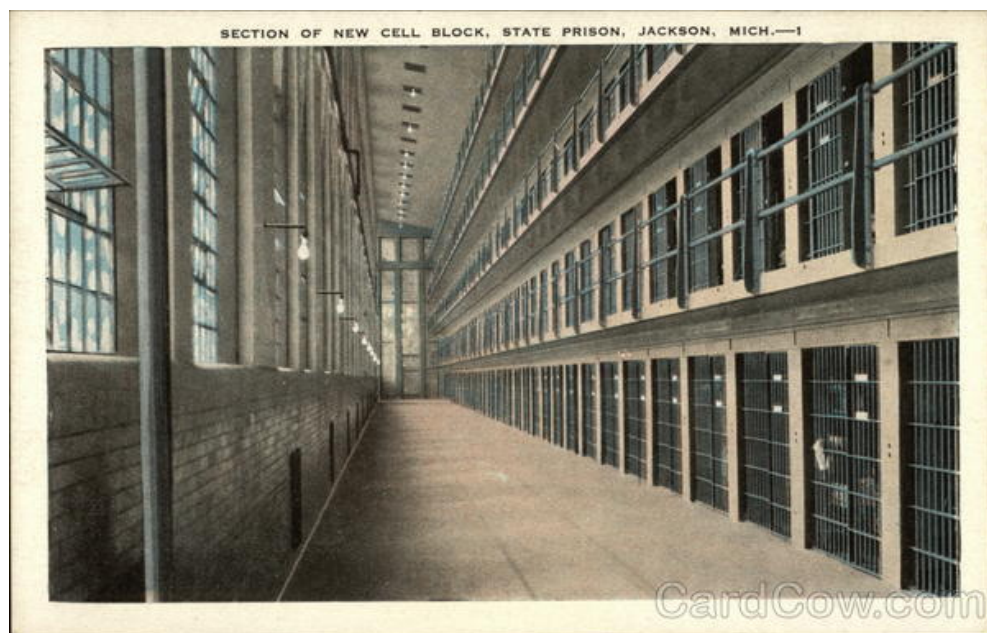
Figure 2. Auburn State Penitentiary.
https://www.cardcow.com/viewall/69135/

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[49] Blake McKelvey, *American Prisons: A history of good Intentions* (Montclair: NJ, 1977), 10.

[50] Ronald Goldfarb, and Linda Singer, *After Conviction* (New York: NY, 1973), 28.

[51] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 76.

The small cells were rationalized because the inmates only occupied them at night for sleeping. Because inmates were not permanently restricted to their cells, there was no need to include access to sunlight and air. This model made it much easier to stack cell blocks for bigger and more cost efficient institutions. The scale of work being done by the inmates became profitable and could provide income that significantly offset the cost of construction as well as running the institution. Auburns officials argued that their system was better for inmates than the system of isolation, and noted that it was much more cost effective for the state. [52] There was a similarity between Auburn style prisons and mid nineteenth century factories. Both institutions were about efficiency, order and maintaining a compliant and docile workforce. It is suggested that these two institutions supported each other, with the prisons providing the harsh consequence that helped factories to maintain order and discipline.[53]

Conclusion

The reformative zeal that has been shown in the creation of these various new prisons ideologies was a way to avoid the harsh corporal or capital punishments of the past such as the blood sanctions, the galley sentence, and the workhouse. Although some of these principles did influence later regimes, such as the regimen of honest labor and

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[52] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 31-32.

[53] Dario Melossi and Massimo Pavarini, *The Prison and the Factory: Origins of the Penitentiary System* (Totowa: NJ, 1981), 143-144.

encouraging working skillsets found in the workhouse model, the societal ideals and systems continued to grow and adjust.

The two prison models of Pennsylvania and Auburn became a foundation for modern prison institutions; these philosophies would be refined and spread throughout the United States and Europe. European countries for the most part adopted the Pennsylvania model. They focused on its reformative philosophy and continued to work to improve the system to reduce the level of distress the isolation caused the inmates. In America, where the prison systems were decentralized and each state was able to make their own decisions, the Auburn model was widely adopted. Although the philosophical issues were strongly debated, the income produced by inmates was the driving force in swinging the states decisions.[54] Work as reform was replaced by work as a way to support the cost of the system. Beyond the immediate economic influences, broader influences also came into play in each of the regions institutional developments. Chronic labor shortages in the United States encouraged the productive capacity provided by the Pennsylvania institutions. Europe, however, had no labor shortages and prison labor was seen as robbing free men of employment making it much less politically attractive. This set up the defining characteristics of early jails and prisons in each region, and has continued to play an important influence on the unique ways our penal systems function today both here and in Europe. [55]

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[54] Blake McKelvey, *American Prisons: A history of good Intentions* (Montclair: NJ, 1977), 15-18.

[55] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 30-33.

C h a p t e r   2

TWEMTY-FIRST CENTURY POLICY AND DESIGN

Introduction

The idealistic goal of penal policy is to create a philosophy as a coherent and unified to determine the disposal of all offenders. In reality, however, the vast array of offences and the varying nature of prisons and jails make this an impossible task. This leads to gaps between penal philosophy and judicial debates about sentencing. Further debated is the sentencing conducted in courts and the reality of what goes on in prisons. Due to these discrepancies, each state plays a large role in developing the policies for their region, the result dependent on their political ideologies. Further influential is the financial structure of the institution, which greatly influences the programing and goals of what the institution is trying to achieve. Before programs can be redesigned and reformed it is imperative to understand the foundational operations of penal policy and how it is embedded into the infrastructure of America's penal system.

Philosophies of Punishment

Punishment serves numerous social-control functions, but it is usually justified on the four main philosophies of punishment, which include retribution, incapacitation, deterrence, rehabilitation, and restoration. The specific principles that underline these dominant philosophies for punishment are summarized in this section.

Retribution is one of the oldest and most basic justifications for punishment, with the principles rooted in the Biblical laws of the Old Testament that emphasize the idea of "an

eye for an eye." Another classic retributive principle is "let the punishment fit the crime", in retributive philosophy, there was no desire to prevent future wrongdoing, and offenders simply get what they deserve. Punishment is justified on its own grounds, a general principle that has remained popular throughout Western history in both law and widespread public beliefs about how justice should be dispensed in democratic societies. This principle of punishment was later modified in neoclassical thought to recognize that although the offenders may commit a similar offense, they may be less culpable due to factors out of their control. These factors may include diminished capacity, mental disease or defect, or immaturity in the case of juveniles. Even under the revised retributive theory, punishment should fit primarily the moral gravity of the crime, and to a lesser extent the characteristics of the offender.[56]

There are still current examples of retributive principles being used as the basis for punishment can be found in the United States. There are mandatory sentencing policies and sentencing guideline systems, which dictate uniform sanctions for particular types of offences, such as, enhanced penalties for crimes committed with firearms. Punishment under these sentencing systems focuses primarily on the seriousness and characteristics of the criminal act rather than the offender.[57] Although retribution is often linked to criminal sanctions, it is equally applicable to other types of legal sanctions and informal sanctions. For example, civil litigation that is based on the principle of strict liability is similar to retributive philosophy in that compensatory and punitive damages focus on the

[56] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 15-16.

[57] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 16.

gravity of the prohibited act rather than characteristics of the offender. Lethal and nonlethal sanctions that derive from blood feuds between rival families, range wars in agrarian communities, terrorist attacks on civilian and government targets, and acts of "street justice" by vigilante groups and other extrajudicial bodies are often fueled by the twin motives of revenge and retribution. Various economic punishments and sanctions that restrict business practices (e.g., asset forfeitures, injunctions, product boycotts, worker strikes and slowdowns, revocation of licenses, decertification of programs, cease-and-desist orders, denial of benefits) may be justified on various utilitarian grounds like protecting society or deterring wrongdoing, but they may ultimately reflect the widespread belief in letting the punishment fit the crime. [58]

Retribution as a penal philosophy has been highly criticized when it is actually applied in practice on a few fronts. One being that strict retributive sanctions based solely on the natures of the offence are often criticized as being overly rigid.[59] To assert one sentencing priority in all circumstances would produce injustices and lead to failure of public confidence in criminal justice.[60] This is true especially in societies that recognize degrees of individual culpability.

Another criticized front would be on the principle of *lex talionis*, otherwise known as an "eye for an eye" dictum, where the punishment should correspond to in degree and kind to the offense. It has limited applicability due to the difficulty of sanctioning in acts such

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[58] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 16-17.

[59] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 17.

[60] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 3.

as traffic violations, substance abuse, and prostitution. Lastly, the assumption of proportionality of punishments, where the punishment should be proportional to the moral gravity of the offense, is flawed in most societies because there is often widespread public disagreement on the severity of particular offenses. Under these conditions, a retributive sentencing system that espouses proportional sanctions would be based on the erroneous assumption that there is a public consensus in the rankings of the moral gravity of particular types of crime. Though even with these criticisms, however, the retributive principle of *lex talionis* and proportionality of sanctions remains a dominant justification of punishment in most Western cultures.[61]

Incapacitation is a principle that focuses on eliminating the individual's opportunity for crime, which involves actions designed to decrease the physical capacity of a person to commit these criminal acts. It is a primarily utilitarian purpose for punishment. While the conditions of confinement may deter the offender from engaging in future misconduct, the deterrent effect is not a necessary component of incapacitation in its pure form.

Some examples of incapacitation used throughout history would include the exile of citizens in ancient Greek society, the English system of transportation of convicts to other colonies used in the seventeenth and eighteenth centuries, and in political exile for a more modern example. These are all relevant situations of incapacitative sanctions because they involve the physical removal of persons from their communities, restricting their

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[61] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 17.

physical opportunity for misconduct in the original setting.[62] A lighter example commonly used in modern sentencing would be requiring a breathalyzer to be installed that prevents drunk drivers from starting their cars. During the last half century, several new forms of incapacitation have emerged. One example would be the shock incarceration programs where short-term incarceration of juvenile offenders is employed to express the horror of imprisonment in hopes to scare them into a future life of conformity. Temporary incapacitation programs such as work release programs and halfway houses are designed to ease the adjustment from prison to conventional life while still being intensely supervised.

Contrary to the earlier, more pure forms of incapacitation that simply emphasized the reduction of physical opportunity for crime, modern versions of this philosophy are seeking more forward looking solutions in terms of focusing on the use of punishments for changing criminal motives once they are no longer physically restrained. In this way, incapacitation can be used with other philosophies for punishment, and different types of incapacitated sanctions may serve as the initial framework for establishing successful programs of deterrence and rehabilitation. [63]

Deterrence is when the fear or actual imposition of punishment leads to conformity. The doctrine of deterrence asks a fundamental question about the relationship between sanctions and human behavior: Are legal sanctions effective in reducing deviance and

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[62] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 18.

[63] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 19-20.

achieving conformity?[64] The deterrent value of punishment is directly linked to the characteristics of those punishments, having the greatest potential for deterring misconduct when they are severe, certain and swift in their application. This theory is based on a rational conception of human behavior, in which individuals freely choose their actions to maximize pleasure and minimize pain, to the means that the criminal solutions to problems become an unattractive option when the cost of conduct exceed its expected benefit. [65]

Several basic factors limit the efforts to assess the effectiveness of deterrence. One being that there is various reasons that someone may abide by laws and avoid deviant behavior other than the fear of legal sanctions. These include ones individual moral and ethical principles, religious beliefs, physical inabilities to commit the deviant act, and simply lack of opportunity. The second reason being that neither swift nor certain punishment exists in most current western legal systems, taking months if not years for the case to resolve after the initial violation. Third, the severity of the punishment received by the offenders if often less than what was mandated by law due to factors such as plea bargaining, charge reductions, jury nullifications, and executive pardons. Under these conditions, it is unsurprising that the deterrent effect of criminal and civil sanctions has not been clearly demonstrated across a variety of contexts. [66]

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[64] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 20.

[65] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 20.

[66] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 22.

The basic principle of rehabilitation is to punish for the treatment and reform of offenders. The ultimate goal of rehabilitation is to restore the convicted offender to a constructive place in society through means of combined treatment, education, and training. This individualized treatment approach is logically consistent with indeterminate sentencing structures that give judges enormous discretion to tailor punishments for the greatest good to the individual offender and provide parole boards with equally high discretion to release or retain offenders for future treatment. [67]

Restoration is one of the more recent goals as an alternative to other punishment philosophies, fundamentally challenging the way we thinking about crime and justice. Under this punishment philosophy, the offender takes full responsibility for the wrongdoing and initiates restitution by returning the situation to the previous condition for all parties involved, including victims and the community. The victim and the offender are brought together to develop a mutually beneficial program that not only helps the victim in the recovery process, but also provides the offender with an initiative to take personal responsibility for their actions, reducing the risk of re-offending. Condemnation is focused on the deviant act, rather than the offender, and its impact on the victim and the community. Both the victim and the offender need to be reintegrated as a result of the harm caused by the criminal behavior. The primary means of achieving these restorative efforts are done through community mediation groups, neighborhood councils, local support groups, and victim-offender conferences. [68]

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[67] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 23.

[68] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 23-24.

The principles of restorative justice have been applied to the study of both criminal and civil sanctions. For example, the institutionalized practice of "written apology" and "letter of forgiveness" in the Japanese criminal justice system is designed to express remorse and make restitution. By accepting the apology, the victim forgives the offender. In all cases of restorative justice, the goal is to restore both the individual parties and their community's sense of wholeness. [69]

The concept of punishment, its definition and its practical application and justification during the past half-century have shown a marked drift away from efforts to reform and rehabilitate offenders in favor of retribution and incarceration. Punishment in its very conception is now acknowledged to be an inherently retributive practice, whatever may be the further role of retribution as a justification or goal of punishment. A liberal justification of punishment would proceed by showing that society needs the threat and the practice of punishment, because the goal of social order cannot be achieved otherwise and because it is unfair to expect victims of criminal aggression to bear the cost of their victimization. Constraints on the use of threatened punishments (such as due process of law) are of course necessary, given the ways in which authority and power can be abused. Such a justification involves both deontological as well as consequentialist considerations.[70]

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[69] Terance Miethe and Hong Lu, *Punishment: A Comparative Historical Perspective* (Cambridge: London, 2004), 24.

[70] "Punishment" Stanford Encyclopedia of Philosophy, accessed May 4th, 2015
http://plato.stanford.edu/entries/punishment/

Population Growth

Prior to discussing policy itself, it is important to understand one of the largest obstacles our country faces and how this has affected modern prison architecture. As a response to an exponential increase in incarceration rates, prison construction has increased aggressively over the last few decades in the industrialized world. Since the late 1970's, approximately 1000 new prisons and jails have been built in the United States, with incarceration rates doubling in the 1980's and again in the 1990's. Despite the hundreds of new prisons being built in the United States, the state's prisons remain grossly overcrowded. Currently there are around two million American adults incarcerated, with an additional increase of 50,000 to 80,000 annually. The United States imprisons a higher portion of its population than any other western nation, with an astonishing incarceration ratio of 645 per 100,000 of the general population. 17 states have smaller populations than America's penal population. California alone has the largest prison system in the western world, growing from 20,000 in 1977 to 94,000 in 1990 and 159,000 in 1998.[71] It is predicted that over the next decade 6.1 billion dollars will be required to simply keep overcrowding at its current levels.[72] Although the building program is narrowly matching the raising incarceration rates, with major refurbishments, extensions, and new construction, the pressure on accommodation remains to be inexorable.[73]

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[71] Bureau of Justice Statistics (1998). *Prisoners in 1997*, pg. 9 US Department of Justice.

[72] Eric Schlosser, "The Prison-Industrial Complex," The Atlantic Monthly, (1998): 51-57.

[73] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 1-3.

Penal Politics

Since the mid 1960's, the ostensible penal consensus has moved from reform to retribution to incapacitation, all with surprising ease and, considering the moral, humanitarian and practical issues at stake, with surprisingly little research. The switch away from reformatory punishment characterizes this process, which came in response to a set of rather undiscriminating empirical findings and a strange political alliance. There was a series of evaluation studies that measured the effects of different types of prison programs in terms of the subsequent offending behavior. These studies suggested the claims that were being made for various types of reformatory treatment could not be supported. Given the vast scope of offenses and the range of penal regimes and conditions, a general statement about the lack of success is hardly surprising. Ideally the approach might have been to redesign and refine programs to better match with the types of offenders. This was probably beyond the management skills of the penal managers of the time, and what actually happened was that it was proclaimed with increasing unanimity and fervor that 'nothing works'. This generalization was met with a response from both the liberal and conservative ends of the political spectrum. [74]

Liberals were concerned about the unsubstantiated reformatory claims and the disordered evaluations of the penal administrators. Their freedom should be granted at an optimum point, when the prisoner would be least likely to re-offend and an offender would be released when enough favorable reports had been obtained by the prison authorities to

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[74] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 3.

secure a positive decision from the parole board. Great weight was given to non-juridical factors, such as the offender's marital status, their availability of accommodation, and their employment after release. There were calls for sentencing to be limited solely to the harm done by offenders and to their culpability; supposedly predictive characteristics, positive and negative, together with all factors not immediately relevant to the criminal process, should be excluded from sentencing.

Many conservatives were equally unhappy with the assumptions implicit in the penal process. Criminal Justice (and much of civil society), they argued, is based upon the notion of free will, for without that there can be no choice, no culpability and therefore no justification for punishment; the very notion of moral capacity depends upon free choice. Emphasizing reformation as a prime objective of sentencing allowed the concept of individual responsibility to be diluted, since it suggested a deficiency - social or psychological - which had to be rectified, and this in turn implied that it was not the individual but his or her circumstances that were culpable.[75]

Financial Implications of Prisons

In the last two decades, there has been a significant introduction of cost saving technology in all labor intensive industries and services, including prison facilities. This is often done by reducing staff members, while improving the remaining members efficiency, competitiveness and profitability. Whether public or privatized, standardized

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[75] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 3-6.

tasks involving large numbers of transactions most easily lend themselves to labor replacement technology.[76] Until relatively recent times, the micro economies of prisons were heavily influenced by the doctrine of less eligibility. Formulated by the utilitarians at the turn of the nineteenth century as a means of safeguarding the deterrent properties of the prison, it was the general consensus that the condition of the prisoner should remain inferior to the condition of the poorest man. This doctrine had the secondary but attractive consequence of restricting expenditure on prisons maintenance. In current times, there is a general acceptance that prisoners should be eligible to live at a restricted but reasonable standard. Upheld through constitutional and conventional obligations along with court judgments, savings in running costs are not come from reductions in prisoners' food, clothing, and maintenance or care provisions.[77]

In any setting when capital replaces labor, the calculations are in anticipation that the initial investment will over time cover the dividend of reduced labor costs. Prisons are no exception; as they are particularly labor intensive involving a very high ratio of staff to inmates with 24 hour coverage. The general rule is approximately three custodial staff to two prisoners in England, and a less generous ratio across the United States.[78] If technology could be used to reduce staff-inmate ratios, medium and long-term savings on running costs would be considerable. The application of this technology is more attractive for medium and high security prisons, as low security prisons typically contain inmates who can be trusted not to attempt escape or to misbehave. Medium to maximum

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[76] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 13.

[77] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 13.

[78] Council of Europe (1998). *Penological Information Bulletin,* 21 December, pg. 88.

security prisoners are defined as more likely to escape, and therefore pose a progressively greater threat accompanied by more complex control problems. This dynamic of restriction requires a much more intensive staffing and therefore greatly increased running costs. These are the circumstances where labor replacement becomes attractive, if not imperative. [79]

In the last few years, there has been an incentive in European countries to eliminate prison facilities driven by structural deficiencies in a system that is skewed towards older, inefficient, and hard to maintain establishments. The incentive is based on the assumption that these aged prisons are unjustifiably expensive and not fit for purpose in the 21st century. Although in an ideal society the goal would be to reduce the number of incarcerated inmates, it is also imperative to assess how to reduce the cost per inmate with in the facility. One of the UK's leading think tanks, *Policy Exchange*, has created a proposal and a brief through extensive research to reform the British Prison estate. Through analysis of prison performance, it has been demonstrated that the key determinant of the decency, safety and effectiveness of a prison is not its size, but its age. Regardless of size, newer prisons perform better than older prisons. The proposal outlines a blueprint which, if adopted, would deliver year to year savings of more than £600m a year, equivalent to 20% of the prison services annual running costs, and just around 9% of the Ministry of Justice's entire budget. The report outlines a plan to close more than 30

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[79] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 14.

existing prisons and replace them with 10-12 'Hub Prisons', large establishments of between 2,500-3,000 inmates.[80]

Although new builds are unavoidably expensive, with a construction cost per place of approximately £120,000, each new prison would be an investment of approximately £270-320m. The proposed program of ten large prisons would require a capital outlay of around £3.75bn, which would in turn release recurring savings of around £600m per year. This would result in a payback period of seven years. Three modes of investment are recommended, public sector borrowing, private finance, and development finance. The most affordable option, year on year, would be to fund the capital development costs through public sector finance, with general taxation bearing the cost of servicing long term debt issued by government to fund the capital outlay involved. An example of this method would be the HMP Oakwood facility. Private finance is endorsed by the analysis, which demonstrates that the replacement of old inefficient prisons with new facilities will deliver very significant on going revenue savings, under which the government makes on going finance payments to a private finance provider. The final private finance – development funding is based off the principle where existing government assets and properties are offered help fund new built developments, with an equity share in a development vehicle formed to manage redevelopment of the government property estate. For example, if there is an existing facility located on prime land, significant value can be achieved by a change of use. This approach does however mean that the new built development is, from a financing perspective, linked to the successful reuse of the old

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[80] Kevin Lockyer, *Future Prisons: A radical Plan to Reform the Prison Estate*. (London, 2013), 5-6.

site.[81] Each of these options provides significant economic investment opportunities, while allowing for a wide range of social benefits for the inmates.

Conclusion

Perhaps the failure in America's penal philosophy lies in the desire to discuss penal policy as a coherent and unified philosophy to determine the disposal of all offenders. Rather than redesigning and adapting programs to better match them with types of offenders, American penal consensus is quick to move through various philosophies of punishment in hopes the next model will be the magic fix the system had been waiting for. By looking at a more holistic approach to penal policy, that may adapt to the current strains on the system as a whole as well as cater to the various unique challenges individual inmates face, a more successful reformatory infrastructure can be accomplished. The strains of population growth and fiscal responsibility must be addressed for a successful and sustainable model of incarceration. However, if these changes in public, political and legal standards result in correctional architecture that is environmentally sufficient yet lacks the social and psychological needs of human habitation, behavior and society, a population of debilitated and damaged inmates will be released into society. Unable to successfully reintegrate into society, recidivism rates are raised, continuing the viscous circle of our penal system many inmates are incapable of leaving.

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[81] Kevin Lockyer, *Future Prisons: A radical Plan to Reform the Prison Estate*. (London, 2013), 41-43.

C h a p t e r   3

THE ENVIRONMENTAL PSYCHOLOGY OF DESIGN

Introduction

As humans we have a symbiotic relationship with the environment, the environment influences our behavior and we in turn we influence the environment. It is important to understand how this relationship with the environment influences our behavior, so architects and psychologists can make educated decisions on how to improve these environments. When addressing the human-environment relationship, foundational theories are established as a way to help environmental psychologists conceptualize the relationship between human behavior and the built environment. However, the theoretical concepts themselves are not able to provide specified answers, but rather help to guide the research process. The research generates knowledge, which informs the application of design solutions.[82] This research will set the foundation necessary to understand the psychology of space and more specifically the psychological effects of confinement on the individual.

The foundational theories of environmental psychology that will be discussed in this chapter include the Social Learning Theory, the Cognitive Dissonance Theory, the Social Identity Theory, and the Attribution Theory. These four theories are important to this dissertation as they are the foundational theories of the human – environment relationship, giving a basic understanding to better grasp the psychology of the incarceration environment.

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[82] Dak Kopec, *Environmental Psychology for Design* (New York, NY: 2012), 17.

Social Learning Theory

Social Cognitive Theories are theories of personality that emphasize cognitive processes. These theories explain how the mind processes social information and how the mind works in a social setting.[83] There are several social cognitive theories, however the most relevant in connection to the environment is the Social Learning Theory developed in 1977 by a behavioral psychologist, Albert Bandura. The Social Learning Theory declares that humans learn first by observing others and then by reproducing those actions.[84] His theory contradicted the strict behaviorist view that individuals must personally experience reward or punishment for learning to occur.[85] Bandura believed that personality is an interaction among the environment, behavior, and the person's psychological processes.[86] He encouraged that humans are cognitive beings who are likely to think about the links between their behavior and its consequences, and are more likely to be influenced about what they believe will happen than by the actual experience. Bandura proposed the idea that human development reflects the interaction among an active person, his behavior, and the environment. He hypothesized that the relationship between behavior and environment was bi-directional, both factors influencing each other, stating that humans

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[83] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

[84] Dak Kopec, *Environmental Psychology for Design* (New York, NY: 2012), 20-21.

[85] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

[86] Dak Kopec, *Environmental Psychology for Design* (New York, NY: 2012), 20-21.

are actively involved in molding the environment that influences their own development and growth. [87]

The theory emphasizes three principles, the first being that people are intrinsically motivated to seek positive reinforcement and avoid negative stimulation. The second is that personality represents an interaction of the individual with the environment, for example, the stimuli that a person is aware of and responds to. This is a relatively stable framework for responding to situations in a particular way. The third emphasizes that to understand behavior, one must first consider an individual's life history and learning experiences in addition to the environment because our subjective interpretation of the environment determines our behavior. [88]

According to Bandura, in the social learning system new patterns of behavior can be acquired in two ways, through direct experience or by observing the behavior of others.[89] Informative function of reinforcement is based on the theory that people observe the differential consequences accompanying their actions. Based on this feedback, they are then able to develop thoughts or hypotheses about the types of behavior most likely to succeed. These hypotheses will serve as guides for future actions.[90] The method of learning through direct experience is largely influenced by the rewarding and punishing

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[87] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

[88] Dak Kopec, *Environmental Psychology for Design* (New York, NY: 2012), 20-21.

[89] Albert Bandura, *Social Learning Theory* (New York, NY: 1971), 3.

[90] Dulanny & O'connell, "Does Partial Reinforcement Dissociate Verbal Rules and the Behavior They Might be Presumed to Control?" *Journal of Verbal Learnig and Verbal Behavior*, 1963, 361-372.

consequences that follow an action. "People are repeatedly confronted with situation with which they must deal with in one way or another. Some of the responses that they try prove unsuccessful, while others produce more favorable effects. Through this process of deferential reinforcement successful modes of behavior are eventually selected from exploratory activities, while ineffectual ones are discarded."[91]

The importance in the context of incarceration lies in understanding the learning patterns experienced by the inmates in their environment. By understanding these learning patterns and motivation, architects will be able to design for more appropriate spaces in which positive reinforcement can be acquired through observing the behavior of others. The spatial implication of this could be seen in the programing of how inmates interact and learn from one another. By allowing the architectural spaces with in a correctional facility to encourage the observation of good behavior of other inmates, successful models of behavior will be selected from the observation of other inmates.

Banduras theories were tested by the famous Bobo Doll study done in 1965. His goal was to add credibility to his belief that human behavior was learned through the act of social imitation and copying, rather than inherited through genetic factors. He did so by allowing children to witness an adult role model interacting with a Bobo doll, a weighted inflatable clown. After a period of time watching adults interact with the Bobo doll, the children would proceed to imitate the behavior that they witnessed. Children witnessing an adult role model behaving in an overly aggressive manner would be the most likely to

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[91] Albert Bandura, *Social Learning Theory* (New York, NY: 1971), 3.

replicate this behavior themselves. Children observing a non-aggressive adult would be less likely to exhibit aggression towards the doll. [92] This behavior was imitated to a stronger degree if the behavior was rewarded, and if the behavior was punished they were less likely to imitate. [93]

This model of learning relates back to the social structure of parenting as modeling of appropriate behaviors. However, not all poor behavior comes from poor parental modeling. In the case where a child may have excellent modeling of parental behavior, the child might still model inappropriate behavior as a result of environmental influences and effects from the greater social structure outside the home.

"Bandura also proposed the concept of reciprocal determinism to describe the idea that human development reflects the interaction among an active person, their behavior, and the environment. The theory was significant because it moved away from the idea that the environment alone affected an individual's behavior".[94] Alternatively, Bandura proposed that the relationship between behavior and environment was *bidirectional*, emphasizing that both factors can influence each other. Banduras theory inferred that

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[92] Explorable, "Bobo Doll Experiment" accessed 13 Apr. 2015, https://explorable.com/bobo-doll-experiment

[93] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

[94] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

humans are actively influence the environment that impacts their own development and growth."[95]

Julian Rotter was a clinical psychologist who was influenced by the Social Learning Theory and expanded upon Bandura's ideas of reciprocal determinism. In 1966, Rotter developed the term 'locus of control' to describe how an individual viewed his or her relationship to the environment. The locus of control refers to individuals' beliefs about what determines his or her rewards or outcomes in life, and can be classified along a spectrum from internal to external. Where an individual falls along the spectrum determines the extent to which they believe they can affect the events around them.[96]

Someone with internal locus of control is a person that believes their rewards in life are guided by their own decisions and efforts. If they do not succeed, they believe it is due to their own lack of effort. The individual believes that they control the consequences of their own behavior, which typically results in better academic achievement, better interpersonal relations, greater efforts to learn, positive attitudes to exercise, lower cigarette smoking, and ultimately loves hypertension and heart attacks. [97]

An external locus of control is a person who believes that rewards or outcomes are determined by either luck or others with more power than themselves. In the event they

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[95] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

[96] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

[97] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

do not succeed, they believed it is due to forces out of their control. When an individual believes that the consequences of their behavior are outside of their control, it typically results in an individual who is content and more resigned to conditions as they are. An example of this learned helplessness would be an individual in a lower socioeconomic status that becomes socially disempowered in this environment. Evidence has supported the theory that locus of control is a learned behavior and can be modified. However, in a non-responsive environment where an individual does not have much control, such as a prison environment, an external locus of control is associated with a greater sense of satisfaction.[98] This results in the individual embracing a feeling of content in their situation and not striving for improvement.

Inmates typically benefit from a spatial layout that encourages structure, predictability and a narrow range of choices. The prison environment does a wonderful job at fulfilling these desires. When an inmate is released back into society, they lose that comforting element of structure and predictability they have become so dependent on. Though understanding this concept of locus of control, there is a spatial opportunity in prison environments to discourage external locus, reducing the mentality that individuals are disempowered and helplessness with little to no choices. By creating a living environment where inmates are allowed to make small choices, the architecture encourages a more empowering approach to behavior. More space amounts to less control and more choice. This may be achieved is by allowing inmates to move more

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[98] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

freely through out their living quarters, as opposed to being locked up in a single cell. Although there are certain programmatic requirements of confinement that cannot be over looked, there is an opportunity to re-analyze how architectural programs can encourage choices that build the internal locus mentality where possible by layering a diversity of experiences and choice within the context of space. A strategic and intentional implementation of varying spatial layouts could allow the inmate choose between two positive choices. This strategy will encourage inmates to take responsibility in their behavior, resulting in better academic achievement, better interpersonal relations, greater efforts to learn, and over all positive attitudes.

This change in mentality can be further encouraged by attribution training, which is a method that focused on strengthening an individual's internal locus of control and can be helpful in increasing motivation. Individuals are encouraged to associate their behavior with the outcomes they experience and increasing their self-efficacy. [99] By training inmates that they influence their own outcome through their behaviors and choices, inmates can train themselves into believing that they do have the power to control and change their situations.

[99] "Bandura's and Rotter's Perspectives." Boundless Psychology. Boundless, 14 Nov. 2014, accessed 03 Apr. 2015, https://www.boundless.com/psychology/textbooks/1516/personality-16/the-social-cognitive-perspective-81/bandura-s-and-rotter-s-perspectives-314-12849/

Cognitive Dissonance Theory

Cognitive dissonance is a psychological conflict resulting from simultaneously held incongruous beliefs and attitudes.[100] Cognitive Dissonance Theory is a theory that acknowledges that this conflict produces discomfort. The discomfort will cause pressures to reduce or eliminate the dissonance, and action is taken in attempt to reduce this discomfort. Attempts to reduce discomfort represent the observable manifestations that this conflict exists.[101] These attempts are represented in three forms, the person may try to change their *beliefs*, *opinions*, or *behaviors* involved in the conflict. The goal would be to acquire a new outlook, or to forget or reduce the importance of those perceptions that are in a dissonant relationship.[102] If this is achieved, the discomfort is alleviated.

In an experiment conducted by Aronson and Carlsmith in 1963, cognitive justification was used to force compliance in children. The experimenter questioned the child on various toys to find which toys the child liked the most and which they found the least tempting. The experimenter then chose a toy that the child liked the most, and left them alone in a room with the toy. Upon leaving the room, the experimenter told half the children that there would be a severe punishment if they played with the toy, and told the other half that there would be a moderate punishment. Later, when the punishment was removed, the children who had the warning of a moderate punishment were less likely to

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[100] http://www.merriam-webster.com/dictionary/cognitive%20dissonance

[101] Festinger, Leon. *Cognative Dissonance Theory* (Stanford, CA: 1957), 25-26.

[102] Festinger, Leon. "Cognative Dissonance Theory." *R. West and LH Turner, Introducing communication Theory Analysis and Application 4* (2010): 112-128.

play with the toys than the child with the severe punishment, even though both punishment threats had been removed and there would be no repercussions. This is because the children who only had the moderate punishment had to justify other reasons as to why they did not want to play with the toy, independent of the punishment. After the experiment, the children with the moderate condition expressed more of a disinterest in the toy than when they initially ranked the toy high in interest, and the children with the severe punishment condition ranked the toy higher in desirability than the initial ranking. [103]

This study explains the effect of over justification and insufficient justification on cognition. In over justification, the personal beliefs and attitudes of the person remain unchanged due to the external reason for their actions. In the case of the children, those with the severe punishment condition had a strong external reasoning for not playing with the toy due to the harsh punishment, however they still wanted the toy, so once the punishment was removed they were more likely to play with it. Conversely, the children who would get the moderate punishment displayed insufficient justification because they had to justify to themselves why they did not desire playing with the toy because the external motivator, the moderate punishment, was not strong enough in its own regard. This resulted in the child convincing themselves that the toy was not worth playing with, and therefore when the punishment was removed, they had lost the desire to play with the toy. [104]

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[103] Festinger, Leon. *Cognative Dissonance Theory* (Stanford, CA: 1957), 26-27.

[104] Festinger, Leon. "Cognitive dissonance theory." *R. West and LH Turner, Introducing communication Theory Analysis and Application* 4 (2010): 112-128.

This study poses an interesting case study in reference to the psychology of confinement and incarceration. If there could be a system implemented where the inmates were encouraged to justify themselves as to why they did not want to continue with their deviant behavior, as opposed to relying simply on external reasoning such as punishment and incarceration, the inmate would have a more successful reintegration into society and be less likely to re-offend. Where the punishment itself falls under a deterrent philosophy, it is proven that the more severe the punishment, the more desirable the urge is to re-offend. If a rehabilitative or restorative justice approach was taken into consideration under these circumstances, the offender takes responsibility of the action and bases their reform not on the consequences themselves.

Social Identity Theory

Social identity is a person's sense of who he is based on his group membership. Groups give individuals a sense of social identity, which contributes to a source of pride and self-esteem.[105] The Social Identity Theory proposes that when acting in groups we define ourselves in terms of our group membership, seeking to have that group valued positively in relation to other groups.[106] "The Social identity theory is a social psychological analysis of the role of self-conception in in group membership, group processes, and

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[105] Tajfel, H., & Turner, J. C. An Integrative Theory of Intergroup Conflict. *The social psychology of intergroup relations* (1979), 33-47.

[106] The BBC Prison Study, "Social Identity Theory" accessed April 15th 2015, http://www.bbcprisonstudy.org/resources.php?p=59

intergroup relations".[107]   The theory embraces several correlated concepts and sub theories, all focusing on social-cognitive, motivational, social interactive and macro social facets of group life. The theory defines group cognitively, in terms of people's self-conception as group members. A group is defined when three or more people evaluate themselves in terms of shared attributes that distinguish them collectively from other people. Phenomena addressed by this theory include prejudice, discrimination, ethnocentrism, stereotyping, conformity, and organizational behavior.[108]

In a world influenced by stereotypes, individuals find themselves in groups that are devalued in comparison with others. Social identity theory argues that this depends on two factors. The first is permeability within various social groups, if one believes that they can still progress in society despite their group membership, they will try to distance themselves from the undesired group and be seen as an individual. If there is no chance of advancement, they will begin to identify with the group and act collectively with fellow group members in an effort to improve their situation. What one does as group members is dependent on the second factor of security. If one believes that the present situation is legitimate or inevitable, they will adapt to it. There may be a desire to improve the valuation of the group, but they will not necessarily question or challenge the system itself. Conversely, if the situation is seen as illegitimate and one can envisage

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[107] Hogg, Michael A. *Social Identity Theory* (New York, 1990), 111-112.

[108] Hogg, Michael A. *Social Identity Theory* (New York, 1990), 111-112.

other ways of organizing society, one will act collectively to challenge the status quo and therefore encourage social change.[109]

A valuable aspect of understanding social identity theory in relation to this dissertation topic is in reference to the ability to interpret criminal and violent behavior among gang members as a group-based phenomenon. Gang relationships are a common social norm in many prisons. This ability to interpret criminal and violent behavior is not simply in terms of individuals engaging in these behaviors, but rather in terms of one's motivation to act. Through an examination of intragroup dynamics of gangs and other peer groups that contribute to delinquency and violence, it was found that group cohesion and group identification are associated with criminal and violent behavior among gang members, but not among members of other kinds of peer groups in the same neighborhoods. "In the models with gang-involved respondents, the relationship between gang cohesion with crime and violence was fully mediated by strength of social identity. These relationships were not found among non-gang respondents where deterrence-related concepts were more important than group cohesion or social identity". [110]   The difference is due to different expectations within street gangs versus within non-gang peer groups. The stronger one's identification with the gang, the stronger the individual is focused on the gang's expectations, regardless of individual concerns.[111] The importance in understanding this theory of incarceration lies in a valuable understanding of the social

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[109] The BBC Prison Study, "Social Identity Theory" accessed April 15th 2015, http://www.bbcprisonstudy.org/resources.php?p=59

[110] Hogg, Michael A. *Social Identity Theory* (New York, 1990), 111-112.

[111] Esbensen and Maxson, *Youth Gangs in International Perspective: results from the Eurogang program of research*. Springer Science & Business Media, 2011. 127-129.

context in which the inmates live. Gang mentality will adhere to a set of codes and values even though they may be the wrong set of values. The goal of the correctional institution should be to encourage pro social behavior by rewarding those who follow the right values and implement punishment based on the wrong values. By encouraging this pro-social change through positive reward, the inmate is allowed a chance to progress with in the correctional society, and distance themselves from the connection to the gang mentality with the wrong values.

Although gangs might not be encouraged with in the prison setting, it is important to acknowledge the programmatic needs to support the classification and segregation schemes necessary with in a prison. This could be in relation to security variations with in the prison, or religious or cultural variations. The balance of socialization and privacy with in a prison is also if great concern. Humans share a dynamically changing need for social contact.[112] Through this knowledge of social interaction, a more successful architectural program can be designed to better serve the inmates socialization and rehabilitation within the prison. This architectural program would incorporate less individual isolation spaces and more collective group areas where inmates could enact in pro-social activities. These collective group areas should also allow for varying sub groups to have space to enact in social activities without conflict of the other sub groups. This may appear as an exterior recreational area in which there are multiple break away zones in which inmate groups can enjoy, as opposed to one large open area. Soft and hard

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[112] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 116.

landscaping can be used to achieve various break away areas with in a larger space. This is allowing the inmates both choice and diversity to engage in pro-social behavior for multiple sub populations with in the same facility.

Attribution Theory

The attribution theory describes the processes when an individual is motivated to attain a cognitive mastery of the causal structure of his environment. There are four criteria relevant in this process; they include distinctiveness, consistency over time, consistency over modality, and consensus.[113] The theory deals with how the individual uses information to arrive at causal explanations for events, examining what information is gathered and how it is combined to form a judgment.[114] The theory explains how and why ordinary people explain events as they do, trying to make sense of the social world. Two main ideas became influential in this theory. The first being that when we explain the behavior of others we look for internal attributions, such as personality traits. For example, we attribute the behavior of a person to their naivety, reliability, or jealousy. The second being that when we try to explain our own behavior we tend to make external attributions, such as situational or environmental.[115]

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[113] Kelley, Harold H. *Attribution Theory in Social Psychology* (Nebraska, 1967), 192

[114] Fiske, S.T., & Taylor, S.E. (1991). *Social cognition (2nd ed.)*. New York: McGraw-Hill

[115] "Attribution Theory" Simple Psychology, 2010, accessed April 26th 2015,
http://www.simplypsychology.org/attribution-theory.html

The originator of the Attribution Theory was Bernard Weiner in 1935. He developed a theoretical framework that has become very influential in social psychology. The theory assumes that people try to interpret causes to an event or behavior. There are three stages outlined with in the theory. First, behavior must be observed and perceived. Second, behavior must be determined to be intentional. Third, behavior must be attributed to internal or external causes. According to Weiner, the theory is mainly about achievement, as the most important factors affecting attributions are ability, effort, task difficulty, and luck. Attributions are classified in three categories: focus of control, stability, and controllability.[116]

Harold Kelly's covariation model is the best known attribution theory. Covariation means that a person has information from multiple observations. This observation is acquired through various occasions and situations, and can perceive an effect and its causes. He developed a logical model for judging whether a particular action should be attributed to a characteristic of the person (classified as internal), or the environment (external). Kelley believed that there were three types of causal information that influences human judgment; Consensus, distinctiveness and consistency. Consensus is the extent to which other people behave in the same way in a similar situation. Distinctiveness is the extent to which the person behaves in the same way in similar situations. Consistency is the extent to which the person behaves like this every time the situation occurs.[117]

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[116] "Attribution Theory" Learning Theories, accessed April 15th, http://www.learning-theories.com/weiners-attribution-theory.html

[117] McLeod, S. A. (2010). Attribution Theory. Retrieved from http://www.simplypsychology.org/attribution-theory.html

By observing these trends in behavior, a consensus can be formulated to define if the behavior is a result of personality of the individual or if it is rooted in environmental influences. This theory does not necessarily have a spatial implication in prison architecture, but is rather a valuable tool in assessing the psychology of environments in the prison context. Once the behavior is determined to be an internal attribution, the focus can be directed towards the rehabilitation of the inmate. Alternatively, if the behavior is determined to be an external attribution, the focus of the rehabilitation should be on the environment in which the inmate lives. This important distinction of where to focus rehabilitation efforts is a valuable tool in assessing rehabilitation needs of prison facilities.

Conclusion

These theories build a foundational understanding of the psychology of human behavior in relation to the environment. Before we can successfully adapt the architecture of prisons to better suit inmate rehabilitation we must understand the effects of which the environment has on us, and in turn our ability to affect the built environment. This guidance will set the tone for the next chapter where the spatial responses of programmatic and social needs will be more thoroughly discussed. Each of these theories provides a valuable piece of information in understanding the complex social implications of design in such a controlled setting. They give insight into how an architect may manipulate correctional space by allowing the inmate to choose between

two positive options, resulting in a more positive social environment while allowing choice and independence, qualities often lost in correctional design.

C h a p t e r 4

THE PSYCHOLOGICAL EFFECTS OF THE PRISON ENVIRONMENT

Introduction

It is interesting the many parallels and similarities that are apparent today in modern prison infrastructure and practice as a penitentiary system. This history has had an immense impact on how our prisons are organized today and seems that many years have passed since there have been any revolutionary adaptations to the idea of incarceration or reformation. Not much has changed as far as confinement used as a mode for punishment. With incarceration rates being higher than ever, it is imperative that we start critically reviewing jail environments and of specific issues critical to the way they are experienced especially by inmates, but also staff and visitors.

The latest research on jailhouse architecture is not limited to the description and analysis of the institution of prisons, but aims at the impressions which inmates, staff and visitors get from the architectural design of the jailhouse. The emotional impact on the psyches of prisoners is grave, but the psychological impact on visitors and staff must also be considered. The symbolic communication of the prison façade is very influential, and goes beyond the mere structure, expressing culture and causes emotional reactions as well as mental associations. Prison facades and walls can be more than just a security measure, they have the ability to exclude the prison from society or they can serve as a link to the community, and connect with the community and the world outside. Interior design can have a similar effect, in regards to the prisoner's subjection to state power and his isolation from the outside world. Interior design on the other hand can provide

stimulation and intrigue, providing options for choice of the prisoner, allowing a humane accentuation of his personality and character.[118]

This chapter begins to make important connections between the psychological foundation that has been discussed in the previous chapters, and the architectural spatial implications applied to correctional institution environments. The chapter reviews several prison layouts and their benefits and disadvantages, both from the perspective of the goals of the administration and the effect on the inmates. In many early cases, the priority of security and intimidation overshadowed any inmate rehabilitation needs, resulting in detrimental psychological implications and high stress environments. Privacy and overcrowding are addressed to build an understanding of two of the biggest problems our correctional infrastructure face today, and what stresses these issues bestow upon the inmates and staff. Various aesthetic characteristics are discussed, which can be used as a tool to create positive low stress living environments with in correctional facilities. These include the quality of light, the importance of windows and the views they afford, the connection to nature, and finally the effect of color application with in correctional environments. Correctional institution design must seek balance between the programmatic needs of security and punishment and allowing inmates to reside in a minimal stress environment, forming a rehabilitative setting in which any inmate must have and deserves if there is any hope for reform and peace.

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[118] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006)

Geometries of Prisons

A defining characteristic of early jails and prisons was the lack of control in regards to how inmates interacted with one another. In general, inmates were housed without any regard to classification or threats they poses to one another. For the prison administration, safety and internal security were of the biggest concern, and achieved by constant inspection.[119] Linear rows of congregate cells found in most facilities allowed guards to clearly see the front of the cells by looking down a long row, however this left significant gaps in the line of site between guards and inmates because they could not see what was going on inside the cells unless they were very close.[120] "The lack of programs or other goals for early structures is reflected in the simplicity of their design, usually consisting of a series of group cells, often arranged in no systematic pattern, or simply disposed around interior courtyards".[121] An example of this would be London's Newgate Prison built in 1769, where "most of the inmates were kept in a series of large rooms arranged around three courtyards, forming a central square and two smaller flanking squares. Lax administration allowed prisoners to shake down one another and there was almost no supervision".[122]

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[119] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 44.

[120] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 33.

[121] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 34.

[122] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 34.

Figure 2: London's Newgate Prison, Sir John Soane's Museum,
London. http://www.londonlives.org/static/Prisons.jsp
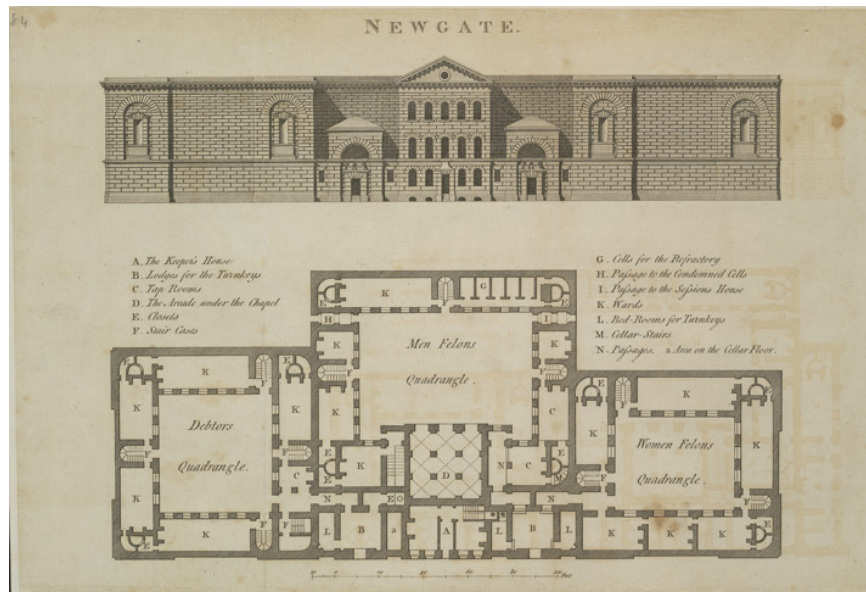
Figure 3: A plan of Newgate Prison published in 1800. Original in
the Crace Collection at the British Library,
http://commons.wikimedia.org/wiki/File:Newgate_Prison_Publ_1
800.jpg

Even on the rare occasion when the design guidelines for a correctional facility provided

by sixteenth, seventeenth, and eighteenth century architects were humane, the foremost

concern was the image presented to the community. "They typically suggested external

facades that showed severity and evoked fear."[123] The ideal prison was "short and massive, where the prisoners, humiliated, weighted down, are constantly before the eyes of other criminals who are confined there, offering a vision of the punishments that await them, in the repentance that must follow the dissoluteness of their past life".[124] This approach is in support of Banduras beliefs with in regards to the Social Learning theory. As discussed in the previous chapter, he believed that as cognitive human begins, we are likely to think about the links between our behavior and its consequences, and we are more likely to be influenced by what we believe will happen than by the actual experience. This example supports his theory, the imposing doom implied by the architecture is creating a relationship with the community where the architecture aiming to positively influence human behavior through the philosophy of *deterrence*, when the fear or actual imposition of punishment leads to conformity.

There were three basic forms that the overall plan of a prison exhibited. These included simple rectangular and nonradial plans, circular or polygonal plans, or radial plans. These variations were not due to the architects aesthetic values. "Rather, the geometry and plan of the facilities both represent and are determined by differing concepts of the nature of institutional operations and, more specifically, the nature of security. The oldest facilities tended to use nonradial layouts, usually rectangular in shape, such as London's Newgate Prison" (Figure 1).[125] The rectangular design largely depended on the strength of its

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[123] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 33.

[124] Blondel, 1771 cited in Johnson, 2000, p. 31

[125] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 34.

barriers to maintain control, which kept inmates away from contact with staff but did not protect inmates from one another. These designs also did not provide sight lines that facilitated surveillance with inmates. Of the circular and polygonal shaped prisons, the most widely known and discussed would be the Panopticon, although few have actually been built.[126]
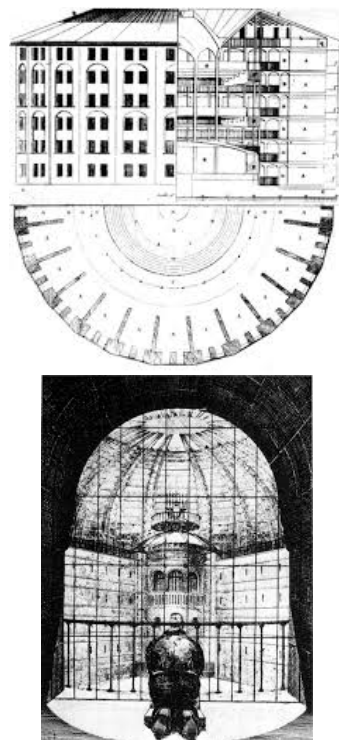
Figure 4: J.Bentham, Panopticon, Works, Vol. IV, n 17.
http://foucault.info/file/j.bentham-panopticon-works-vol.-iv-n°17

Panoptic facilities rely on the complete visual access of the inmates living quarters by the guards. The facility is circular with vertical floors of cells around an atrium, and a central guard tower for optimum viewing. The driving concept is that visual surveillance is the

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[126] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 35.

key element of security, as bad behavior can only take place out of site, and everything is in a site line.[127] The disadvantage is that is does not easily support classification or segregation schemes and limits options providing inmates with secure access to fresh air.[128]

By the late eighteenth century, most prisons adopted a semicircular or radial plans. "The popularity of radial plans, linear tiers of cells that radiate from a central point, was spurred in the early nineteenth century by interest in the new Pennsylvania model.[129] The radial plan provides a physical structure that supports a specific organizational scheme. It breaks cell areas into easy to identify and physically separate entities. All spaces flow to and from a centralized area, making it easy to organize separate units to segregate different types of groups of inmates and provide for efficient use of staff and resources."[130] As discussed in the previous chapter, the Social Identity theory explains the importance of group identification and classification. Acknowledging and responding to these social needs programmatically and allowing segregation schemes when necessary, a healthier and safer environment is created for the inmates. This planed and intentional segregation will allow for positive social interaction with in groups stratifications without unnecessary conflict.

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[127] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 35.

[128] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 36-38.

[129] Norman Johnson, *Forms of Constraint: A History of Prison Architecture* (Illinois: Chicago, 2000), 36-38.

[130] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 36.
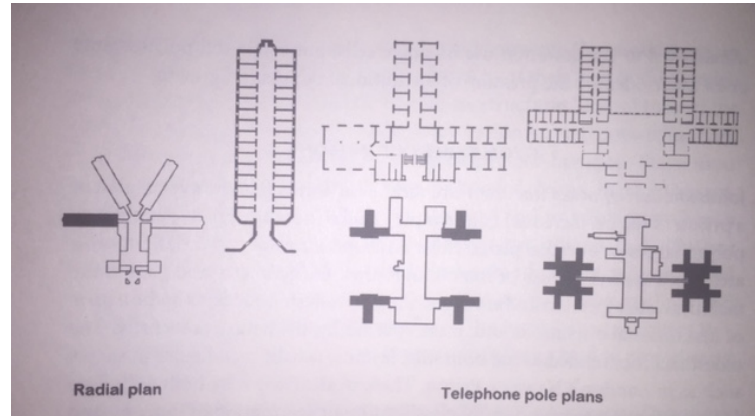
Figure 5: Radial and Telephone Pole plans. Courtesy of L. Fairwether & S. McConville. Leah Wener, *Prison Architecture, Policy, Design and Experience*. (Oxford, Boston Architectural Press, 2000)

Although radial designs were expected to provide for superior surveillance of inmates, they could only do so in limited ways. The staff could easily see along the long corridors and into the large rooms and yards, but far corners were often out of sight and sound.[131] Staff was limited to seeing inside the cells only when they performed their scheduled walking tours. This has been termed in the modern context, *linear intermittent surveillance*.[132] Because the inspection is predictable and not constant, the inmates are able to avoid the guards as they have the time and the warning to change their behavior before the guards come into sight. This is a very important issue not only in social settings, but also inmate safety such as suicide.

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[131] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 36.

[132] W.R. Nelson, "The Origins of Direct Supervision: An Eyewitness Account" American Jail, Spring, 1988. 8-14.

FIRST GENERATION

SECOND GENERATION
Officer separated from inmates by glass
Good visibility, but from fixed point

Officer station separated from living area

No light control or exterior window in cell

Rooms have exterior windows

Doors give privacy

Activity space limited

THIRD GENERATION

Officer isolated from inmates even on tour

No space for activities

Gang looks, barred cells - no privacy

Officer directly in living area - excellent visibility

Multiple activity spaces

Small group and TV areas

Inmate controls light - door gives privacy

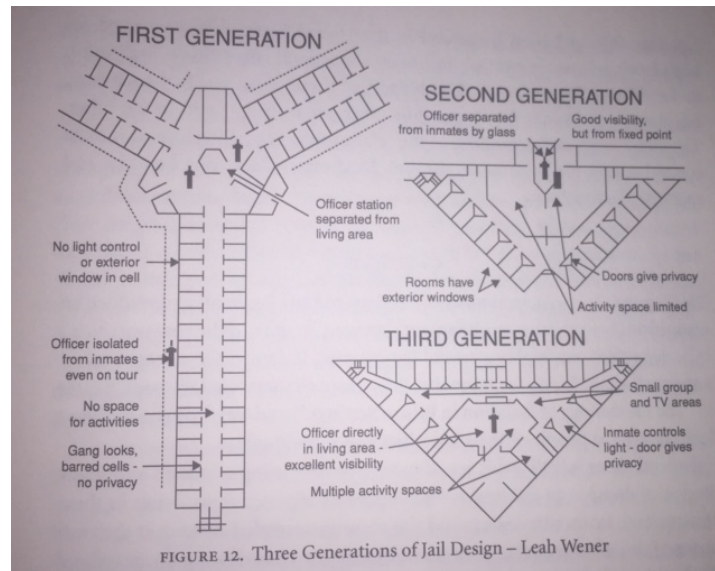FIGURE 12. Three Generations of Jail Design – Leah Wener

Figure 6: Three Generations of Jail Design. Leah Wener, *Prison Architecture, Policy, Design and Experience*. (Oxford, Boston Architectural Press, 2000)

In the twentieth century, form and layout has changed and evolved to become more efficient and effective. For the most part, prisons in the twentieth century utilized designs in the form of rectangular plans, radial plans, or campus like models with buildings disperse over a broad area. The telephone plan, a plan that uses a direct line of sight in direct supervision models, became very popular because they allowed for controlled movement, the layout allowed for more light with in the cells, and also provided connections between programs and buildings (see figure 4). They also had the benefits of providing easy separation of inmates through classifications, simpler supervision, and relatively easy expansion. One of the first examples of this design would be at Wormwood in London, which was soon followed by several in the United States.
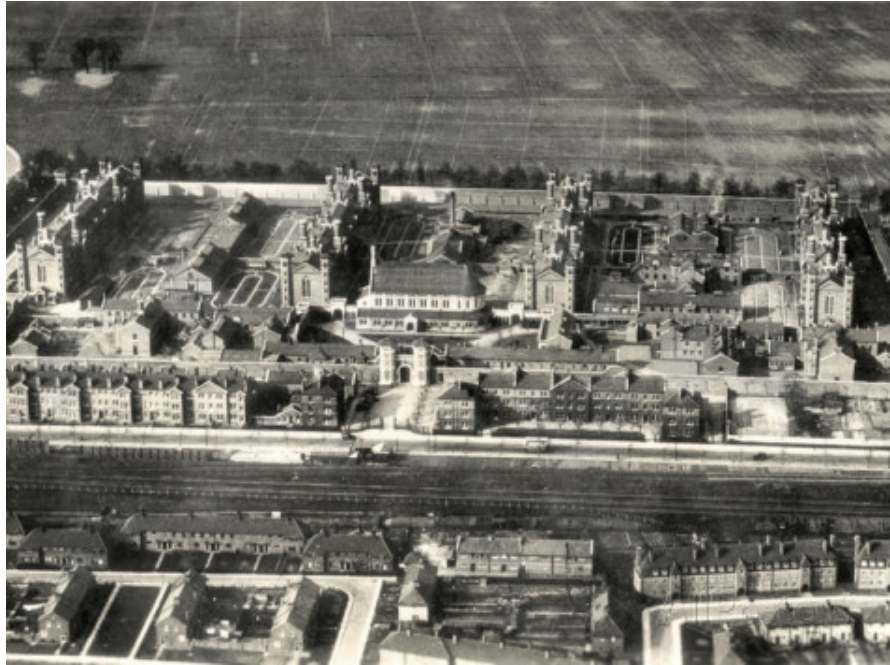
Figure 7: Wormwood Scrubs Prison in London,
http://www.justice.gov.uk/contacts/prison-
finder/wormwood-scrubs

These facilities were used for high levels of inmate control. This design continues to follow Banduras beliefs, with the same basic understanding of the relationship of architecture to inmate control, however, through hard materials, strong barriers, and easy visual surveillance.[133]

Privacy

This section will address theory and research related to the issues of physical space, interpersonal distance, and the control of both aspects. When looking at correctional institutions from a larger scale, the facility can be considered in terms of broad

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[133] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 36-38.

organizational issues of design and management, for example, how a facility is created, how space is organized, and how rules are devised and maintained. "Day to day and moment to moment, however, the social ecology of a place is experience on the smaller scale of interpersonal relations involving privacy, personal space, and territoriality".[134] Privacy plays a very important role in the design issues of correctional facilities, and can either help or inhibit inmate rehabilitation depending on how it is addressed within the design context of a prison. Irwin Altman was a behavioral psychologist who developed a theory called the Privacy Regulation Theory in 1975. "The model presumes that people everywhere share a dynamically changing need for social contact, ranging from the desire to be absolutely alone, with no interaction with or information about others, to the need to broad and intense interaction with one, several or many other people". [135] Altman describes a term, *Optimal Privacy*, which represents a match between the level of contact wanted and the contact available, allowed and achieved. This process is dynamic in that the desired levels of social interaction and information access will fluctuate over time. Typically, the individual needs control over the situation in order to achieve privacy, being able to change the situation to fit changing desires for greater or lesser contact. Optimal privacy does not necessarily mean being alone. According to Altman, it is to be alone when being alone is desired, or to be with several others sometimes, or with many people at other times. There are two situations in which privacy may fail. *Crowding* is the state in which attempts at privacy fail because a person has no choice but to be in contact

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[134] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 115.

[135] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 115-116.

with more people than desired. *Isolation* is when privacy fails because the person wants to interact with more people but is kept from doing so through limitations such as architectural, social or organizational.[136]

Privacy plays an important role in self-evaluation and rejuvenation.[137] Incorporating this concept was a goal previously attempted in the design characteristics of early American jails, such as The Pennsylvania Model, where extreme isolation was provided to allow inmates both space and time for reflection and self-evaluation in the hopes for the reform of the inmate. This model however proved to be unsuccessful as the isolation created stress through lack of social interaction over long periods of time, and was and resulted in a psychologically damaging effect in the inmate. On the other extreme, as presented in the Panopticon, "the prison was intended to make the inmate aware of the omniscience of the authorities that comes from never being certain if, at any particular moment, he or she is being observed".[138] The loss of privacy becomes an important part of the institutions ability to strip the individual of his or her sense of self.[139] In order to create a successful environment for reflection, a healthy balance of privacy is imperative in the success of the inmate's rehabilitation. A oppressive design such as the Panopticon encourages a *external locus of control*, encouraging that the inmates are completely disempowered and

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[136] Irwin Altman, *The Environment and Social Behavior: Privacy, Personal Space, Territory, and Crowding* (1981), 115-116.

[137] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 117.

[138] J. Semple. Bentham's Prison: A study of the Panopticon Penitentiary (New York, 1993), 118.

[139] Pilar Jiminez, Psychology in Spain: "Psychological Intervention with Drug Addicts in Prison" (2000) http://www.psychologyinspain.com/content/full/2000/6.htm

helpless. This view on a situation can have harmful effects to the inmate's behavior and motivation to reform.

Correctional settings are in general extremely poor places for privacy, due to the nature of the legal and social contract that creates the right to incarcerate someone, transferring control over these choices from the individual to the organization.[140] Inmates may use a variety of means to regulate interactions in order to maintain privacy. These may include verbal statements, nonverbal behavior and physical arrangements of space. In Altman's model, "territoriality and personal space are two tools used to affect physical and social distance in regulating levels of contact and access to help achieve the desired degree of being open or closed".[141]

There are various types of privacy, including *solitude*, the state of being alone by choice. Solitude distinguished from *isolation*, which refers to being alone at the directive of others. *Anonymity* is achieving aloneness by not being recognized in a crowd, and through *reserve*, withdrawing into one's self. Privacy is also experienced in *intimacy*, which is considered close contact with others in the context of an emotional exchange.[142] In a jail or prison, opportunities for solitude are highly prized though very difficult to achieve. It is becoming less common for inmates to have individual cells for economic

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[140] Michel Foucault, Discipline and Punish: The Birth of the Prison. (New York, 1979)

[141] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 116.

[142] D. Pederson, *Journal of Environmental Psychology* "Model for types od privacy by privacy functions" (1999), 397-405

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reasons, and space and site line limitations further reduce or eliminate opportunities for physical separation.[143]

These different types of privacy serve important social and psychological needs. For example, solitude and intimacy can be very influential in achieving emotional release, especially when an individual is dealing with emotions such as fear, grief, or anger.[144] When confronting these feelings it is natural to human behavior to seek space away from others, and option generally unavailable in correctional settings. "Privacy allows reflection, understanding, and sometimes personal growth to emerge from events, once we can take a step back in order to review and make sense of them". [145]

If a healthy balance of privacy is not achieved, stress will be instilled in the inmate resulting in negative effects on inmate rehabilitation. "By defining privacy in terms of control or lack of control over the degree of openness to interaction, we are also able to connect it to the broader literature on environmental stress. *Control* - the ability to regulate the level of exposure to environmental events – has been linked to the degree to which people experience stress and have lasting effects from exposure to stressors".[146] Unpredictable, intermittent stressors appear to have the most negative and lasting impacts.[147] Control is not just the physical ability to manipulate settings, but also includes

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[143] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 117.

[144] D. Pederson, *Journal of Environmental Psychology* "Model for types od privacy by privacy functions" (1999), 397-405

[145] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 117.

[146] Evans & Stecker, *Journal of Environmental Psychology,* Motivational Consequences of Environmental Stress (2004), 143-165.

[147] G. Evans, Environmental Stress (NY, 1982), 120.

the ability to predict events. As discussed in the previous chapter, when confronted with a dissonance causing discomfort as we learned with the Cognitive Dissonance theory, individuals may try to reduce the stress of loss of privacy changing their behavior, this may be shown by an increase in territorial behavior. In a prison situation, this might be seen in dominant individuals claiming certain areas within the prison, such as a prized seat by the TV, asserting claim over a specific area or object.[148]

A study by Zimring, Weitzer and Knight conducted in 1982, showed that when residents with in institutions have private bedrooms with closable, lockable doors, they are more social and less withdrawn. These private spaces allow for retreat opportunities when desired and therefore allow the inmate to have the freedom to be more social otherwise. They suggest that the lack of private space encourages more aggressive territorial behavior. The study showed that the designs that increased control over social interaction as well as of physical aspects of light, heat and noise, positively impacted stress and interaction.[149] Unfortunately, the vast majority of inmates are in multiple occupancy rooms, as the number of incarcerated inmates continues to egregiously surpass population projections.[150]

"When several inmates share a cell, the problems that are created go beyond physical closeness. Sharing toilets facilities within a cell violates basic privacy norms regarding sight, sound and odor. It is stressful to most inmates, even though they have no choice but

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[148] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 120.

[149] C. Zimrig, W. Weitzer, & R.C. Knight, *Environmental Health*, Advances in Environmental Psychology, Vol. 4 (NJ, 1982) 171-210

[150] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 121.

to adjust and accommodate because the situation is so common in many correctional settings that it is seen by administrators as the norm and not as a problem of great repair."[151] Werner mentions a jail that was studied which used alternating access to the dayroom as a way to adjust to overcrowding conditions. The facility had been sized for an expected capacity if one inmate in each of the thirty-six single cells. At the time of the visit each cell had two inmates and the dayroom was far too small to be used by all inmates at once. This resulted in a change of procedure so that inmates were kept licked in their cells, except for the periods when half were allowed into the dayroom at a given time. Those allowed into the dayroom was determined by allowing alternating access from upper and lower levels of the facility. Those from the upper tier of the living unit were allowed out of their cells for 90 minutes, after which they returned to their cells and the inmate who resided in the lower tier were then allowed out. From a privacy perspective, this is a failed opportunity to allow for solitude and positive socialization. When the inmates are locked in their rooms, they are locked in with a cellmate and have no opportunity for solitude. An alternative idea may be if officers were to let one inmate from each cell out into the dayroom for alternating periods, alternating the groups differently to allow for some alone time with in the cell. In this case, both the time out of the cell (for activities such as exercise, TV, phone etc.) and the time inside of their cell (for sleep, using the toilet, reading, and reflection) become positive conditions.[152]

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[151] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 121.

[152] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 121-122.

Over Crowding

The attention given to prison crowding seems to get more acknowledgment than any other environmental issue affecting prisons, not surprising considering prison population levels almost always seem to surpass capacity expectations causing fundamental issues not only for inmates but for administrators and prison management as well.[153] "The overcrowding that has plagued our nations prison system has changed the nature of imprisonment, altered correctional norms, placed the well-being of many prisoners and correctional staff in jeopardy, and contributed little or nothing to the worthy goal of reducing crime rates"[154] It is important to look at external events that push large numbers of people into lower socioeconomic strata, such as the end of slavery, returning soldiers after war, surges in immigration, increased drug use, and poor public education systems tend to increase crime rates, arrests, and in turn heighten incarceration rates.[155]

Prison populations tend to rise faster than the general population or the number of available intuitional beds, resulting in overcrowding and the inability to provide rehabilitation services such as educational programs.[156] The issue is then amplified by the lack of inmate reformation while incarcerated, leading to high recidivism rates ultimately increasing the overall incarceration rates and prison crowding. There are many cases in

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[153] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 137.

[154] C. Haney, Journal of Law and Policy, "The wages of prison overcrowding: Harmful psychological consequences and dysfunctional correctional reactions" (2006), 265-203.

[155] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 137.

[156] A. Blumstein & A. Beck, *Prisons:* "Population Growth in US Prisons 1980-1996", (Chicago, 1999), vol. 26, 17-62

which prison population growth and overcrowding stifle rehabilitative programs that could be a great resource for inmate reform. One example would be the prison colony at Norfolk, Massachusetts, started by Howard Gill in 1927. Gill implemented many innovative treatment approaches, however the new policies were overwhelmed by the egregious amount of inmates allowed into the facility. This system was further challenged by the administration of inmates who did not fit the profile that the prison was designed to address.[157] The issue of overcrowding has begun to implement itself into the philosophical design of prison institutions, prompting an increase in direct supervision models due to the ease of handing crowding better than other approaches. Examples of the direct supervision models would be facilities where there is an unobstructed line of site, such as the Panopticon or the radial patterns previously discussed in this chapter. The lack of privacy in these direct supervision conditions have proven to cause stress resulting in negative effects on inmate rehabilitation as discussed in the last section.

An interesting approach to a design solution is proposed by Kevin Lockyer in his article "Future Prisons: A radical plan to reform the prison estate". According to their study "Our new analysis of prison performance demonstrates, for the first time, that the key determinant of the decency, safety and effectiveness of a prison is not its size, but its age".[158] The study claims that newer prisons perform better than older prisons regardless of their size. Establishments were compared with the same functions, reoffending levels, respect between prisoners and staff, decency, quality of life and the result was that safety

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[157] E. Rotman, *The Oxford history of Prisons* "The failure to reform", (New York, 1995) 169-198.

[158] Kevin Lockyer, *Policy Exchange,* "Future Prisons: A radical plan to reform the prison estate", (London, 2013), 6.

measures are all higher for newer prisons than for older ones. The study hopes to discredit the belief that smaller prisons outperform larger ones, stating that size does not actually matter, small is not good and big is not bad. The proposal is to close more than 30 existing prisons with in the UK and replace them with 10-12 new 'Hub Prisons'. The 10-12 Hubs would hold between 2,500-3,000 inmates each and would be designed as a connected fabric where the units may share a common site and set of services, providing optional flexibility to respond to changes in the size of the prison population. The Hubs are proposed to be built on brownfield sites, previously used land that has been left vacant, helping to drive wider community and social benefits. The Hubs would include important resettlement opportunities such as half way houses built into the design, and provide opportunities for shared use with other parts of the criminal justice system, such as courts. They will be strategically located to enable connection with transportation routes so that the prisoners are not isolated from the communities and support networks that are so important in rehabilitation. [159]

The architecture would utilize the latest in design and technology allowing for better inmate living accommodations and a more efficient use of security personnel. The proposal is not for large penal warehouses but rather a modern prison containing a range of flexible accommodation settings utilizing the central hub for shared facilities. This campus style approach would allow prisoners to progress through their sentence with in

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[159] Kevin Lockyer, *Policy Exchange,* "Future Prisons: A radical plan to reform the prison estate", (London, 2013), 6-10.

one prison, allowing the living accommodation to reflect their stage of the sentence and security needs in a flexible and transitional path to rehabilitation. [160]
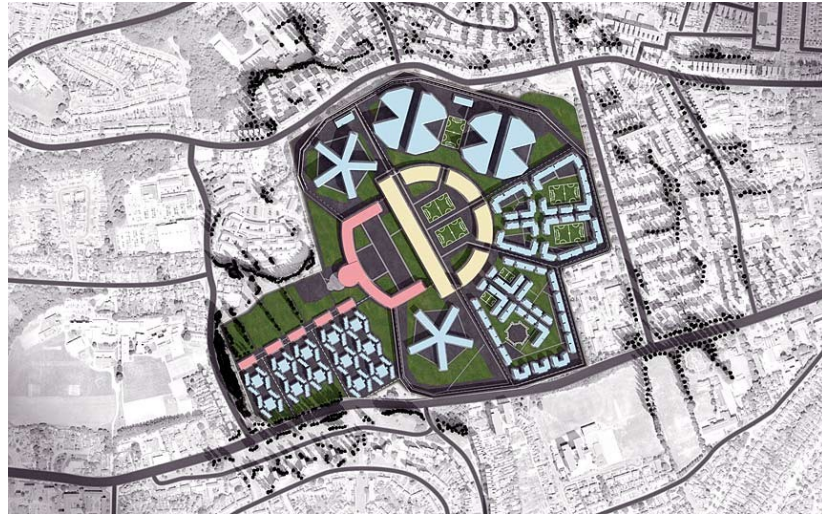

Figure 8: Hub Prison, The Telegraph,
http://www.telegraph.co.uk/news/uknews/crime/10121277/
Build-massive-hub-prisons-to-replace-Victorian-dungeons-
says-report.html

The financial proposal supports this radical new prison approach, claiming that by 'swapping the old with the new' and financing the construction of new large prisons to replace expensive, hard to maintain, poorly located older prisons, there is an opportunity for the Ministry of Justice to not only meet its entire spending budget but save up to 600 million euros a year in operational costs once construction is complete. By reducing the cost per prisoner and having a facility that can accommodate growth to eliminate overcrowding, more attention can be paid to the rehabilitative goals of the institution. The dynamic is changing from an endless chase trying to keep up with rising incarceration

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[160] Kevin Lockyer, *Policy Exchange,* "Future Prisons: A radical plan to reform the prison estate", (London, 2013), 6-10.

demands, to a preventative approach allowing growth to happen successfully and naturally, therefore allowing more focus on the inmate's success within the institution. [161]

Architectural Aesthetics

Aesthetic concern seems to be the last priority of prison design, falling far behind the more well-known and highly publicized issues causing stressful environments such as overcrowding and isolation. It is important to understand that incarceration magnifies and intensifies experiences; even small irritants can become serious stressors over time. This is especially important with inmates, as there are few options to alleviate or remove themselves from these situations. Issues that a normal citizen may consider tolerable for a brief period in a non-controlled society, where the possibility to escape is an option, may become intolerable with in an institution. In addition to the welfare of the inmates, it is also important to consider that staff members spend considerable about of time with in the institution walls, in which poor psychological and physical conditions affect their work life and health, in turn reflecting on the inmates. This section will discuss four important environmental elements that are very influential in inmate rehabilitation. The effects of light on human behavior and health, the importance and effect of windows, the psychological effects of views, and the impact of color in in interior design on behavior.

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[161] Kevin Lockyer, *Policy Exchange,* "Future Prisons: A radical plan to reform the prison estate", (London, 2013), 6-10.

Light

Humans have an innate connection to light, as they have evolved in a day-lit environment. Our bodies react to changes in lighting conditions, and the way we react depends on the lighting intensity, the spectrum of the light, and the timing of our exposure.[162] Exposure to natural light, based on the planet's 24-hour cycle, plays an important role in setting and maintaining *circadian rhythms*, the body's biological clock.[163] Recent finding indicate that this time setting function does not respond uniquely to natural light, and may be affected by artificial light as well.[164]

In most correctional settings, access to daylight is limited by several factors, including architectural restrictions and regimen. In addition to these challenges, the 24-hour nature of the prison settings means that a significant amount of activity occurs in the evening and overnight. For these reasons, it is especially important to consider electrical light as both a compliment to natural light, and in some cases a substitute for it.[165] All light is not considered equal; our bodies react to various types of light in different ways. The most common kinds of electrical lights are incandescent, light that comes from heating a filament, and fluorescent light, light that is emitted when current is passed through an ionized gas. Most fluorescent lighting uses white light, although the white light contains

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[162] J. Veitch, *Final Report – the 5ᵗʰ International LRO Lighting Research Symposium – Light and Human Health* (Palo Alto, CA 2004)

[163] P. Boyce, C. Hunter & O. Howlett, *The Benefits of Daylight through Windows* (NY, 2003)

[164] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 206-207.

[165] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 207.

color tints. The nature of these tints and the wavelength emitted depends on the chemical composition of the phosphor lining of the bulb. The most successful type of light at mimicking the benefits of natural daylight is known as a full-spectrum fluorescent lamp, designed to mimic the qualities of daylight in the north sky. Although this type of light might be the closest imitation to natural daylight, it is does not come close to the benefits of natural daylight.[166] "The purported similarity between FSFL emissions and daylight is tenuous at best".[167] The most important difference between full spectrum fluorescent light and daylight is in the intensity of the light exposure.[168] A study conducted in 1994 observed occupants of buildings exposed to daylight often received 2,000 or more lux (lumens per meter) as opposed to those in electrically lit buildings who received around 100 lux.[169]

Light intensity is also particularly important for the purpose of maintaining circadian rhythms. The 24-hour cycle of light and dark patterns that is built into our biology can be changed by exposure to high intensity light.[170] Excessive amounts of time spent indoors leads to an inadequate exposure of high intensity light found in natural daylight, leading

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[166] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 207-208.

[167] P. Boyce, *Full Spectrum Lighting Special?* (No. IRC Internal Report No 659, 1994), P7.

[168] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 208.

[169] D. Cawthorne, *Buildings, Lighting and the Biological Clock, Martin Center for Architectural and Urban Studies* (Cambridge, 1991)

[170] C. Cajochen, S. Chellappa & C. Schmidt, *What Keeps us Awake? – The role of clocks and hourglasses, light and melatonin,* International Review of Neurobiology, 92, 57-90.

to negative health consequences[171] including disruption of circadian rhythms, affects to hormone regulations,[172] mood disorders[173] and vitamin D deficiencies.[174]

While being exposed to the right kind of light at the right times can be very positive on health effects, exposure to light during normal sleeping times has the effect of prohibiting melatonin, which affects sleepiness and mood. People need not just properly lit environments, but also proper light-dark cycles.[175] "Healthy light is inextricably linked to healthy darkness".[176] The problem that many prisons need to address is both too little light and too little darkness.

Windows

Windows serve multiple functions; they let in direct and indirect sunlight, aid in ventilation and temperature control, and serve as a source of information about place, the environment, and nature. They provide stimulation and sensory change, an important tool to allow for remediation for isolation and boredom that many inmates are faced with. Providing views to the outside world and of nature can offer inmates benefits for stress

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[171] A. Joseph *The Impact of Light on Outcomes in Healthcare Settings,* (NJ, 2006), 209.

[172] (burgess, sharkey, Eastmand 2002) 210

[173] R. Leslie, *Capturing the daylight divided I buildings: Why and how?* Building and Environment (2003), 381-385.

[174] A. Joseph *The impact of Light on Outcomes in Healthcare Settings,* (NJ, 2006), 209.

[175] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 211.

[176] J. Veitch, *Principles of healthy lighting: highlights of CIE TC 6-11's report.* (2010, p.2)

reduction, mental restoration and recovery, and are capable of unconsciously influencing the level of satisfaction with an environment.[177]

In a study for space travelers, research was conducted on the importance of windows for long missions in confined settings. In areas where one is confined to a small setting, an individual's eye might never have an object to focus on that is more than a few meters away. [178] When an eye is in close focus, the ciliary muscles in the eye contract to thicken the lens and shorten the focal length for viewing. Windows allow for infinite focus of the eye. By allowing the eye longer or infinite opportunities for focus, it allows the eye muscles to relax, reducing muscle strain and relieving tension that could cause headaches.[179] The study on space habitats suggests that "windows are works of art, and other distracters which divert attention from other people can promote social distance and reduce perceived crowding".[180] Windows also decrease crowding by increased perceived spaciousness.[181] Windows offer visual stimuli and variety and provide an opportunity for psychological distancing and escape in confined settings. Although there are many differences between space capsules and prison cells, these findings still hold great relevance for the confined environment of correctional facilities, helping to understand

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[177] J. Heerwagen, *The Psychological aspects of windows and window design* (Oklahoma, 1990), 269-280.

[178] R. Haines, *Space station proximity operations and window design*. Space Station Human Factors Research Review, 1988, 4. 1-18.

[179] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 214.

[180] A. Harrison, B. Caldweli, N. Struthers, Y Clearwater, *Incorporation of Privacy Elements in Space Station Design* (Washington, 1988), p.iii

[181] J. Desor, "Toward a psychological theory of crowding," *Journal of Personality and Social Psychology*, 1972, 21(1), 79-83.

the importance of windows in providing visual variety and the potential for psychological escape.[182]

It is also important to consider the negative effects windows may have in correctional settings, there are some consequences of windows that could bring more harm than good. Although the view afforded by windows is a highly valued element in prisons, being visually exposed could cause emotional detriment to inmates. In correctional settings, there is often conflict between the visual need for security, and providing an environment that does not make the inmate feel exposed or on display, which can be uncomfortable and stressful. The views through windows could also be of concern, crating hazards with respect to the local community surrounding the prison. A window that faces to outside public space could be used as an opportunity to inappropriately communicate between an inmate and a friend or relative, via gestures or signs, or could create privacy issues for the inmate if recognized by outsiders. Windows can also be seen as posing security management problems, and can present hazards to staff.[183] For instance, if there is a view towards staff vehicles, the inmate has the potential to record license plates and potentially harass the owner later on. Windows are profoundly important for correctional institutions for their irreplaceable qualities of light and views, resulting in numerous health benefits; however it is imperative that they are applied in the right context so as not to cause harm to the inmates, staff or surrounding community.

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[182] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 214.

[183] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 216.

Nature

Contact with nature is critical to human mental and physical health.[184] There have been many studies on the effect nature and nature views on behavior, mood and health. They biophilia hypothesis assumes that there is a survival advantage gained from direct contact with nature. The study suggests that exposure to nature reduces stress and that there is an evolutionary advantage conferred by rapid stress recovery.[185]

Guided by this theory, a psychologist by the name of Roger Ulrich developed a notable body of work in 1984 on views and health care. "Investigations of aesthetic and affective responses to outdoor visual environments have a strong tendency for American and European groups to prefer natural scenes more than urban views that lack natural elements. Views of vegetation, and especially water, appear to sustain interest and attention more effectively than urban views of equivalent information rate".[186] These views of nature had a positive impact on feelings, reduced fear in stressed subjects, hold interest, and block or reduce stressful thoughts, resulting in restoration from anxiety or stress. He also found that for those patients that have unvarying schedules and spend a considerable amount of time in the same room, such as surgical patients (not unlike prisoners), views to the outside become especially important. He found a direct correlation between the positive impact of views on the patients emotional state, which

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[184] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 217.

[185] S. Kellert & E. Wilson, *The Biophilia Hypotheses,* (Washington, 1993)

[186] R. Ulrich, "View through a window may influence recovery from surgery," *Science, 224* (April 27, 1984), pg1, 420-421.

had a direct impact on the patients recovery.[187] Other research confirms that views in hospital settings can significantly reducing depression, anxiety, and post treatment delirium.[188]

Another theoretical approach is based on a cognitive explanation by Rachel and Steven Kaplan in 1989, in relation to attention and depletion of attention. According to their study, focusing on scenes, mental tasks, and situations that are not inherently fascinating and pleasant requires concentration and is mentally fatiguing. "Scenes and situations that provide easy fascination can be restorative, in that exposure to them can speed recovery from mental fatigue. They allow a person to rest the inhibitory mechanism on which concentration depends".[189] They found that access to views lead to less frustration, more satisfaction, and fewer self-reported ailments.[190]

Further studies related to the correctional environment have showed evidence that exposure to nature has the potential to reduce aggressive behavior. A study by Rice and Remy in 1998 found that inmates in prison reported less aggressive feelings when

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[187] R. Ulrich, "View through a window may influence recovery from surgery," *Science, 224* (April 27, 1984), pg1, 420-421.

[188] P.Keep, J. James & M. Inman, "Windows in the intensive Therapy Unit" *Anesthesia,* 35(13), 1990, 257-262.

[189] R. Kaplan & S. Kaplan, *The Experience of Nature* (NY, 1989), 218.

[190] R. Kaplan, "The role of nature in the context of the workplace," *Landscape and Urban Planning,* 1993, 26(1-4), 193-201.

working in a garden.[191] Other studies indicated that inmates with external views of nature had reduced blood pressures and used lower levels of institutional health care facilities.[192] Windows should play a role in supportive design, helping to achieve rehabilitative goals with in correctional facilities, reducing stress, agitation, irritation, and aggression to increase positive interaction and reform with in the institution. "The inability to be part of and touch nature, or even to view it, eliminates yet one more important option for adapting to and reducing stress and mental fatigue. Not only do inmates suffer from exposure to many sources of stress, they also are denied many or most of the means the rest of us use to deal with stress".[193]

Color

The great nineteenth century writer and critic John Ruskin said, "Color is the most sacred element in all visual things".[194] Humans have a strong preference for and powerful emotional associations with color.[195] Color creates strong psychological and physiological effects influencing people's moods and behaviors as well as their perceptions in regards to space, weight, texture, temperature and even ones reaction to sounds, taste and

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[191] J. Rice & L. Remy, "Impact of horticultural therapy on psychosocial functioning among urban jail inmates," *Journal of Offender Rehabilitation*, 1998, 26(3-4), 169-191.

[192] E. Moore, *Environmental Variables Affecting Prisoner Health Care Demands,* (LA, 1985)

[193] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 228.

[194] Lynn Jones and Phyllis Allen, *Beginnings of Interior Environments* (New Jersey, 2009), 111.

[195] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 225.

odors.[196] A great deal of attention is paid to color in environmental design, as it can be uses as a tool in various ways. Color plays an important role in room lighting, as the reflectance of light on wall surfaces can enhance or counteract lighting systems.[197] Color has multiple dimensions, such as hue, saturation and brightness, all adding to its complexity. How a pigment on a wall is perceived will be effected by lighting conditions, the brightness and quality of light, as well as the color spectrum of the light itself, so the perception of a color can change greatly in different contexts.[198]

There are a few research studies concerning the use of color as a behavior change agent in prisons and jails. The first was based on the suggestion that the colors of blue and green can be used to help create a calming atmosphere in institutional settings. This theory was tested at Alcatraz when a cellblock and solitary confinement area were painted green in an attempt to calm inmates, although there was no data recorded on its effectiveness.[199] The other example was the use of color as a means of providing emergency calming to an aroused or out of control inmate. The study used the color *Baker-Miller pink*, which came to be known as *Drunk-Tank pink*, to paint the interior of the holding cells as a means of reducing aggressive behavior through short-term exposure to this specific shade of pink. Though a few studies showed reduced muscle strength in these pink rooms, some did not. A review on this research by Pelligrini, Schauss and

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[196] Lynn Jones and Phyllis Allen, *Beginnings of Interior Environments* (New Jersey, 2009), 120.

[197] Veitch, 2004, 225

[198] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 225-226.

[199] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 227.

Miller in 1981 proposed that the effect of the Baker-Miller pink might be as much related to presenting the inmates with a newly painted space as the specific color itself.[200]

Color in designed spaces is clearly apparent and easily noticed, and if simply painting a wall a particular color was truly effective in changing mood or behavior, it would be a very inexpensive and easy fix on behavioral problems. Unfortunately, there is relatively little substantial research that addresses the issue of color and behavior as a concept, and little can be said with confidence about the psychological and behavioral effects of color. This is largely due to the complexity of color, as many studies have looked at color as a unitary concept, the effects of an individual color independent to its appropriate context with in the environment.[201] If color were considered within its proper place in the environment, it may more likely to have a significant impact. "Contextual use of color produced occupant effects, and not the explicit color of certain single elements".[202] "Color, then, needs to be viewed as an ecological construct, relevant as both signal and symbol in the way we respond to the environment, as part of the ecological niche in which humans evolved".[203]

The message from these reviews is that something as simple as painting a room one specific color will not generate a powerful response, however that does not render color

[200] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 227.

[201] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 226.

[202] J. Wise and J. Heerwagen, *The Ecology of Color, Pattern and Texture: A Synthesis of Research for the Design of Office Environments* (1977), pg 2.

[203] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 227.

as unimportant or insufficiently powerful for use in a correctional context.[204] Correctional institutions often suffer from dull monochromatic color schemes causing monotony and boredom. Color can serve as a potentially positive and stimulating effect for inmates as well as staff.[205] "The key to the successful use of color is placing it in an appropriate environmental context, considered with patterns and textures, used to reflect natural elements that can have positive psychological effects".[206] Much like the distraction of a view may provide an inmate with psychological benefits, color may be used to stimulate the inmate in a positive way. This can be applied by means of a broad varying color scheme throughout the correctional facility, or in a more targeted approach by creating mood rooms in a particular area for a specific response.

Conclusion

Issues of privacy and overcrowding not only expose inmates to an extreme amount of stress as a result to their living conditions, they are also denied many or most of the means the rest of us use to deal with stress.[207] Not being able to cope with these emotions, they are compounded and exaggerated over a long periods of time causing lasting if not permanent psychological effects. Despite the most accurate planning intentions, incarceration continues to grow faster than the correctional institutions are capable of

[204] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 228.

[205] Wise & Wise, *The Human Factors of Color in Environmental Design: A Creitcal Review*, (CA, 1988)

[206] J. Wise and J. Heerwagen, *The Ecology of Color, Pattern and Texture: A Synthesis of Research for the Design of Office Environments* (1977), pg 228.

[207] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 228.

supporting. Institutions need to be dynamic systems that are capable of changing operations and programs in response to privacy or crowding conditions. With greater adaptability, the institution would be capable of addressing the increasing stressors put on inmates and staff.

The use of light, windows, views of nature and color are profoundly important for creating a livable environment with in correctional institutions. "These elements represent much of what is lost with incarceration, in the denial of control over ones' setting, including the ability to raise or lower lighting levels, change colors, and gain access to the natural environment".[208] The design of correctional facilities should address all of these issues in from a holistic approach to create settings that are less oppressive, produce less stress, and be more supportive of pro-social behavior and productive activity.[209]

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[208] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 228.

[209] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 229.

C h a p t e r   5

CASE STUDIES

Introduction

Before being able to move forward in a positive direction for rehabilitative correctional architecture here in Hawaii, it is important to understand where we have come from, and where we would like to go. This chapter introduces two case studies. The first case study discusses a background understanding of our current local prison system, focusing on Halawa Correctional Facility, its current capabilities and grave shortfalls, along with an action plan of how the state would like to move forward. Looking into the future of Hawaii by peering into the recent history of Austria, a second case study discusses a successful alternative to the traditional correctional facility. Leoben Justice Center provides an innovative perspective of a rehabilitative correctional structure that has been proven to not only lower inmate recidivism rates, but provide a truly rehabilitative environment for which inmates have the opportunity to reform their deviant behavior and re-integrate into society more successfully.

Halawa Correctional Facility

The Halawa Correctional Facility is a male only medium security state prison located on the island of Oahu, operated by the Hawaii Department of Public Safety. The institution also offers a special-need facility, where inmates with severe mental illnesses are kept in a segregated environment. The special needs facility opened in 1962, originally starting as the City and County of Honolulu's Halawa Jail, and transferred to the State of Hawaii in 1977. The special needs facility houses inmates with sever or chronic mental illnesses

that are deemed unfit to be placed in large populations, as well as inmates who require protective custody. The medium security facility opened in 1987, and remains the newest prison in Hawaii.[210]

Figure 9: Façade of the Halawa Correctional Facility."Halawa Correctional Facility," Department of Public Safety, Accessed May 4th, 2015, http://dps.hawaii.gov/halawa/

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[210] "Halawa Correctional Facility," Department of Public Saftey, Accessed May 4th, 2015, http://dps.hawaii.gov/halawa/

Figure 10: A view from inside Halawas walls."Halawa prison
safety fixes to cost $261K," Hawaii News Now, Accessed May
4th, 2015,
http://www.hawaiinewsnow.com/story/27181294/halawa-prison-
safety-fixes-to-cost-261k

Halawa Correctional Facility is the largest prion in the state of Hawaii, with 992 beds.

Unfortunately, as the case with many prisons, this does not come close to the

incarceration demand on the institution and overcrowding is taking its toll on the facility.

Currently Halawa hosts approximately 1,045 prisoners, and in attempt to mitigate

overcrowding, an overflow population of inmates is sent to Arizona facilities.[211] Hawaii

holds a contract with a private prison in Arizona owned by Corrections Corporation of

America, which holds approximately 1,900 of Hawaii's medium security inmates. As of

May, 2011, the state was paying approximately $63.22 per day for each of the 1,900

inmates held in Saguaro, located in Eloy, Arizona. Written in the contract, there is an

automatic clause in the per diem rate raising the charges two to three percent annually. As

of 2011, costs to Hawaii for mainland incarcerations had more than tripled since 2001,

rising from just under $20 million annually to more than $60 million, with in state prison

expenses totaling to $167 million last year. Although there is a big push from both local

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[211] "Halawa Correctional Facility," Hawaii Department of Public Safety, Accessed May 4th, 2015,
   http://dps.hawaii.gov/halawa/

government representatives as well as the community to bring Hawaii inmates home to serve their sentences closer to family and supportive networks here in the islands, cost continues to be a conflicting issues. Housing an inmate in a private prison on the mainland is much cheaper than incarcerating them here in Hawaii. Private prisons are selective about the inmates they accept. Prisoners with severe mental health conditions are either not accepted by the private contractors or their treatment expenses are billed separately to the state.[212] For this reason, a determining factor as to which inmates to send to a mainland private facility is that there are "no medical or mental health conditions that may affect the inmate's ability to function within a normal range".[213] The price for the roughly 1,000 inmates imprisoned at the Halawa Correctional Facility is currently double what it would be if they were held in Arizona, this is assuming of course if the private prison would even accept them for various reasons such as health conditions.[214]

[212] "New Prison Contract Overdue," Hawaii Reporter, Accessed May 4th, 2015, http://www.hawaiireporter.com/new-prison-contract-overdue

[213] "Management Audit of the Department of Public Safety's Contracting for Prison Beds and Services," December 2010, Accessed May 4th, 2015, http://www.hawaiireporter.com/wp-content/uploads/2011/05/10-10.pdf

[214] "New Prison Contract Overdue," Hawaii Reporter, Accessed May 4th, 2015, http://www.hawaiireporter.com/new-prison-contract-overdue

Figure 11: Aerial Photograph of Halawa,"Halawa Correctional
Facility," Department of Public Safety, accessed May 4, 2015,
http://dps.hawaii.gov/halawa/

Figure 12: Halawa Correctional Facility,"Ex-inmate describes life
in USO prison gang," Samoa news, Accessed May 4th, 2015,
http://www.samoanews.com/content/en/ex-inmate-describes-life-
uso-prison-gang

Despite being the newest prison in Hawaii, the architecture of Halawa Correctional Facility is dismal at best, a concrete fortress much like the intimidating facades of the eighteenth century designs, used to instill fear in the community with the goal of deterrence. The linear organization of the prison follows a telephone plan, with a central exterior circulation pathway, referred to as "Main Street", which divides the two sides of the prison, allowing inmates and staff to get from one place to another without exiting the facilities (Figure 4). The front block shown in figure 4 houses the administration, conference and kitchen sections of the facility. Immediately behind and to the right of the main front block, are the medical and mental health offices. This is also the location of the medical and mental health infirmary beds and the suicide cells. Still on the right and after the medical facilities are a series of three identical housing blocks for the medium security inmates. To the far, back left is the high security area of the facility, separated from the medium security section. Little natural light or views are afforded to inmates, and no exposure to nature.

With Halawa being the newest prison facility in the state, it is clear that all of our correctional institutions are outdated and in dire need of more efficiently designed facilities, however the state lacks the resources to do so. In a recent interview with Gov. David Ige, the governor says that he favors finding a private partner to invest in a new facility here. Ige personally visited all of the state facilities and found them antiquated. "Part of the cost of housing prisoners is a function of how poorly designed and how old the facilities are" he said. "We need to make an investment in the prison system. I do

think it is an opportunity for a public-private partnership."[215] Investing in a new prison in Hawaii as opposed to shipping our overflow of inmates out of state would help fulfill a longstanding goal of bringing prisoners back to the islands, where they can maintain family and community ties through more frequent visitation. "It would allow us to build a modern facility, it would help reduce the cost" he asses. "There is a way to fashion a win-win that would allow us to move forward." [216] The proposal is to replace the poorly sited and crumbing Oahu Community Correctional Center in Kalihi, and relocate the inmates to an updated correctional infrastructure at Hawawa. Creating a criminal justice and prison system that can handle public-safety needs efficiently requires a difficult balance, improving the physical facilities of Hawaii while addressing alternative rehabilitative programs to incarceration. Through improving our local facilities while aiming to keep overcrowding at bay through innovative rehabilitation alternatives, our society will benefit greatly.[217]

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[215] "New Prison Key Part of Broad Reform" Star Advertiser, accessed May 4th, 2015,
http://www.staradvertiser.com/editorialspremium/20150111_New_prison__key_part_of_broad_reform.html?id=288178
951

[216] "New Prison Key Part of Broad Reform" Star Advertiser, accessed May 4th, 2015,
http://www.staradvertiser.com/editorialspremium/20150111_New_prison__key_part_of_broad_reform.html?id=288178
951

[217] "New Prison Key Part of Broad Reform" Star Advertiser, accessed May 4th, 2015,
http://www.staradvertiser.com/editorialspremium/20150111_New_prison__key_part_of_broad_reform.html?id=288178
951

Leoben Center of Justice

The Leoben Center of Justice for me was the impetus on my journey into the world of Prison Typology. By chance I had stumbled upon an article in the New York Times, *"Behind Bars… Sort Of"*. It gave a sort but interesting comparison to what prisons are today, by analyzing why they function as they do, whether or not they are actually working and is it for the right reasons. It asks the question, should we punish people with architecture? How does isolating humans help them to recover, or does it render them worse off than before? The article then goes into exploring new ideas, re thinking prison design, and analyzing a unique prison in Leoben, Austria, by looking at how the innovative design can impact inmates in a positive way. It really sparked my attention to seeing this problem in a new light, and looking at how architecture can solve (or at least improve) this dire situation of extremely high incarceration rates in the US. I was fortunate enough to visit the prison this summer, and would like to share what I have learned in this pilgrimage to better understand the penal system.[218]

The Leoben Center of Justice is a grand scale complex of buildings, including the regional court, the county court, the public prosecution as well as the jail house. For both the owner, the Bundesimmobiliengesellschaft, as well as for its occupant, the Austrian Federal Ministry of Justice, this would be an exciting and passionate project of great importance to the country of Austria. Completed in November of 2004, after only 24

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[218] "Behind Bars… Sort Of" The new York Times, accessed October 13, 2014,
   http://www.nytimes.com/2009/06/14/magazine/14prisons-t.html?pagewanted=all&_r=0

months of construction, "the project is the result of intense and multidisciplinary examination, which has focused on the convict, his relationship to justice and the optimization of the complex network of interrelations"[219]. The decision to build the Leoben Center of Justice resulted from long and intense discussions, which was started among experts such as Michel Foucault, in particular with his piece "Discipline and Punishment". The core thesis of the debate was that "imprisonment means deprivation of liberty, of everyday life". This deprivation automatically leads to resocialization problems, and thus the damages made by the system of imprisonment make the social reintegration of former inmates very difficult. In the 1980's, Austria disposed of only two centers of justice, and looking to expand, the Leoben Center of Justice presented the Federal Ministry of Justice with the chance to practically test the debated solutions. They did this by asking questions such as: How can damages from imprisonment be avoided? How close can "prison life" come to "normal life" without taking security risks? How can the inmates' feeling of being locked up be reduced? To address these questions in the best way possible, the Bundesimmobiliengesellschaft arranged an international open architectural competition in 1999 following the ministry's demands and prerequisites. The jury, chaired by famous architect Gustav Peichl, filtered through 30 competition applications to select architect Josef Hohensinn's concept both for its innovative design and its ability to fulfill all demands. From the initial phases of design, it was decided that

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[219] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), 15.

"art and construction" would play an imperative role in the project, and nine artists were invited to design pieces focused on the dignity of human beings.[220]

Hohensin Architekur has a very sensitive design philosophy, focusing their approach to architecture on carefully handling existing structures and respect for occupants needs. They aim to create qualities and synergies in the interest of those involved while maintaining a structure of responsible architecture through all their work. Their interests include an intensive co-operation and collaboration with the building developers and in optimal implementation of individual needs in architecture. By reacting to the existing topographical and structural setting, they make thoughtful site specific decisions that determine the organization, scale, material composition and feel of a building. Hohensin Architekur's decisions are always based on sustainable thinking, both in terms of economy and ecology. This delicate yet complex approach to architecture ensures that each design is perfectly tailored to the programmatic requests, meeting and surpassing the needs of the client and users of the building. Although they focus on a very broad range of projects, including office and administration, social housing, residential buildings, sports and leisure facilities, and hospitality, along with interior design and urban planning, their special emphasis is placed on the conception and execution of buildings with highly complex functional and security related demands, such as prison facilities and judicial buildings. With their accomplished background and competent staff, it is no

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[220] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

surprise that Hohensin Architekur was the choice selection for the design of the Leoben Center of Justice. [221]

The topographical location of this site leads logically to the arrangement of the court building facing the town, with its execution as a "belle façade" coming across as an open and transparent building to represent the new self-image of Justice in Austria. The building is welcoming to everyone- including prisoners, staff and visitors with the first lines of the Declaration of Human Rights written on the building: "All human beings are born free an equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood". These lines are joined by the core statement of the International Covenant on Civil and Political Rights: "All persons deprived of their liberty shall be treated with humanity and with respect for the inherent dignity of the human person". These wise and humbling words are meant to remind us of the importance when dealing with governmental access to people in the form of imprisonment. [222]

Architect Josef Hohensinn's thought was that everyone in the community would enter the courthouse at some point as, apart from trials, it also hosts the land register, several helpdesks and other public offices. Through his research of visiting other courts and jail houses, he examined the Graz civil court and witnessed how inmates were pilloried and

[221] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

[222] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

presented to the public in handcuffs in the courtroom before their trials, all of the visitors would first walk past them and they are the last ones to enter the courtroom. Hohensinn felt that this treatment was inappropriate today and felt that it was a consequence of insufficient spatial organization. By simply separating all functions spatially, he was able to solve this problem through architecture. The jailhouse behind the court is connected by and internal link between the buildings, a bridge that leads from the main level of the jail house to the courthouse floor where the court rooms and inquisitors offices are located. Honensinn did this to build an optimal link not visible to the outside, and while emotionally distressed prisoners cross this bridge en route to their trial, they are comforted with the bright, wide open bridge.[223]
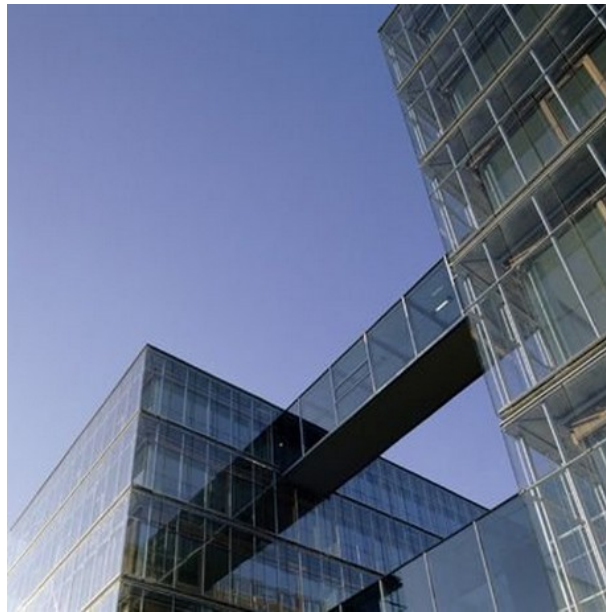
Figure 13: Bridge that connects the prison to the courthouse.

[223] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

R. Himmelfreundpointer, P. Ott, H. Miltner,
Leoben Center of Justice, (Germany, 2006)

Figure 14: Front Façade of the courthouse. R.
Himmelfreundpointer, P. Ott, H. Miltner, Leoben Center of
Justice, (Germany, 2006)

Figure 15: Entrance lobby to the courthouse. R.
Himmelfreundpointer, P. Ott, H. Miltner, Leoben Center of
Justice, (Germany, 2006)

Walking into the three story entrance hall it is quickly apparent that this is no ordinary judicial center. Openness and Transparency were the key principles. The courthouse is entered through a big hall, which is bright, open and clearly laid out. The large fully glassed hall connects four internal cubes in which the individual institutions are situated - the county court, civil court, and the courtrooms along with the administration offices. All visitors' traffic can be observed and finding ones way around is fairly easy. In between the four cubes, halos are carved into the ceiling, these halos have several functions. They not only allow light into the courtrooms, the hall, and the traffic areas in the back of the building, but they also structure the building and give it some rhythm, which Hohensinn thought provided better orientation for visitors. Another key factor important to Hohensinn was the symbol of openness as seen from the jailhouse which overlooks the courthouse.[224]

Another focus of openness and transparency is apparent in the semipublic administration units located above the hall and the cubes. Although they are quite standard office units the effect of openness and transparency was achieved by glassed fan lights and high visibility. Hohensinn made a conscious decision to do this, because he felt that in jurisdiction, nothing should be decided on behind closed doors anymore, and that all work should be done transparently. He feels that courts are service facilities for all citizens, and that a courthouse must not intimidate, but serve everyone. This self-portrayal as a public person, initially startled employees, but it died away quickly. It was

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[224] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

important that the offices were comfortable, as said by Hohensinn, because they were workspaces but also lounges and habitats for the office personnel. He achieved this by making the rooms friendly and bright, with a lot of glass and a larch wood ceiling to give the room warmth.[225]
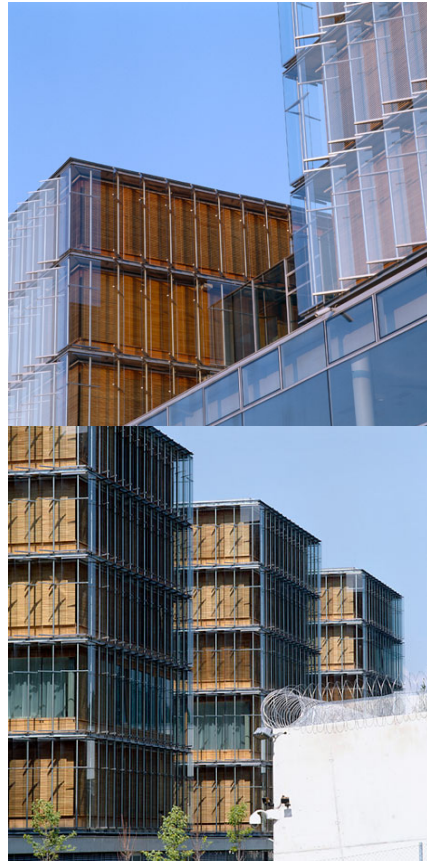
Figure 16: Exterior views showing wooden blinds. R. Himmelfreundpointer, P. Ott, H. Miltner, Leoben Center of Justice, (Germany, 2006)

Found throughout the building, the blinds are also made from the larch wood, with a double façade resulting in a warmly illuminated vibe when the blinds are down. The

[225] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

double façade assists in other areas as well, including noise protection from the busy automobile traffic noise around the site. The façade also assists in climate control within the building. The building is rear ventilated, with ability of the outside glass tiles to be rotated 90 degrees, minimizing overheating in the summer. While there are a lot of advantages in relation to the functionality of the building, the glass façade makes the building appear as a clearly structured glass cube, with a soft wooden interior. To achieve the desired openness, Hohensinn applied a frame construction to the building, which also allows for flexibility in the future. He used materials that symbolize the necessities of life, you will find simple stone floors in the hall, and the cubes are lined with phenolic resin slabs in the color of auburn. The inner skin of the courtrooms is made of red oak, the same as all of the wooden floors in the building. Another example of the openness strived for in this design can be found in the elevator shaft. The elevator first runs through the hall and then along the outside wall of the building. The shaft is glassed so that you can see the interior side of the building and at the same time the outdoor environment- meant to dispel people's fears and intimidations. [226]

Located behind the courthouse is the jail house, not open to the public. Research prior to starting the design process showed that there really had not been any fundamental or innovative developments in prison architecture in the last 150 years. Josef Hohensin spent a considerable amount of time interviewing former prisoners, many of whom said it took months to adapt back into the "real world" after being released. One particular

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[226] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

interview stood out to Hohensinn, and that was one prisoner who said he continued to stop in front of every door, waiting for someone to unlock it. People who are so accustomed to living under such severe limitations need rehabilitation. Hohensinn took this information, and considering all security measures, came up with the concept to create micro cosmos which allowed prisoners to lead normal lives.[227]

By focusing on maximum security outside, the theory is that you can create areas of controlled minimum security inside. The interior or the prison is further broken up into zones for regular prisoners, typically ones that have not been sentenced yet, and zones for a more residential type of imprisonment. Hohensinn designed a theoretical model, a type of modular system if you will, which can be applied at any prison. By using a pavilion system that groups prisoners into smaller residential units, they are able to create a controlled and manageable environment where it is not necessary for the inmate to be in complete isolation, and have the ability to move around at their own free will. To achieve this in a controlled manner, the capacity of each unit is limited to 15 people. These 15 people are locked up but may move freely in their "residential" zones. To create this habitat for the 15 prisoners, Hohensinn brought several ideas into consideration by analyzing the form and function of a traditional flat sharing community, which includes bedrooms, living rooms, bathrooms, kitchens, and a loggia. These elements are all found with in each of the 15 person prisoner units. Once the inmates are locked into these units, they are able to roam freely, through the living, dining, kitchen areas, and outside to the

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[227] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

loggia. The loggia plays an important role for the psychological health of the inmates, despite the bars, they are allowed to let themselves into an open air zone, to feel the weather, get some fresh air, and have the feeling of being outside.[228]

Figure 17: Colorful furniture on the porch, where inmates are able to get some fresh air and exterior views. R. Himmelfreundpointer, P. Ott, H. Miltner, Leoben Center of Justice, (Germany, 2006)

This openness was vital to the concept of the design, as being imprisoned is an inevitable situation for the inmates, but it is possible to minimize claustrophobic situations and allow freedom of movement though out these controlled habitats. Also available at certain times of the day are out door yards, and activity fields for a more complete outdoor experience. Another important detail is that each cell has a normal door, rather than a cell door, which can be locked by the inmate and gives them some privacy. The units are quite similar to normal cells, albeit one difference- they are each equipped with a toilet and a private shower- something that is quite a novelty for Austrian Prisons- and

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[228] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

much appreciated by the prisoners. Each cell also has massive windows, another attempt to allow the prisoners to be connected to the outside. The furniture with in the cell is also designed by Hohensinn, and allows for flexibility so the inmate is able to customize their room to their own liking. Other furniture in the units are diverse, bright, colorful and modern, creating a relaxed atmosphere and some sort of normality in everyday prison life. [229]

Art and construction was a very important focus for the concept of this prison design. Each individual art piece in this building is extremely important, as they underline and extend the approach of the architectural design in many respects. Hohensinn believes that the building can actually be better understood through the "art and construction". The selection of artists came from a wide spectrum- from furniture designers to sculptors and painters. Hohensinn felt that the most important artistic intervention was the design of the recreational space by Lois and Franziska Weinberg with a unique language of shape, creating tension and interest in places such as the courtyards. Hohensinn sees this as "a gesture of hope and acceptance of life". [230]

[229] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

[230] R. Himmelfreundpointer, P. Ott, H. Miltner, *Leoben Center of Justice*, (Germany, 2006), referenced from J. Emberson, ARCH 699 Leoben Case Study, August 2013.

Figure 18: Recreational courtyard incorporates organic and green elements for visual and physical interest. R. Himmelfreundpointer, P. Ott, H. Miltner, Leoben Center of Justice, (Germany, 2006)

Figure 19: Local artist donate their work for installations with in the prison. R. Himmelfreundpointer, P. Ott, H. Miltner, Leoben Center of Justice, (Germany, 2006)

The strong outer protection of the prison, achieved by the use of high tech materials and technology to reduce the odds of a jailbreak to a very minimum possibility if any, allows

the interior of the prison to allow a degree of relative freedom and openness with in the building. Even though the rooms are approximately the same size as any average cell unit, they appear much bigger due to the use of flexible furniture and equipment, along with the strong connections to the outdoors, and the natural light that floods the space bringing brightness and stimulation to the rooms.

While great effort was made to ensure that the inmates had the best experience as possible- much of the allotted "free" space where the architects had imagined the inmates roaming around and enjoying became a logistical issue for safety reasons and many spaces go unused. One example of this would be the entrance lobby in which the prisoners pass through every day when they leave their residential units to go to other areas of the jail, for example the cafeteria or to the outdoor yards. Beautiful as these spaces may be and filled with art, the inmates are not allowed to linger in this space and the guards had mentioned it was one of the most underutilized spaces in the prison. Another shortfall of this design was that there was not a strong connection between the guards and the inmates. The guards observed from a distance in a video screening room, and have very little contact with the inmates. The Hohensinn architecture firm had mentioned that this was one of their greatest mistakes when designing this facility, and have learned from this experience and incorporated more friendly and encouraging spaces for inmates to interact with guards in future prison designs.

Conclusion

These two examples of prison architecture are vastly different; however they do have one thing in common. Both designs create segregation between staff and inmates. If design technology almost completely separates prisoners from staff, one must wonder to what extent either group can treat the other as human beings.[231] Surely you can find fault in almost every existing prison facility today; however Hohensinn pioneered an admirable approach to correctional institution architecture, founded in the principles of art and humanity. By analyzing the motivations behind the Leoben Center of Justice philosophy and architectural decisions, Hawaii could gain a great deal of knowledge and immeasurable value for our future incarceration infrastructure.

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[231] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 15.

C h a p t e r   6

FINDINGS AND DISCUSSION

Conclusion

A historical look at where the first ideas of incarceration as a means of punishment came from and how they have transformed into our modern day penal system has laid the foundation for understanding why America's penal system stands where it is today. The problem with prison buildings is that they endure while ideas change. Approximately one-third of the American prison estate dates from the nineteenth century or earlier, most of which were built for very different philosophies in different social climates. For educational purposes they remain an informative example of what has not worked, however many of these aging facilities are incapable of adapting to the demands of our modern penal society.[232]

The modalities of incarceration over the ages have shaped American's level of acceptance to the societal norm for prison architecture, and many have become de-sensitized to the pitfalls we are creating within our society. The changing and evolving of public, political and legal standards over time has ensured that the inhumane conditions of past prison architecture do not resurface, however this is of little reward if we as are not able to analyze what is societies social responsibility to our countries incarcerated population. It is imperative that we imbed the psychological theories and philosophies of human behavior and environment into the education and execution of our countries penal philosophy and architecture. If conditions are provided that are hygienic, nutritionally

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[232] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 72.

and environmentally sufficient, but socially bleak and psychologically brutalizing, we are not advancing as a society nor are we being of any help to reform the incarcerated population. Incarceration rates will continue to grow exponentially and the incarceration enterprise will continue to be conducted in a vacuum. [233]

Architecture is capable of distinguishing itself from mere building and design by incorporating theories of the nature of man, the social context of how people live together and interact with each other, and our innate needs for personal wellbeing. "While some currents in penological thought suggest that we can overlook the moral capabilities of prisoners and staff, surely the whole ethos of architecture – its integrity as a tool in the refinement and development of civilization cannot allow it to proceed without placing the human element at the center of its endeavors."[234] Architecture must always be more than a body of ideas, for the danger that policy may fade into a state of responsiveness and design into a form of accountancy, leading to critical decisions being made by default rather than principle and intent.

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[233] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 15.

[234] Leslie Fairweather and Sean McConville, *Prison Architecture: Policy, Design and Experience* (London, 2000), 15.

C h a p t e r   7

PEARL HAVEN SPECIAL TREATMENT FACILITY

Introduction

After completing extensive research on rehabilitative architecture, and developing quite an interest in the topic, I came across a local organization by the name of Hoʻōla Nā Pua. They were first introduced to me at a charity event hosted by *The Women's Fund*, an organization which awards grants to non-profits empowering women and children. Hoʻōla Nā Pua is a Hawaiian non-profit organization proposing a 24-hour therapeutic Special Treatment Facility, called Pearl Haven. The facility will be designed as a rehabilitation residence for adolescent females ages 11 through 18 who have recently exited a life of commercial sexual exploitation. The girls would inhabit the facility for a period of up to 19 months with the aim of successfully rehabilitating them back into the community as empowered, self-respecting young women. Immediately I saw an opportunity to utilize my research on rehabilitation architecture, while applying the knowledge and skills I have acquired to assist a valiant organization in need with in my own community. The parallels between the architecture of rehabilitative incarceration and a rehabilitative special treatment facility such as Pearl Haven are numerous, and follow many of the same concepts of the psychological implications of architecture that have been researched in this dissertation. The psychological issues raised in Chapter IV such as the impacts of privacy allowances, over crowding, architectural aesthetics, light, windows, nature and color will all have substantial impacts on a rehabilitation facility such as Pearl Haven. Accommodating these essential aspects to rehabilitation must be delicately balanced with the care needs of girls coming into the facility from very traumatized backgrounds, with special attention paid to provide a safe environment

committed to the rescue, restoration, and reintegration of juvenile victims back into our community.

Purpose

In 1865, the U.S. House of Representatives abolished slavery by passing the 13th Amendment to the Constitution, which states, "Neither slavery nor involuntary servitude…shall exist within the United States, or any place subject to their jurisdiction" (U.S. Const. amend. XIII). Many Americans believe this to be true today; unfortunately, this is not the case, as it is happening in almost every city in the United States. Sexual exploitation in the form of human trafficking occurs among men, women, and children; it is a worldwide epidemic negatively impacting our health, freedom, and economy. Research has found the majority of victims are females between the ages of 11 through 14, from low socioeconomic status families, and with a history of abuse.[235] The Commercial Sexual Exploitation of Children (CSEC) also known as Domestic Minor Sex Trafficking (DMST) is defined by the Trafficking Victims Protection Act (TVPA) of 2000 reauthorized in 2008, as "the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act" when the person is a U.S. citizen or lawful permanent resident, or under age 18.[236] Commercial Sexual Exploitation of Children (CSEC) is the most common form of sexual trafficking in the United States

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[235] Kotlra, K. (2010). Domestic Minor Sex Trafficking in the United States. *Social Work* 55, 2.
[236] Trafficking Victims Protection Act (TVPA) of 2000, Pub. L. No. 106-386, Division A, § 103(8), 9. http:www.state.gov/documents/organization/10492.pdf accessed on January 28, 2015.

and typically involves adult males who coerce young girls into prostitution, pornography, stripping, or any other form of sexual services for their own personal profit.

Sex trafficking of minors exists within every community, socioeconomic status, religion, and ethnic group within the United States; however, specific risk factors leave a young girl vulnerable to being targeted for sex trafficking. These risk factors include, but are not limited to:

- Being under 18 years of age
- Chronic runaways (3 or more)
- Having little or no familial and social support
- Being from an ethnic minority
- Coming from a low socioeconomic household
- Coming from a dysfunctional family
- Having a history of molestation - sexual abuse
- Having experienced domestic violence
- Homelessness
- School absence/truancy
- Abuse of drug/s
- Current or previous involvement in the Child Welfare System, including being in the foster care system or having lived in a group home.

The U.S. government reports difficulties estimating trends of CSEC, due to the hidden nature of the crime and the number of unreported cases of runaway or throwaway children. Even with these obstacles, the U.S. Department of Health and Human Services estimates that around 100,000 American children are sold into sexual slavery every year.

Hawai`i does not formally track incidences of CSEC; in order to obtain an estimate of Hawai`i's need for a sexual trafficking Special Treatment Facility for juvenile girls, Pearl Haven utilized the following methodologies: literature reviews, descriptive research

(obtained from the observations of family court personnel), organizational data, archival research, and an analysis of existing statistics on the phenomena identified as "high-risk" or "at-risk" within this population.

Honolulu is a hub for business and trading between the East and the West, and as such, the economy is fueled by domestic and international tourism and is home to eleven installations that include all branches of the United States Armed Forces. These combined conditions contribute to making Hawai`i a prime market for traffickers who capitalize on high demand for sex services sought by leisure and business travelers, locals, and armed forces personnel.

As the demand for sexual services increases in Hawai`i, so does the number of child trafficking victims; girls as young as 11 years old are particularly vulnerable, and among the choice targets of solicitors. On a daily basis, girls are ordered online and met or sent to hotels and homes, purchased in massage parlors, sent to the streets, and taken to the mainland to be sold and sexually exploited.

Among the children found to be highly susceptible to victimization through sex trafficking, underage runaway girls are at greatest risk. The National Runaway Safeline presented data on the runaway statistics from research and data collected from sources such as the US Office of Juvenile Justice and Delinquency Prevention (OJJDP), the US Department of Health and Human Resources (HHS), the American Journal of Public Health (AJPH), the Journal of Adolescent Health (JAH), the Polaris Project, and the

National Human Trafficking Resource Center (NHTRC), among others. The data
presented offers an opportunity for analysis and reasonable speculation about the push
and pull of youth into sex trafficking. The relevant statistics are:

- The three most common forms of sex trafficking reported to the hotline involved pimp-controlled prostitution, commercial-front brothels, and escort services.
- 41% of sex trafficking cases referenced are U.S. citizens as victims.
- Females were referenced as victims in 85% of sex trafficking cases.
- Children under 18 are particularly vulnerable to exploitation, and minors have been reported in nearly every form of sexual trafficking.
- 74% of child trafficking cases involve sex trafficking.
- The International Labor Organization estimates 5.5 million children globally are being trafficked.
- In 2013, the NHTRC, operated by Polaris Project, received multiple reports of human trafficking cases from all 50 states and D.C; **85 of these calls were regarding victims in Hawaii.**
- There is no official estimate of the total number of human trafficking victims in the U.S. however, there is a general consensus of 100,000 estimated children being sex trafficked in the U.S. annually.
- Between 1.6 and 2.8 million youth run away each year.
- Youth aged 12-17 are at higher risk for homelessness than adults.
- 47% of runaway and homeless youth indicated that conflict between them and their parents or guardian was a major problem.
- 80% of runaway and homeless girls reported having been sexually or physically abused.
- 34% of runaway youths (girls and boys) reported sexual abuse before leaving home.
- 7% of youth in runaway and homeless youth shelters and 14% of youth on the street had traded sex for money, food, shelter, or drugs in the last twelve months when surveyed in 1995.
- Approximately 48.2% of youth living on the street and 33.2% of youth living in a shelter reported becoming pregnant.
- Approximately 10% of shelter youth and 28% of street youths report having participated in survival sex. Survival sex includes the exchange of sex for shelter, food, drugs, or other subsistence needs.

Approximately 100-200 children are reported missing every month in Hawai`i. It is often
believed that these children have "chosen" the street life alternatively to "behaving" at
home and subsequently fell into a life of exploitation. This presumption fails to account

for the reason or "push" to the streets by sexual and other serious forms of abuse experienced by 80 % of child victims of prostitution prior to leaving home.[237] Once on the streets, sex-offenders and sexual predators exploit these children, who are seeking basic needs such as love, need for encouragement, food, and shelter. The children quickly fall victim to the deceit, coercion, and force that compel them into prostitution.

The Hawaii justice system is well aware of the sex trafficking facts in the state, and is increasingly recognizing these children as victims instead of criminals. Law enforcement actively targets the perpetrators who profit from the sexual exploitation of children. However, these same officials are disarmed in their efforts, given the lack of dedicated homes and services that cater specifically to the underage victims they recover. While the paradigm shift in viewing the child as a victim is long overdue, the reality of treatment is quite different, due to the lack of shelters and resources.

According to the Attorney General's Missing Children Center Hawaii (MCCH), from 2009 – 2013 there were 18 juveniles arrested for prostitution, 16 of which were females. According to the MCCH, up until 2013, it was law enforcement's practice not to arrest minors for prostitution, but to instead return them to their families or guardians, resulting in low identification and even lower reported cases. Utilizing the Dallas Police Department's High-Risk Victims Unit model, the MCCH was able to obtain an estimate of the CSEC problem in Hawai`i. According to the MCCH a list of "high risk" youth

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[237] Bagley, C. & Young, L. (1987). Juvenile Prostitution and Child Sexual Abuse: a controlled study. *Canadian Journal of Community Mental Health,* Vol 6:5-26. http://cjcmh.metapress.com/app/home/contribution.asp?referrer=parent&backto=issue,1,7;journal,51,62;linkingpublicationresults,1:120150,1 (Accessed 11/4/11)

was compiled by using the following criteria: chronic runners (youth with 3 or more runaways on record), who also had a history of sex abuse/assault, and were between the ages of 11 and 18. This list was then taken to the Family Court system and agencies known to be working with sexual assault victims, in order to identify any confirmed or highly suspected cases of human sex trafficking. Of the 125 youth identified as high risk, 25% were flagged as highly suspected cases.

In 2014, the Honolulu Police Department Vice and Morals unit began arresting minors engaging in prostitution in an effort to increase identification, ensure victims are referred for comprehensive services, and to decrease the likelihood of the victim returning to their trafficker. According to the MCCH, in 2014 there were 12 arrests of confirmed sex trafficked girls in the state of Hawai`i.

The Susannah Wesley Community Center (SWCC) of Honolulu provides crisis intervention and comprehensive case management services to human trafficking victims, under grants by the Department of Labor & Industrial Relations -Office of Victims of Crime/Office of Community Services, and U.S. Committee for Refugees and Immigrants (USCRI). According to their data collection, 12 girls were confirmed Domestic Minor Sex Trafficking victims who reportedly would have benefited from being admitted into a Special Treatment Facility designed specifically for sexually trafficked minors. Of these 12 girls, two were sent to mainland facilities for treatment, six were placed in locked facilities, and five were returned to families with reported and documented dysfunction. Of the two girls relocated to mainland facilities, one eloped from the program and was

missing on the mainland for several weeks before being located. Once located, she was returned to Oahu and placed in the Hawaii Youth Correctional Facility for her safety. The second girl placed in the mainland treatment program also eloped during her treatment (which she attributed to missing her family) but returned and completed treatment. Additionally, SWCC reports being contacted by mainland victim service providers seeking to place girls at high risk of recidivism in a Hawai`i sex trafficking specific Special Treatment Facility to thwart the victim's chances of returning to her trafficker, due to close proximity.

In January 2014, the Family Court of the First Circuit Hawaii State Judiciary conducted a study designed to explore the social conditions among girls at risk of commercial sexual exploitation through prostitution, with the goal of improving early identification and improving victim services.[238] Family Court acknowledges that the caseload is not representative of the sample; nevertheless, they identified a initial 19 cases fitting the profile of sexually trafficked minors as evidenced by report history. Since they were unable to locate 4 of the girls, however, their study consists of 15 sex trafficking survivors. The 15 girls studied were identified as being involved in commercial sexual exploitation through prostitution by six agencies providing services to human trafficking victims. Of the 15 confirmed cases of CSEC, only 5 were arrested for prostitution. Ten, however, had histories of status offense arrests (runaways). Abusive histories were found in 10, with 4 being physically abused, 3 being sexually abused, and 2 experiencing

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[238] Sadaya-Ibu, M. N., JJIS (2014). Commercial Sexual Exploitation Project. *Crime Prevention and Justice Assistance Division.* Department of Attorney General, State of Hawaii.

both physical and sexual abuse prior to their trafficking experience. In addition, household instability evidenced by the involvement of Child Welfare Services (CWS) was present in 12 cases.

In an April 2014 survey of 10 Hawaii Juvenile Probation Intake Officers participating in training to identify juvenile sex-trafficked victims, the officers reported an informed belief that in the previous 12 months, not less than 30 children may have been unidentified victims of sex trafficking.

Nationally, there are 407,000 children in Foster Care; in Hawai`i there were reportedly 1,368 in Foster Care in 2012, with 611 females being confirmed victims of sexual abuse, physical abuse, or neglect. From these 611, there is a reported 100-200 who ran away from their abusive homes on a monthly basis. Research on the CSEC population reports that within 48 hours of running away from home, a girl is approached by a trafficker/pimp looking to exploit her vulnerabilities:[239] Hawai`i is no exception to this rule. Minimally, there are hundreds of Hawaii's keiki (children) who are vulnerable to traffickers each month.

Identification of victims is only the tip of the iceberg; commercial sexually exploited children are most often subjected to a systemic cycle through which they end up back in the control of their trafficker. Behavioral observations tend to evidence the necessity for trauma-informed care, since despite being in the custody of a non-trauma informed care

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[239] Kotlra, K. (2010). Domestic Minor Sex Trafficking in the United States. *Social Work* 55,2.

system, survivors are only physically away from their trafficker, not free from their control. Sadly, they often engage in recruitment while in placement and return to their trafficker once the opportunity provides itself. Youth correctional facilities become a temporary and transitional holding stopover, where the victims pass the time believing the trafficker/pimp's coercive message of the victim's' lack of value when apart from her perpetrator. Numerous studies on this topic have detailed the need for underage prostituted victims to be rehabilitated from their exploitative captivity with care and services assisting in self-renewal that prevents recidivating trauma and exploitation.[240]

Methods

The dynamics found in the CSEC population are unique. Victims of CSEC suffer from extreme trauma, brainwashing (in the form of trauma bonds), chronic runaway, histories of abuse, substance abuse, poor interpersonal skills, and other various forms of delinquent behaviors. Providing treatment for this population requires a specialized treatment program developed specifically for the CSEC survivor.

Safety is the primary concern for victims of CSEC. Their poor coping skills of running away, abusing substances, seeking love from their abuser/trafficker, and engaging in risk seeking behaviors leave them vulnerable to returning to their trafficking experience. To ensure safety, Pearl Haven maintains restrictions which are not found in traditional group

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[240] Clawson, H. J., Dutch, N. M., Solomon, A., & Grace, L. G. (2009). Study of HHS Programs Serving Human Trafficking Victims: Final Report. *U.S. Department of Health & Human Services. Office of the Assistant Secretary for Planning and Evaluation.* Found on http://aspe.hhs.gov.hsp/07/humantrafficking/final/index.pdf.

homes, such as restrictions on cell phones, Internet access, family visits, and community interactions.

Once safety is established, Pearl Haven provides therapeutic and restorative services to the residents. Victims of CSEC typically suffer from complex trauma, PTSD, and dissociative disorders. These forms of psychological disorders require long-term therapeutic intervention to decrease symptomatology. Without 24-hour supervision, appropriate modeling, constant and consistent teaching of appropriate social skills, and educational guidance and support, many CSEC victims revert to their historical, negative coping skills and fall out of treatment. Pearl Haven offers the essential, long-term, 24-hour constant supervision and appropriate modeling necessary for residents to learn, practice, and adopt positive and appropriate coping skills, thinking patterns, symptom reduction, and interpersonal relationships, which are needed for reunification into their families and the community.

Significance

Traditional group homes primarily focus on behavior modification, with the goal of decreasing behaviors associated with Conduct Disorder and/or Oppositional Defiance Disorder. Pearl Haven differs from traditional programs, since staff target the underlying trauma experienced by victims, strive to provide and maintain a family style environment, directly target the victim's experience in the commercial sex industry, and incorporate non-offending families in the adolescent's treatment.

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Victims of CSEC frequently fail in traditional group homes and foster care placements for various reasons, which include: the caregivers' fears of the trafficker/pimp tracking down the youth and the resulting dangers to those in the home, routine elopements back to their trafficker due to trauma bonds, attempts at recruiting other youth in the home into sex trafficking, and educational difficulties.

The overarching obstacle found in victims of CSEC is their trauma bond with their trafficker. Trauma bonding is a form of coercive control, whereby the pimp vacillates between love and extreme intimidation, leaving the victim with feelings of gratitude that he has not killed her in one of his many beatings and/or threats. This bond is a coping mechanism formed when a victim perceives an intense loving relationship between herself and the pimp. At the same time, the pimp uses a mixture of rewards and punishment, psychological manipulation, and moments of intense and extreme fear as a form of exploiting the victims' trust and power. This form of reinforcement is the most difficult to extinguish, due to the victims sustained knowledge that their behaviors will eventually be rewarded.

Victims of trauma bonding typically side with their trafficker, deny any wrongdoing on the traffickers behalf, blame themselves for their situation, participate in self-harming behaviors, runaway from treatment, view the world from the perspective of the trafficker, value themselves strictly through the traffickers' perspective, and view the trafficker as the good guy or the victim. Recognizing the internal threats that develop from trauma

bonds, the staff at Pearl Haven are trained to not only identify, but to respond in a therapeutic manner to victims struggling to overcome their trauma bonds. At Pearl Haven, residents are supported in their journey back to health by skilled practitioners armed with clear guidelines on providing trauma-informed therapeutic interventions, which are geared towards reducing the survivor's negative psychological symptoms that precluded or resulted from their trafficking experience.

Pearl Haven is designed to target the most salient issues observed amongst the CSEC population, which include but are not limited to: histories of abuse, trauma, family dysfunction, depression, PTSD and substance abuse issues. Prior research has shown that without employing such a program, CSEC survivors are likely to return to their trafficker, be re-victimized by a new trafficker, experience long-term ongoing psychological disorder/s, develop unhealthy interpersonal skills, and engage in harmful substance abuse behaviors. [241]

Pearl Haven is also a research facility that allows for both qualitative and quantitative research to be conducted increasing awareness of the phenomenological experiences of sexually trafficked youth. Staff coordinate with major universities and researchers to better understand the dynamics of sex trafficking and effective treatment modalities of child and adolescent survivors. Throughout the course of their stay in the home, the residents are empowered to engage in various research studies, which will provide in-depth insight into the effectiveness and outcomes of therapeutic interventions, staff

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[241] Kotlra, K. (2010). Domestic Minor Sex Trafficking in the United States. *Social Work* 55,2.

approach, and their overall experience within the home. Residents are able to opt out of research at any time without consequence.

Consultation with local mental health and counseling experts is a key component within the home. Long-standing Hawaii resident Dr. George F. Rhoades is a national and international expert in the arena of child sexual exploitation, trauma, PTSD, and dissociative disorders; he is providing clinical and program oversight. Utilizing evidenced-based treatment modalities and individualized therapy plans are essential components of the program. Dr. Rhoades utilizes the most up to date therapy modalities to provide guidance on therapeutic interventions, mental health assessments, and both qualitative and quantitative research conducted within the home.

Collaboration with other service providers is key to Pearl Haven program goals in meeting the comprehensive needs of the CSEC survivors. Staff have established MOU's with various organizations to increase individualized, trauma-informed specific services to all in Pearl Haven's care. Select interns from the Myron B Thompson School of social work, as well as selected doctoral students with trauma counseling and therapy focus are utilized when appropriate.

Program Goal and Objectives

The goals of Pearl Haven are as follows:

1. Create and maintain safety.
2. Provide a family and home-like environment.
3. Provide holistic treatment for every resident.
4. Increase residents' understanding of their behaviors as they relate to their trauma history.
5. Allow for each resident to process her trafficking experience in an empathic, non-judgmental, and safe environment.
6. Provide trauma-informed/trauma-focused individual, group, family and adjunct therapies for all residents who meet criteria.
7. Assist residents in decreasing their negative emotional or behavioral responses to trauma.
8. Develop feelings of empowerment and increase feelings of self worth in each resident.
9. Teach and model how to create and maintain healthy relationships.
10. Teach and model appropriate boundaries.
11. Increase pro-social thoughts, behaviors, and relationships.
12. Assist residents towards independent living.
13. Continual assessments for quality improvement.
14. Contribute to the sparsely validated research in the field of human trafficking.

The objectives of Pearl Haven are as follows:

- *Support the Life Renewal of Formerly Trafficked Underage Girls.* Each year staff treat and support girls as they reintegrate into their communities with a renewed sense of being, purpose, hope, and capacity to live and thrive productively in life.

- *Sustain a Home.* Staff will maintain and sustain a comprehensive Special Treatment Facility to house and serve in the recovery and holistic renewal of underage girls removed from sex trafficking in Hawaii. The home is an around-the-clock therapeutic residence that accepts domestic and international referrals.

- *Increase the Numbers of Recovered Commercially Sexually Exploited Children.* In collaboration with medical and human services providers, state and federal justice agencies, and nongovernmental organizations, staff will identify and remove children from the atrocity of human trafficking.

- *Reduce Trafficking Vulnerability Through Education and Advocacy.* Staff conduct multi-sector community education to increase awareness of sex trafficking in Hawaii. The objective is to provide safeguards for vulnerable persons and foster an

interactive anti-trafficking community through outreach to neighborhoods, schools, first-responders, lawmakers, and the population at large.

- *Create and Support Initiatives Targeting Perpetration and the Demand of Sex Trafficking.* The objective is to support and advocate for policies and practices to protect sex trafficked child victims and bring their traffickers and patronizing solicitors to justice.

Program Overview

Pearl Haven is a Special Treatment Facility for adolescent females ages 11 through 18 who have recently exited a life of commercial sexual exploitation. Staff provide care, safety, and integrated services planning committed to the rescue, restoration, and reintegration of juvenile victims.

The facility addresses the behavioral, emotional, and/or familial problems that may prevent the residents from taking part in family and/or community life. Pearl Haven is designed for residents whose needs are best met in a structured program with a relatively small milieu in a setting where the resident will be provided with the opportunity to obtain therapeutic, educational, recreational, and occupational activities.

The Pearl Haven campus provides a comprehensive, and holistic therapy plan for each resident placed within its care. Safety is the primary concern. Residents will be provided a safe place to heal as their physical, emotional, psychological, psychosocial, spiritual, educational, and reintegration needs are met. The goal is to prepare each resident for

successful transition and reintegration back into the community. The comprehensive program embraces the Hawaiian value of Lokahi (unity, balance, and harmony).

Pearl Haven's comprehensive program also integrates the Hawaiian values: Mālama (caring), Hō'ihi, (respect), Ahonui (patient and enduring), Hilina'i (trust), Huikala (forgiveness), and Aloha (love). Cultural sensitivity and respect for diversity is of utmost importance in the program. It is the belief that each girl is priceless and precious; as such, Pearl Haven accepts girls of every race, creed, color, religion, and socioeconomic status. The traditional values transcend mere adherence to culturally sensitivity; at Pearl Haven we believe the practice of these values is essential to promoting a healthy recovery and restoration from severe trauma.

The goal is to help each resident develop self-value, support her in achieving her goal and dreams, and embrace the value and meaning of her life. All Pearl Haven team members interacting with the residents will utilize a trauma-informed, population specific, and gender specific approaches. All care, treatment, and service decisions are collaborative and interdisciplinary, with input from the resident's entire treatment team and collaterals.

Pearl Haven's Vision

The vision of Pearl Haven is to provide girls who are recovering from the abuse of sex trafficking with a home, a path to restoration and healing from their trauma, an increased

sense of self-worth, and the confidence and ability to successfully reintegrate into their family and the community.

Pearl Haven's Mission

The mission of Pearl Haven is to provide girls with a home designed to meet the unique needs of underage female sex trafficking victims through the utilization of individualized, comprehensive, and restorative therapies.

Program Philosophy

At the core of Pearl Haven is the belief that each individual child matters: "it matters to that one". Every child lost in sex trafficking deserves to be recovered, rehabilitated, and above all, loved.

Pearl Haven Core Values

Integrity: Pearl Haven values shall be uncompromised in behaviors, services, commitment to the girls under our care, and to the Pearl Haven mission and vision.

Financial Transparency: Pearl Haven is committed to prudent financial accountability with strong fiscal controls in place and the timely presentation of public information.

Inspiration: The purpose and services are intended to inspire and nurture Hawaiian community attachment to the Pearl Haven values, mission, and vision.

Impact: Each child entrusted to Pearl Haven care experiences lifelong and purposeful change that impact favorably upon them and upon those who serve with excellence in the child's and community's best interest.

Collaboration: Pearl Haven is comprehensive in the services offered to the girls ; nevertheless, the program is incomplete without the community, our allied service providers, funders, and intra-governmental partners who collaborate in our shared mission.

Faith: As a non-religious organization, Pearl Haven is not without faith. The acknowledgement of a God greater than ourselves shall not be forsaken or forbidden among us.

Population Served

Pearl Haven is designed to serve adolescent females between ages 11 through 18, who have recently exited the commercial sex industry. Recently exited is defined as up to two months post experience; exceptions to this rule may be made on a case-by-case basis. Low-income persons, racial and ethnic minorities, persons with disabilities, and other underserved populations will be welcomed at Pearl Haven. Cognitive and developmental

limitations will be considered with regard to milieu and group placement; however, unless severe, these limitations should not interfere with membership. Pearl Haven is best suited for residents who desire to engage in treatment and have discontinued contact with their pimp/trafficker and those involved in the lifestyle.

Recognizing the positive impact a resident's non-offending family/caregiver can have on their recovery, Pearl Haven welcomes non-offending family/caregiver participation in the healing process of their child. Resident's non-offending families/caregivers will be invited to participate in treatment whenever possible. Non-offending families/caregivers are defined as families or caregivers who did not engage in the trafficking of the minor, who do not and have not had Child Welfare Services intervention (exceptions may be made for families who prove to have eradicated the issue), who in no way knew of the child's trafficking experience prior to identification (this cannot have been because of neglect), and who are deemed appropriate following a full psychological evaluation.

Individuals eligible to receive services at the Pearl Haven Campus must fulfill the following criteria:

1. Female
2. Age 11 – 18
3. Confirmed to be a Commercially Sexually Exploited Child (CSEC) as defined under the Trafficking Victim Protection Act (TVPA) 2000, revised in 2008. Confirmation must be documented from law enforcement, family court and/or qualified personnel to make determination.
4. The prospective resident must express their willingness and desire to participate in the program.
5. The prospective resident must not possess cognitive or developmental limitations that will render the program ineffective in providing treatment.

Length of Stay

Recognizing the extent of trauma found in the lives of trafficked children, Pearl Haven is designed to provide a long-term home in which residents can heal in a safe and caring environment. The estimated length of stay in the home is 12 to 19 months, however care is individualized to each resident and is reflected in discharge plans. Pearl Haven may accept residents under shorter placement restrictions, however this will occur only under special circumstances where early release purposes outweigh the importance of the recommended length of stay.

Geographic Area

Being that Hawaii is the only archipelago state, Pearl Haven is at an advantage in keeping residents safe within the program. Once identified, children exploited through commercial sexualization often return to their pimps/traffickers due to trauma bonds or fear. Those who return to their trafficker are routinely moved off island by their trafficker to avoid further detection. The Pearl Haven facility will be located at 58-130 Kamehameha Highway in Haleiwa on the North Shore of the island of Oahu, Hawaii, between the communities of Sunset Beach and Kahuku. The land is owned by the State of Hawaii Department of Land and Natural Resources and has been developed since the early 1900s. The location of Pearl Haven is advantageous, as it increases the likelihood of resident recovery due to small island size and the ability to flag minors leaving through

the airport. The single road in and out of Haleiwa increases the chance of residents being

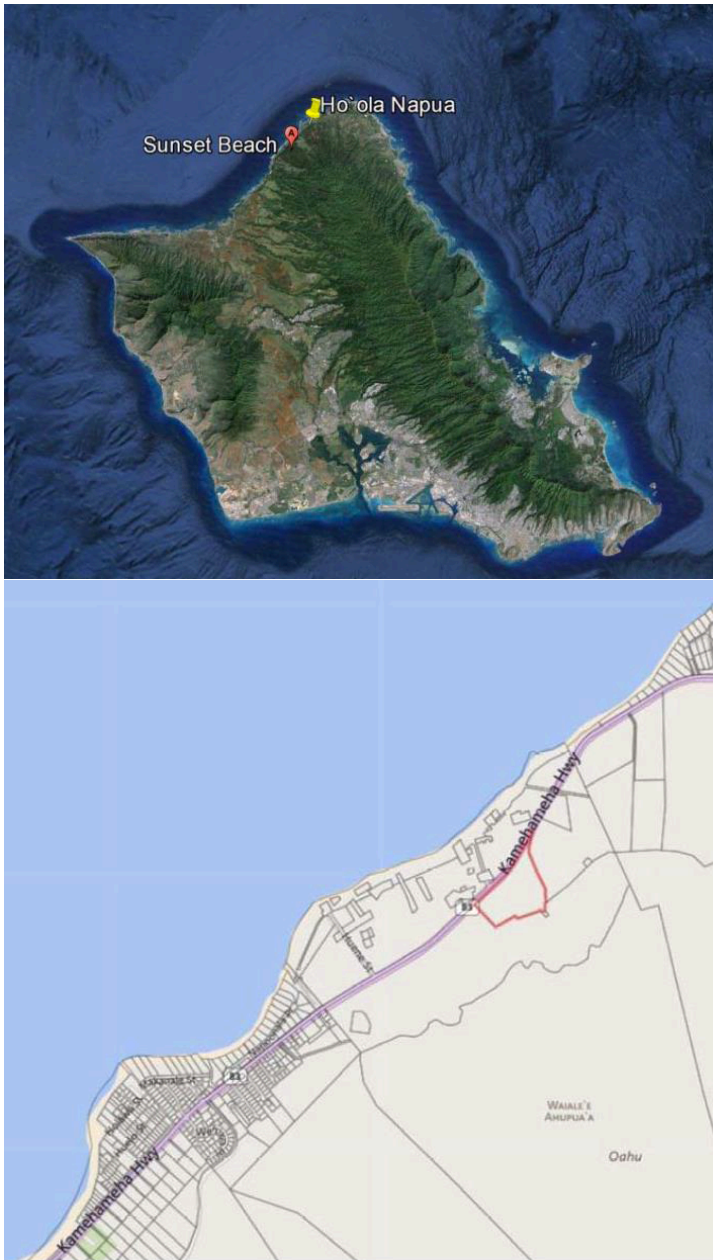identified and located prior to them leaving the area.

Figure 18: Location of Pearl Haven and parcel map.

Site Information

PROJECT SUMMARY
PROJECT NAME: Pearl Haven Residential Special Treatment Facility
APPLICANT/LESSOR: Hoʻola Nā Pua, Inc.
58-130 Kamehameha Highway
Haleiwa, Hawaiʻi 96712
PROJECT LOCATION: Waialeʻe Ahupuaʻa, Waialua District, Oahu
TAX MAP KEY: (1) 5-8-001: 051
PROPERTY OWNERSHIP: State of Hawaiʻi Department of Land and Natural Resources
LOT AREA: 12.854 acres 559,920 s.f.
EXISTING USE: Vacant
PROPOSED USE: Residential Care facility.
STATE LAND USE: Agriculture
COUNTY ZONING: Agriculture District (Ag-2),
SPECIAL DISTRICT: Within the Special Management Area
ACTION REQUESTED: Use of State Lands
APPROVING AGENCY: State of Hawaiʻi Department of Land and Natural Resources
ANTICIPATED Finding of No Significant Impact (FONSI)
DETERMINATION:
PERMITS REQUIRED Department of Health Certification, IWS, Building
Conditional Use Permit, SMA (minor)
AGENCIES CONSULTED: Department of Land and Natural Resources Land Division
US Fish and Wildlife Service
DLNR State Historic Preservation

Figure 19: Aerial Photograph of the property showing the 12.8 acre parcel and surroundings.

Figure 19.1: Aerial photograph of the property showing existing building structures.

Weather and Climate

The vicinity of the subject property typically has a warm, wet, and windy climate. Prevailing tradewinds arrive from the northeast. According to the National Weather Service Honolulu Office, over a period of 30 years, normal monthly high temperatures range from 79.1 degrees in January to a high of 86.7 degrees in August for an average of 82.9 degrees. Normal month low temperatures range from a low of Final Environmental Assessment Ho`Ola NaPua 15 65.6 degrees in February and a high of 72.5 degrees in August for a monthly average of 68.9 degrees. Precipitation typically ranges from 0.70 inches in August to a high of 5.2 inches in January (Sunset Beach). Rainfall increases

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dramatically with uplift provided by the seaward cliffs, but the majority of that falls further inland than the subject property.

Topography, Geology and Soils

The project site is relatively flat, has been graded and cleared, and lies on a coastal plane. The project site and surrounding areas are relatively flat and devoid of any significant natural features. About 5 out of the 13 total acres are cleared; majority of cleared space covered in St. Augustine grass. Geology is volcanic soils interspersed with calcareous marine deposits. 76% of the project site is located on soils classified as Waialua silty clay (WkB, 3 to 8% slopes according to the Soil Survey of Islands of Kaua`i, Oahu, Maui, Molokai, and Lanai, State of Hawai`i by the U.S. Department of Agriculture Soil Conservation Service. There is no known evidence of hazardous materials, solid wastes or industrial land use that may suggest on-site contamination.

This project will not require grading or grubbing. Water service pipes may be replaced as necessary requiring a small amount of trenching. NPDES permitting is not anticipated due to the lack of grading and grubbing. Because of the minimum disturbance and relatively flat topography, no impacts to local soils or runoff are anticipated.

Surface Water and Drainage

The subject property is approximately 800 feet from an unprotected coast of the Pacific Ocean on the North Shore of Oahu. Surface elevation of the site is gently sloped over the

majority of the property. Elevations range from 15 feet to 78 feet above mean sea level. The intermittent Waiale`e stream forms north boundary of the property, and an ancient fishpond is located 380 west of the site on the seaward side of Kamehameha Highway. The coastal areas near the north point of Oahu are relatively arid near the coastline and getting wetter with distance inland as a result of the tradewind showers. The Waialua silty clay has a relatively high permeability, reducing the potential for runoff, particularly in the flat areas of the parcel. The area is subject to occasional winter storms that drop rainfall in quantities that are not absorbed by the ground. Runoff from the impervious surfaces are normally absorbed in the grassed and wild buffer areas on the parcel, but during heavy storms runoff would exit the site along Kamehameha highway and travel seaward to the areas now designated as Waiale`e Beach Park where soils consist primarily of sand. Run-on to the property is limited by the steep cliffs on the landward (mauka) side of the property. The majority of project site is located in Zone X. Zone X is an area determined to be outside of the 0.2%annual chance floodplain. No base flood elevations or depths are shown within this zone. The undeveloped areas on the makai edge of the parcel are within the AE zone having a flood elevation of 15 feet.

The proposed action will not add to the impermeable surfaces of the parcel. In the rare instances when surface water runoff occurs it is very likely to be drained either overland to Waiale`e Beach Park where it will infiltrate in the sandy soils surrounding the shoreline, or drain to Waiale`e Stream. Surface disturbance during project construction is expected to be minimal because of the existing infrastructure Final Environmental Assessment Ho`Ola NaPua 18 water and wastewater infrastructure. Best management

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practices and soil erosion controls will be used during landscaping changes, and with landscape maintenance.

Archeological, Cultural and Historic Resources

The subject property is located in within the Waiale`e Ahupua`a in the Ko`olouloa District of Oahu. The project site is adjacent to an area described by Cultural Surveys Hawaii, Inc. (February 2014) as part of the City's proposed development of Waiale`e Beach Park. According to Hammett et. Al. quoting Clark 1946, the place name Waiale`e means rippling or stirring waters. At one time people on shore this area could see freshwater bubbling up in small fountains on the shallow reef at low tide. The freshwater upwelling may have influenced Hawaiians in naming the area. The small island offshore is called Kuka`imanini meaning a parade of Manini fish. Cultural Surveys Hawaii (2014) reports that within the Waiale`e ahupuaa a major concentration of Hawaiian habitation and activity was focused within the coastal flats just behind the coastline. In this coastal area there was a freshwater spring that would have provided water for drinking, irrigation of lo`i and a brackish water environment for Kalou Pond.

The first known use of the project site was upon construction of the Waialee Training School for Boys in 1903. The facility is also referred to on maps and the Waialee Industrial School. The Territorial Legislature of 1864 authorized an act to establish an industrial and reformatory school "for the care and education of helpless and neglected children, and also for the reformation of juvenile offenders. The objective of said industrial and reformatory schools shall be the detention, management education,

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employment reformation and maintenance of such children as shall be committed thereto as orphans, vagrants, truants living an idle or dissolute life, or duly convicted of any crime or misdemeanor." Authorized in 1899, the school was not started until 1901 when the land was deeded to the Department

Figure 20: Boys Dormitory in 1935

of Education. The Waiale`e school was built to replace an older one in Kapalama. In May 1902 boys were moved from town into Waialee.
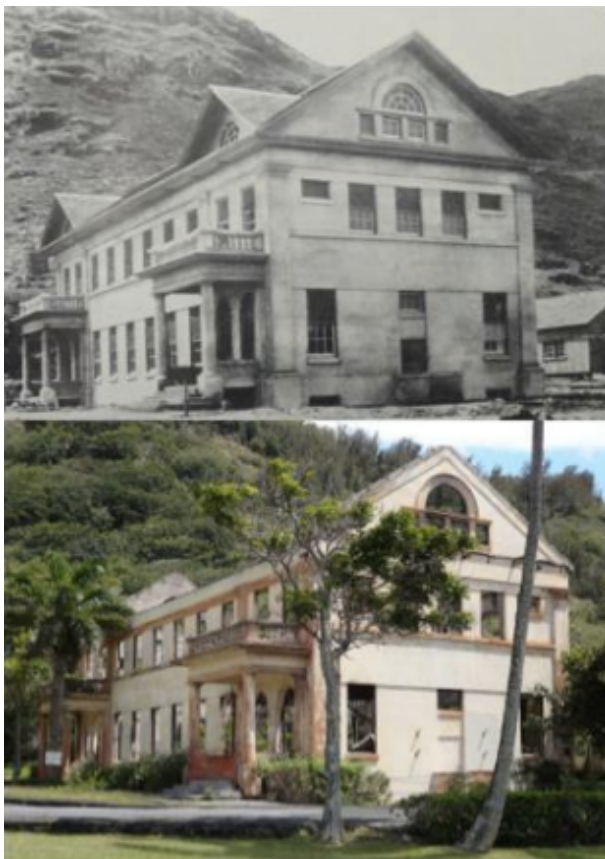

Originally the School consisted of 650 acres construction continued in stages through 1934 when 42 separate buildings were in operation. It contained all of the lands between the cliffs and the shoreline. The shoreline extended for approximately one mile. Cultural Surveys Hawaii states that it was a major entity for change in the area. In the 1930s there were between 150 and 175 "inmates" confined to the school. Training centered on agriculture and

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Figure 21: Top: Boys Dormitory in 1935.
Bottom: Current ruins.
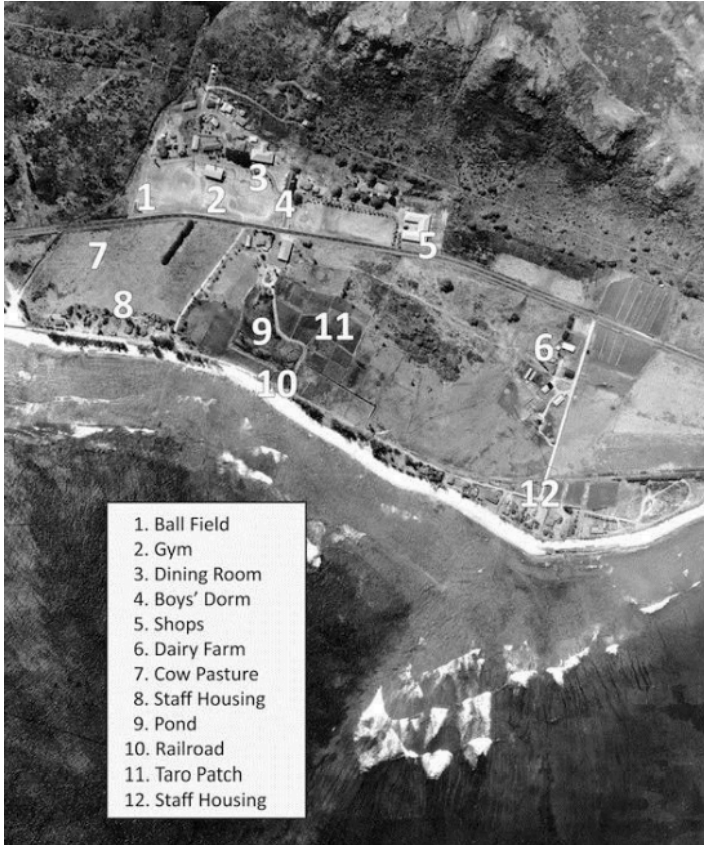
animal husbandry (Territorial Planning Board, 1939). Consistent with the prison –type circumstances there are reports of dark cells build below ground, ball and chain restraints, shackles and leg irons, and lashings were common place. An article in the Honolulu Record (September 3, 1953) notes that 70 percent of the inmates at the Oahu Prison come from the Walee training School, which is supposedly a correction and rehabilitation home. Many of the inmates asking in their early youth to be transferred to the jail rather than withstand the brutality of the administration staff at the boys school. The inmates and staff totaled between 200 and 250 persons for much of the schools history. The facility produced cattle, hogs, vegetables and poi for other institutions and themselves.

1. Ball Field
2. Gym
3. Dining Room
4. Boys' Dorm
5. Shops
6. Dairy Farm
7. Cow Pasture
8. Staff Housing
9. Pond
10. Railroad
11. Taro Patch
12. Staff Housing

Figure 22: A 1949 Aerial photograph of the Waiale`e Industrial School campus. Courtesy of Stafford Ames-Morse, http://www.ghosttowns.com/states/hi/waialee.html.

The school was in use until 1950 when it was closed and the remaining inmates were transferred to windward Oahu. Shortly thereafter the Crawford Convalescent Home utilized some of the land and buildings but constructed a new building in 1954. In 1960

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the University of Hawaii took control of other School buildings and established the Waiale`e Agricultural Experiment Station. The Oahu Railway ceased operation in 1947 and Kahuku Sugar closed is door in 1971. Presently the Agricultural Experiment Station only uses pastures on the makai side of Kamehameha Highway.

In 1950 Fredrick Crawford retired from the territorial hospital system and acquired the rights to the property. The main building of Crawford's Convalescent Home was completed in 1953 and the facility was opened in 1954. Crawford's Convalescent Home served residents who were elderly and required medical assistance until 2010 when low occupancy and rising costs forced it out of business. Subsequent to closing the lesees maintained a presence until June 2014. Since that time it has been vacant and has been subject to vandalism and theft.

Figure 23: Current street view of the Crawford's Convalescent Home

Proposed Design Strategy

The proposed action includes demolition and renovation of the internal spaces for the former Crawford's building. The entire interior will be demolished and redesigned to fit
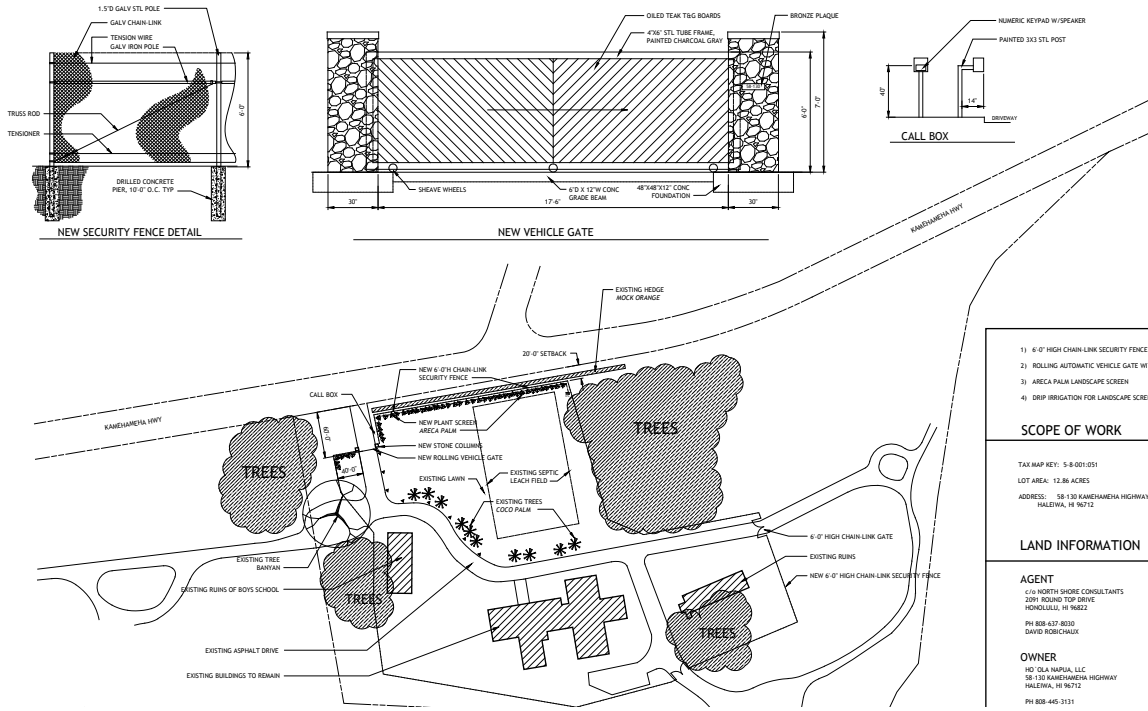
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the needs of the facility however the only exterior construction will be to replace the roof with similar roofing materials. No grading, grubbing and minimal trenching is expected. The appearance and all external design details of the 1953 convalescent home will be retained. Impacts to the character and function of the primary structure will be temporary and limited to those associated with construction. No mitigation measures are required to address impacts associated with the Convalescent home. The former boys dormitory from the Waiale`e Training School is the only historical structure on the property. It will not be demolished or renovated. A permanent fence will be placed around the structure for health and safety reasons. A security fence will also be installed around the 5 acres of developed area of the parcel. Impacts associated with the addition of security fences include restricted visibility of the property. These will be mitigated using vegetative buffers which hide the fence. Landscaping and development plans have been reviewed by the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (DLNR), which concluded that no historic properties would be affected by the proposed action.

The proposed action will not result in the loss of open space. The proposed action will restore the former Convalescent home to operating condition and retain the historical building remnants on the property. Landscape and general maintenance will be improved over its current condition. Views of the sea cliffs rising behind the existing structures will not be occluded. The primary visual resources are toward the ocean in this vicinity. As the subject property is on the land side of Kamehameha highway coastal vistas are not impacted. Scenic views of the ruins of the Waiale`e Industrial School will be maintained.

The architecture provides a distinct statement of early 20th century grandeur, but the ruins also serve as a stern reminder of a darker chapter in our history to many resident of the area.

The interior renovation will focus on the psychological implications of design on human behavior as an architectural strategy for rehabilitation. Various architectural elements will be incorporated to achieve this, including spatial planning paying special attention to the issues of physical space including privacy, crowding, and social interaction areas. Architectural aesthetics such as light, color, psychological effects of views and nature, as well as auditory and sensory implications will also be considered for rehabilitative strategies.

Proposed Site and Floor Plans
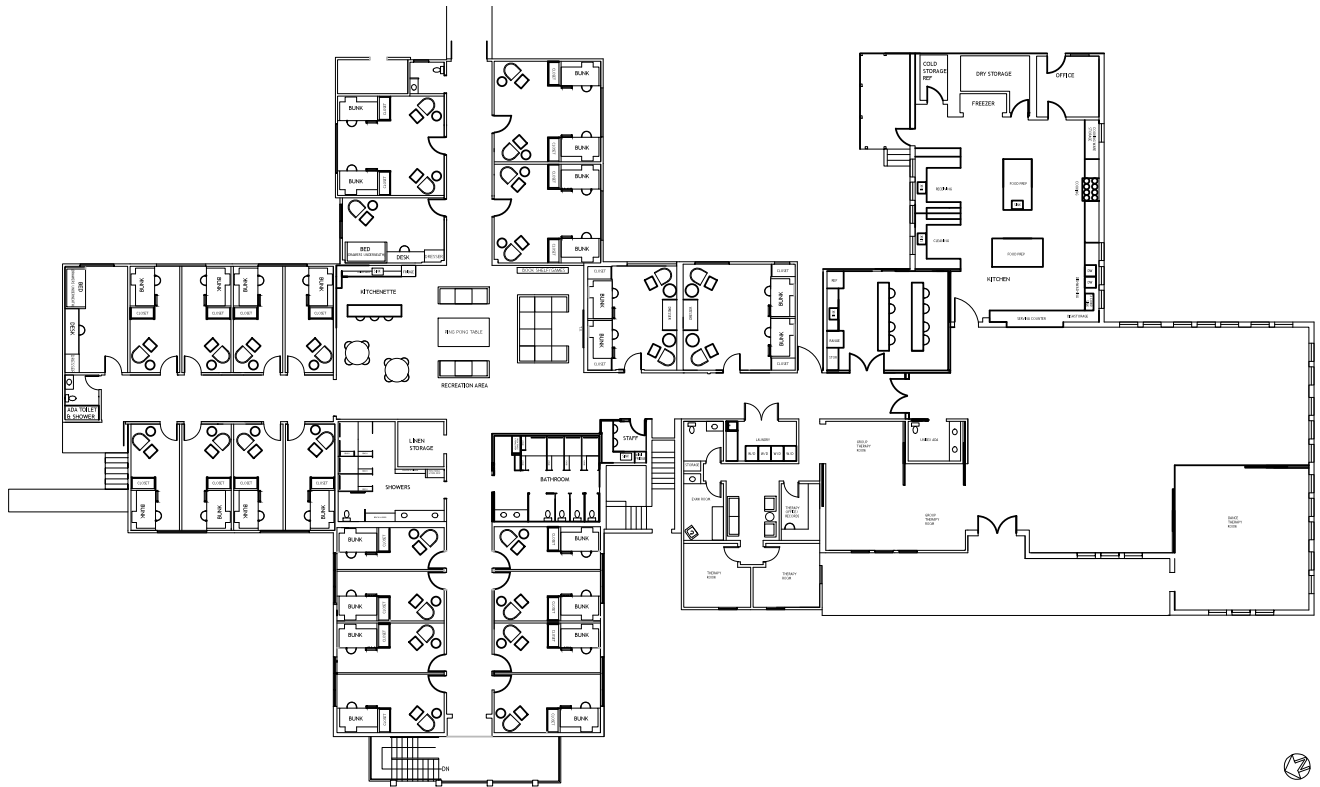

Figure 25: Site Plan.

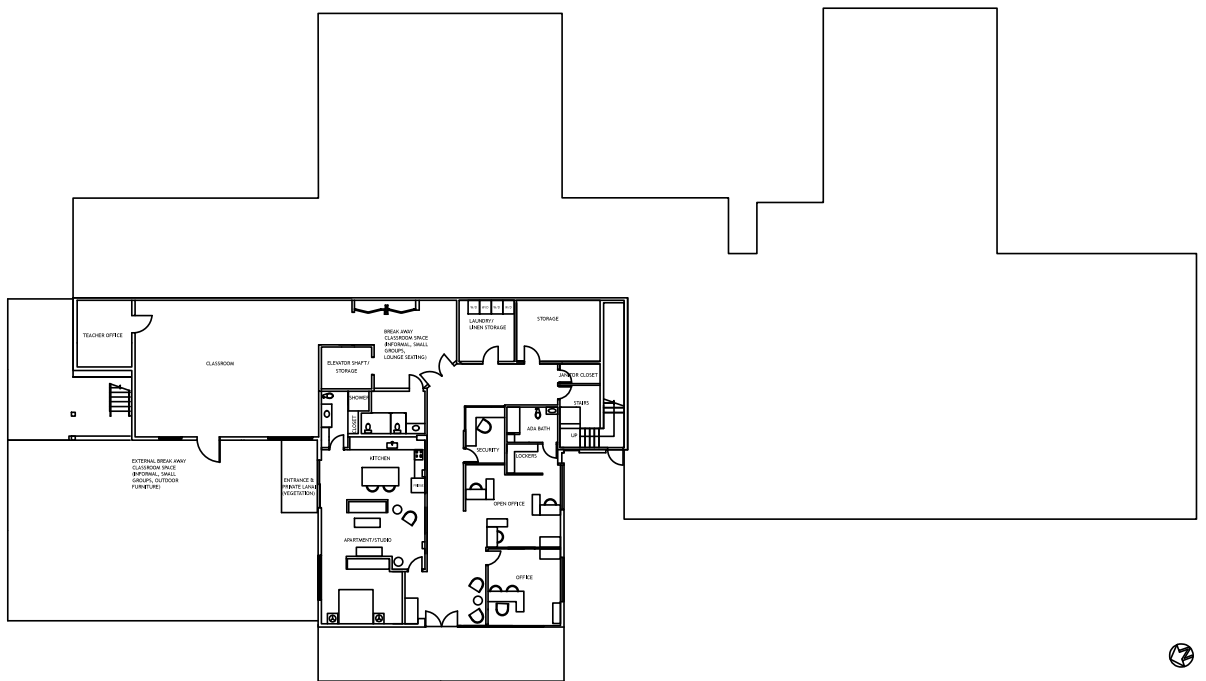Figure 26: Proposed 2nd Floor Plan.

Figure 27: Proposed 1st Floor Plan.

Outer Perimeter

To ensure the Pearl Haven campus is secure from any intruders entering the property, the following safety measures are implemented:

- A wrought iron picket impasse fence, 7 feet in height, completely surrounds the utilized portion of the property.
- A double electronic sliding vehicle gate recessed from the highway to create a "sally port" or "man trap" situation. A vehicle is given access through the first gate, the first gate closes, and then the second gate opens allowing access to the campus. This is done to prevent a "follow through" situation by an unauthorized vehicle or an unauthorized pedestrian from running onto the campus. All staff vehicles are given access through a card reader. Non-staff persons identified through a camera and intercom system will only gain access if their information has been previously supplied to the security guards, or once the guards contact the **Program Manager** and ensure access is cleared.
- An onsite portable guard shack at the vehicle gate will be available for times when the security posture may need to temporarily increase.
- The vehicle access area includes an intercom system, lighting, video surveillance system with infrared/night vision capability, and the ability to read a license plate.
- A HD quality video surveillance camera with the ability to view the entire perimeter will also face the main road
- Pan Tilt Zoom (PTZ) cameras are used in areas that require an active, specific, real time look at activity (i.e. front vehicle gate).
- The exterior of the campus is well lit with security lighting that doubles as landscaping lighting. The fence line is equipped with motion sensing LED security lighting, as well as cameras, with particular attention given to the south west corner where the unused access road meets the property.
- The shoulder of the road is rutted to eliminate the shoulder and prevent unauthorized parking.
- The immediate section of Kamehameha Highway east and west is covered by high quality video surveillance.
- There is a protocol for access by the Board of Water Supply, which includes supervised ingress and egress. Only clearly marked Water Board trucks and employees with identification are allowed access.
- A secondary fence system is utilized that protects the back of the facility in the activity area. This is ornamental fencing that extends from the left front side of the structure all the way to the perimeter fence. This fence also extends from the right front side of the perimeter fence with a pedestrian door.
- Enhanced video surveillance on the dirt road that comes from the property on the east will also be implemented.

- Aggressive signage announcing video surveillance and security patrols will be posted.

Structure/Inner Perimeter

The following measures are taken to ensure the safety of the structure and inner perimeter

of Pearl Haven:

- A web based video surveillance system is utilized allowing portability of, and flexibility for guard personnel and staff.
- Landscaping is designed for, and signage clearly marks and designates the Main Entrance/Reception Area as well as areas that are off limits.
- The main entrance contains a controlled vestibule area creating a layer of controlled access. A shielded staff member or security guard controls access into the main facility.
- Only staff are allowed access to the second floor through the front and left outside stairwells. Residents use the interior stairwell or the rear entrance (this is guided by campus protocol).
- The left/east outside stairwell, the front outside stairwell leading to the living quarters, and the outside stairwell to the left of the living quarters are enclosed, with a secure gate at the bottom of the stairs with a fire code approved delayed egress device. This stairwell always remains clear of view blocking vegetation.
- All vegetation around the structure is no more than two or three feet high and any vegetation obscuring views from the windows are trimmed or removed.
- Vegetation directly below the windows are low lying inhospitable, indigenous, barrier plants to discourage unauthorized intrusion, surveillance and/or egress through an opened window. (for example; Yucca, Pygmy Date Palm, Aloe etc.)
- All doors and windows are alarmed in zones.
- The outside of the facility has 24 hour high definition video monitoring with the ability to view <u>all</u> sides of the building, to include "blind spots". This interior stairwell has video surveillance as well.
- All exits and entrances have high definition video monitoring.
- Windows on the first floor have coverings for use as/when needed.
- The kitchen area, due to its high windows and solid walls, is the safe lockdown/shelter during an emergency, when evacuation is not the most prudent course of action.

Cameras/Video Surveillance.

Cameras are utilized throughout the common areas in the home, as well as on the Pearl Haven grounds and the area immediately around the grounds. The cameras are monitored in the administrative office in a location out of the sight of the residents. Cameras are monitored throughout all hours of the day, and as an added measure, staff directly monitors residents 24 hours a day. As noted with the alarm system and all other features of the security infrastructure, the cameras/video surveillance are integrated with the entire system. Cameras cover all "public/common" areas of the interior and both the outer and inner perimeter of the property, with particular attention given to those areas noted as physical "blind spots. High quality IP cameras are considered relative to the environment. The outdoor cameras are designed to tolerate heat, humidity and rain with IR capability and up to 10 megapixels of definition.

Alarm System

Pearl Haven has an alarm system, which will alert staff when residents are in key areas of the home. These key areas are spaces designated as 'likely to be utilized' if the resident is planning to elope. The alarm system is tied in with all other systems: cameras, doors, windows, panic, vehicle access and motion detection. These systems are controlled and operated through a centralized security system and all operate through the same software.

Scope of Services

Topics Covered.

At Pearl Haven the concepts are centered on trauma healing, community integration, familial harmony, and psychological rehabilitation. The CSEC survivor experiences immeasurable hindrances while on their path towards healing In an attempt to target salient obstacles seen in CSEC survivors, the program covers the following topics:

1. Safety
2. Survivor healing of abuse, to include sexual abuse and domestic violence
3. Distorted beliefs regarding abuse histories
4. Family dysfunction
5. Substance abuse
6. Stress management
7. Processing of survivor's experience of commercial sexual exploitation (glorification not permitted)
8. Appropriate boundaries
9. Recognizing and breaking trauma bonds
10. Coping and interpersonal skills
11. Pro-social thoughts and relationships
12. Psycho-education on their trafficking experience
13. Social skills
14. Opening the lines of communication between survivors and their families

Intervention Services Offered

1. Education- to include contracting with the Department of Education, onsite tutoring, and study groups
2. Individual psychotherapy
3. Group psychotherapy
4. Psycho-education groups
5. Social skills training
6. Life skills training
7. Interpersonal skill development training
8. Substance abuse education and prevention
9. Recreational activities
10. Art therapy
11. Equine therapy
12. Dance therapy
13. Medical, dental, dietetic and psychiatric care by contracted providers
14. Individualized rehabilitation plans

Interventions

Individual Therapy. Each resident receives individualized therapy, which, with her input, is profiled to her specific age, as well as her cultural and circumstantial needs. Individual sessions serve the purpose of supporting, educating, and providing an opportunity for them to process issues related to a spectrum of traumatic abuses, mental health, and recovery. The approach is that both the child and provider have equally valuable knowledge; consequently, the resident can be an active planner and participant in services. A priority is placed on choice, self-control, and trust, which are developed over time to promote empowerment and recovery. The therapists are eclectic and will elicit various therapeutic orientations and interventions deemed best suited for the residents; the approaches consist of but are not limited to: Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Abbreviated TF-CBT, victim-centered approaches, CBT, Cognitive Processing Therapy (CPT), Dialectical Behavioral Therapy (DBT), and Humanistic therapy. However, the trauma-focused 3 stage model of Safety, Integration, and Trauma Work will be utilized as the therapy basis. Weekly treatment team meetings will determine which interventions will be implemented with each resident. There are two individual therapy rooms here at the facility.

Group Therapy. Group sessions provide a powerful and effective experience to learn and develop skills to effectively communicate thoughts and emotions to others, listen actively to others, recognize self-defeating behaviors and their consequences, identify self-enhancing alternative behaviors and their benefits, and develop healthy and

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supportive relationships with others. The large therapy area can be used as one space for larger groups, or used as two medium sized spaces by sectioning off the pocket door partition. The group therapy room is multifunctional, it may be completely opened up to the common area to the right or closed off for private sessions. When group therapy sessions are not taking place the room serves as an additional break out area from the common area.
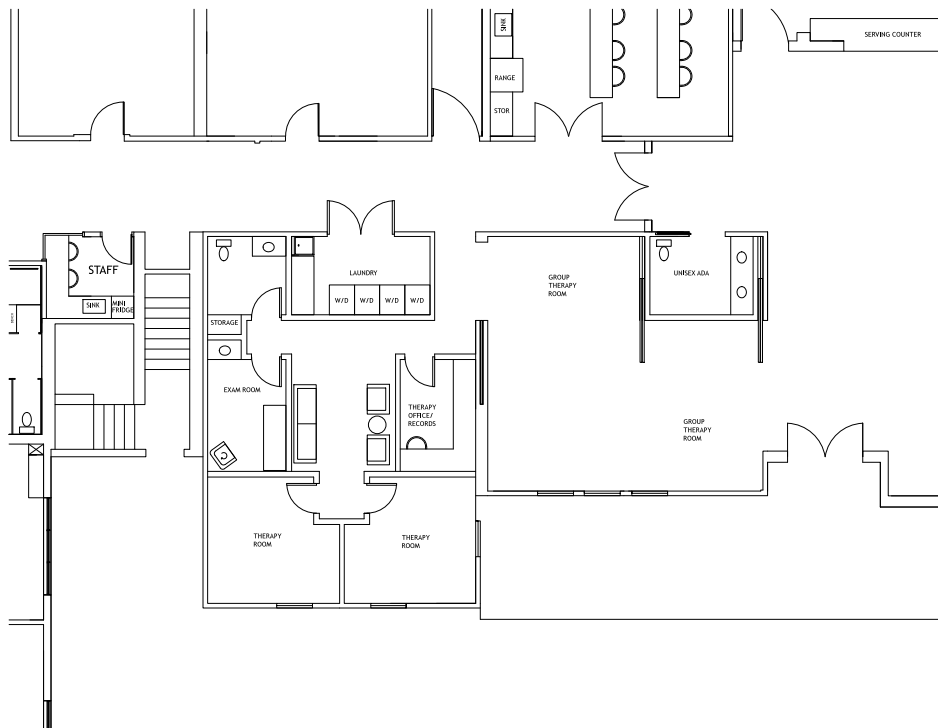

Figure 28: Therapy Rooms and Health Clinic.

Survivor Based Support Group. In order to teach the residents they are not alone in their experience and that overcoming their trauma is possible, Pearl Haven utilizes survivor based support groups. Survivor based support groups are considered, by some,

the treatment option of choice for the CSEC population.[242] The support groups serve to bring survivors together as a group with the goal of the residents learning that they are not alone. This is accomplished through connecting with others, providing support for one another, feeling validated in their experience, offering empathy to one another, and instilling feelings of hope and empowerment.[243] All residents are assigned to a survivor group to meet with on a weekly basis. Each group is co-facilitated by a Master's level therapist or higher and, when possible, an approved survivor of minor sex trafficking. The purpose of this group is to decrease the resident's feelings of loneliness and isolation by providing a safe place to share their experiences with others who understand firsthand what they have gone through. In addition, residents will be taught age appropriate sexual behaviors through the use of cognitive reframing and role-plays. The residents attend mandatory group therapy twice a week. Safety is the primary focus within the open treatment group, with participants learning to identify and end dangerous relationships (specifically relationships with their pimps/traffickers and other individuals in "the Life"), discontinue inappropriate coping mechanisms (i.e. substance abuse), and refrain from unsafe behavior in general. In addition, residents are taught interpersonal skills that will enable them to create and maintain appropriate relationships.

Psycho-Education Groups. Pearl Haven's psycho-education groups teach the residents tactics utilized by pimps, identify aspects of their lives that made them vulnerable to

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[242] Tavkar, P., & Hansen, D. J., (2011). Interventions for families victimized by child sexual abuse: Clinical issues and approaches for child advocacy center-based services. *Aggression and Violent Behavior*. 16(3): 188-199.

[243] Anderson, J., Hodge, C., Kinzer, M., Lenahan, D., Olson, D., & Sparks, R. (2006). Circle of Hope: A Guide for Conducting Psychoeducational Support Groups. *Washington Coalition of Sexual Assault Programs*. Washington: Olympia.

trafficking, define psychological disorders commonly found within this population, explain trauma symptoms and how and why they manifest, and teach and practice appropriate coping skills. The goal of the psycho-education group is to normalize symptom manifestation and decrease the resident's vulnerabilities to being re-trafficked by increasing awareness. Subjects covered in the psycho-education groups include but are not limited to: Trauma bonds, Appropriate socialization, Appropriate boundaries, Post Traumatic Stress Disorder (PTSD), Complex PTSD, Commercial Sexual Exploitation of Children (CSEC), Sexual health, Sexuality, Proper personal hygiene, Depression, Anxiety, Dating violence, Domestic violence, Healthy interpersonal relationships, Appropriate coping mechanisms, Correcting thinking errors, Communication skills, and Poverty.

Adjunct Therapies. Pearl Haven also offers adjunct therapies to include equine therapy, dance therapy, and music therapy. Recognizing the importance of incorporating various forms of treatment targeting trauma recovery, Pearl Haven utilizes adjunct therapies that allow the residents to have fun, while addressing their trauma symptoms.

Equine therapy has proven to have a significant increase in participants' levels of self-esteem and self-efficacy, as well as positive shifts in their overall attitude toward life.[244] In addition, research has found that adolescents who participate in equine therapy

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[244] Kendall, E., Maujean, A., (2015). Horse Play: A brief Psychological intervention for disengaged youths. *Journal of Creaativity in Mental Health*, 10(1): 46-61.

experience positive increases in self control, self-image, and general life satisfaction.[245]

Pearl Haven has established an memorandum of understanding (MOU) with an agency that provides equine therapy for the residents on their campus. The residents will participate in equine therapy on a monthly basis. Should equine therapy prove significantly beneficial for a resident, their treatment team may prescribe additional sessions.

Dance therapy is also offered at Pearl Haven. Research has found that dance therapy improves the self-rated health of adolescent girls when utilized twice a week. In addition, adolescent girls endorsed a decrease in internalizing problems when participating in dance therapy, even if they had no prior dance experience.[246] Pearl Haven will provide dance therapy to the residents on a regular basis. The dance therapy room is located just off of the main common room.

Music therapy. Music therapy will provide a space for creative expression, allowing for the residents to release emotions they are unable to verbalize. Research indicates that music therapy can assist participants resistant to traditional therapy in decreasing symptoms of depression.[247]

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[245] Bachi, K., Teichman, M., Terkel, J., (2011). Equine-facilitated psychotherapy for at-risk adolescents: The influence on self-image, self control and trust. *Clinical Child Psychology and Psychiatry*.

[246] Duber, A., Hagberg, L., Sunvisson, H., & Moller, M. (2013). Influencing Self-rated Health Among Adolescent Girl with Dance Intervention. *Jama Pediatrics*, 167(1).

[247] Albornoz, Y. (2011). The effects of group improvisational music therapy on depression in adolescents and adults with substance abuse: a randomized controlled trial. *Nordic Journal of Music Therapy*, 20(3): 208-224.

Family Therapy. To expose the residents to healthy family behavior, a couple will also reside at Pearl Haven, in a separate apartment on the first floor. Often overlooked is the trauma to a victim's non-offending family; following the aftermath of the trafficking experience, families are often faced with: economic challenges, shame, guilt, limited support, panic, denial, shock, anger towards the trafficker, anger towards self or others for not knowing, multiple investigations, ensuring the victim is taken to their multiple appointments, depression, embarrassment, desire for secrecy, fear for their child victim, and secondary trauma. Research has shown non-offending families/caregivers often play a crucial role in the healing process for survivors adjusting from their trafficking experience.[248] For this reason, families/caregivers who are deemed non-offending, and who complete program requirements, will participate in family therapy once the resident has reached a point in her treatment where it is deemed appropriate.

Social Rehabilitation. Group interactions at Pearl Haven are structured to assist residents in learning appropriate social skills, boundaries, and a sense of belonging. Residents are taught social skills which they practice within the milieu of the home, while simultaneously learning from the direct teaching and modeling of staff.

Structured Arts and Recreational Program. Given the complex trauma experience by CSEC survivors, healing is often a long and strenuous process. For some survivors, processing traumatic histories may do more harm than good. Studies have found art

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[248] Finkelhor, D., & Berliner, L. (1995). Research on the Treatment of Sexually Abused Children: A Review and Recommendations. *J. AM. ACAD. Child Adolesc*, 34(11): 1408-1423.

therapy to be beneficial for trauma survivors as it promotes insight, improves functioning, increases self-esteem, reduces debilitating symptoms, provides opportunities to express and resolve painful memories, and assists in reducing stress.[249] Pearl Haven offers a structured arts and recreational program that provides an avenue for residents to express feelings and experiences they are not able to verbalize.

Physical Fitness. The importance of physical fitness in the treatment of PTSD is stressed throughout the Pearl Haven program. Research indicates that vigorous exercise stimulates the brain's release of endorphins, resulting in feelings of well-being, improved sleep, and intrinsic benefits such as improved sense of self-worth and control.[250]

Creativity. Creative writing, freelance art, music, dance, poetry, crafting, and all other forms of creative expression are encouraged and utilized at Pearl Haven. Recognizing the important role creative outlets play in stress relief, increasing self-esteem, providing mental distractions, and providing an avenue for trauma reenactment, residents will be encouraged to learn to access their creative side to decrease their daily trauma symptoms.

Play. The forced maturation of CSEC victims stunts their developmental process. Their daily focus goes from playing to surviving, causing them to lack the needed outlets for

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[249] Piscatelli, S., Meaders, R., Edmondson, E., Kaiser, D., Ph.D., ATR-BC, Feed, H., Ph.D., ATR-BC, Haeseler, M., ATR-BC, & Ault, R., ATR-BC, HLM (n.d.). Art Therapy, Posttraumatic Stress Disorder, and Veterans. *American Art Therapy Association*. http://www.artherapy.org/upload/file/RMveteransPTSD.pdf (Accessed 02/02/15).

[250] LeardMann, C. A., MPH, Kelton, M. L., Smith, B., MPH, Ph.D., Littman, A. J., Ph.D., Boyko, E. J., MD, MPH, Wells, T. S., DVM, MPH, Ph.D. & Smith, T. C., MS, Ph.D. (2011). Prospectively Assessed Posttraumatic Stress Disorder and Associated Physical Activity. *Public Health Rep*. 126(3): 371-383.

brain development and social learning. Structured, unstructured, and imaginative plays
are built into the Pearl Haven program to assist residents in reaching necessary
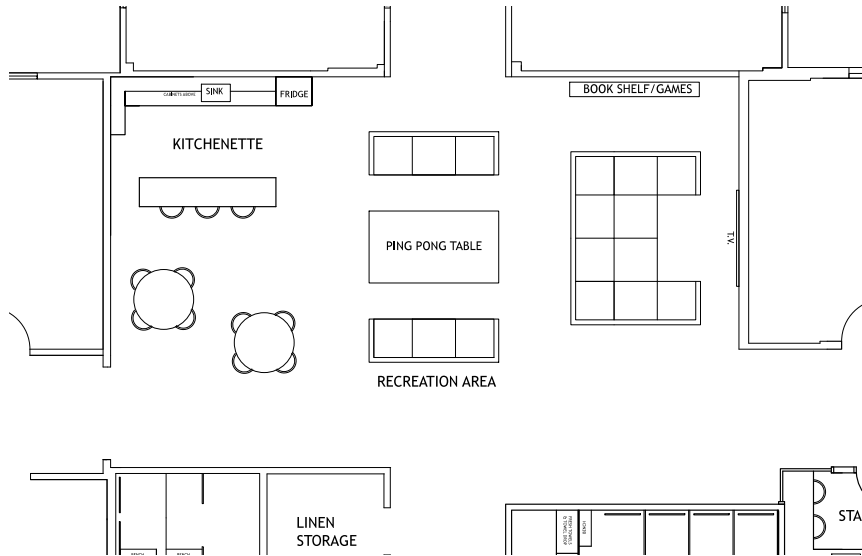developmental milestones.

Figure 29: Recreational Area.

Skill Building.   Learning various skills such as crafting, cooking, sport activities,
nutrition, creative writing, drama, design, dance, and music are a few of the activities
offered at Pearl Haven to increase residents interpersonal communication and meaningful
purpose in life.[251] CSEC victims are robbed of the experience of learning new skills that
later contribute to vocational goals. Pearl Haven allows residents to explore these future-
oriented skills and assist them in developing additional coping skills and choosing a
career path. There is a multi purpose craft room just off of the kitchen that will be used
for both recreational free time as well as a learning area for classes such as cooking and

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[251] May, H. J., Gazda, G. M., Powell, M., & Hauser, G. (1985). Life skill training: Psychoeducational
training as mental health treatment. *Journal of Clinical Psychology,* 41(3): 359-367.

sewing. The commercial kitchen is also a learning area, designed as a teaching kitchen that can be used by the girls during lessons.
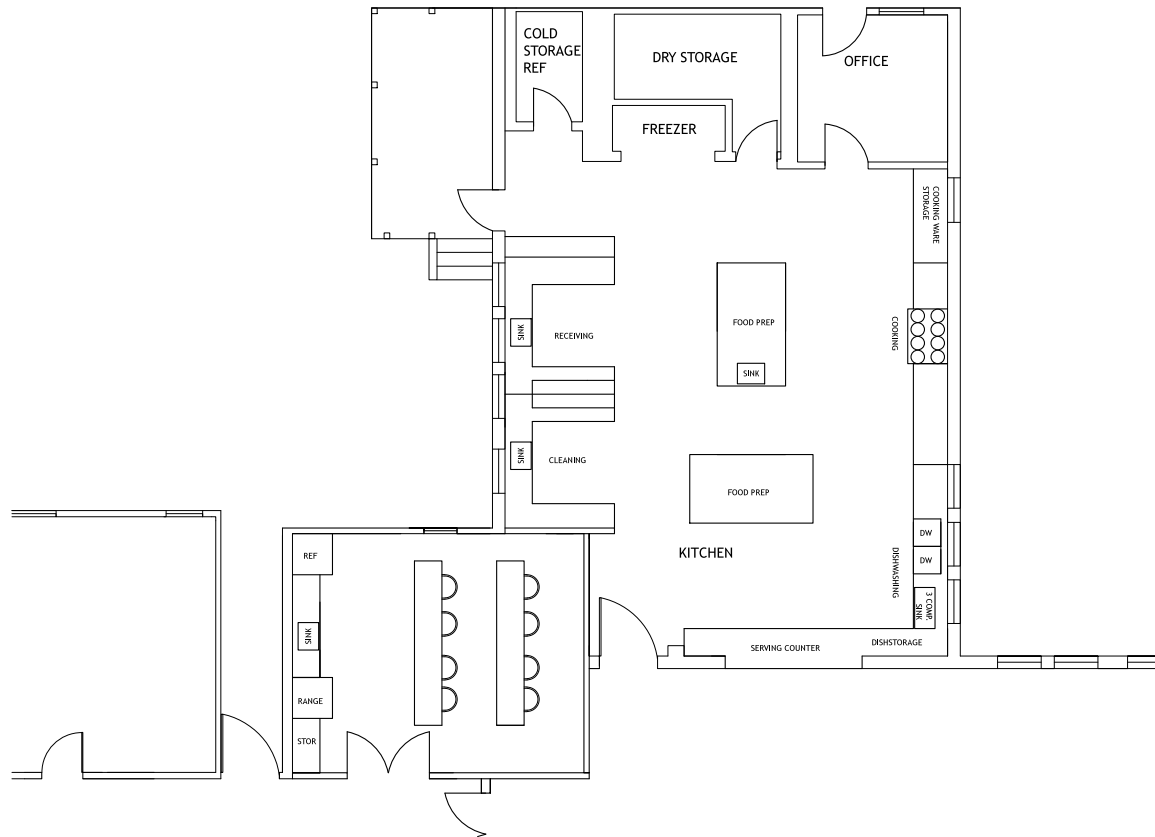

Figure 30: Teaching kitchen and multi purpose craft room.

Health and Wholeness. The health (physical and mental) and nutritional focus contributes to the quality of life of each young girl by addressing her fundamental health and nutrition needs. Pearl Haven is a gender-specific, comprehensive treatment program for adolescent girls, with an emphasis in health promotion and disease prevention to encourage positive outcomes. The Kaiser Permanente ACE study (Adverse Childhood Experiences) demonstrates that children who suffer from adverse childhood experiences

of abuse and trauma are shown to have increased risk for chronic diseases and adverse mental health outcomes as adults. Adolescent health treatment needs can be challenging and often involve comprehensive and multidisciplinary approaches that include balanced integration of healthy nutritional routines and education. Pearl Haven delivers a highly individualized, holistic approach to treatment, where these needs are continually assessed and revised throughout service periods.

Sustainability. Aiding the residents through establishing a personal journey of sustainability is one of the most crucial services to their lifelong capacity for independence and reintegration into their communities. It begins with helping them to understand what sustainability is in definition and vision, and then encourages behaviors within their lifestyle to achieve their personal sustainability goals. The residents will have opportunity to consider setting goals across various aspects of life, including community, relationships, cultural, spiritual, and personal, and articulating them in a goals matrix. They will be challenged to consider 3 fundamental questions: 1) What are your values, 2) What is important to you in social, economic, and environmental contexts, and 3) What is your purpose/aim and what is the scope or boundaries to this purpose?

Life Skills Training. Due to the prevalence of family dysfunction, transient lifestyles (i.e. living on the streets or hotel hopping), and complete indoctrination into the Game (the subculture of prostitution), the vast majority of survivors have not been afforded the opportunity to learn basic life skills. Life skills training teaches the residents how to be productive and contributing members of society, giving them tools to respond to diverse

life situations and achieve personal goals.[252] Life skills training include, but are not limited to: Appropriate dress, Health care maintenance, Dental hygiene, Money management, Charm school – teaching etiquette, appropriate dress for various occasions, appropriate social skills, proper walking and seating postures, appropriate hygiene, etc., Legal rights and resources, Employment readiness (writing resumes, applying for jobs, interviews, work ethics, etc.), Time management, Educational opportunities, Military opportunities, and Health and nutrition. In addition to the staff office and couples apartment, there is a classroom on the first floor for the girls education.
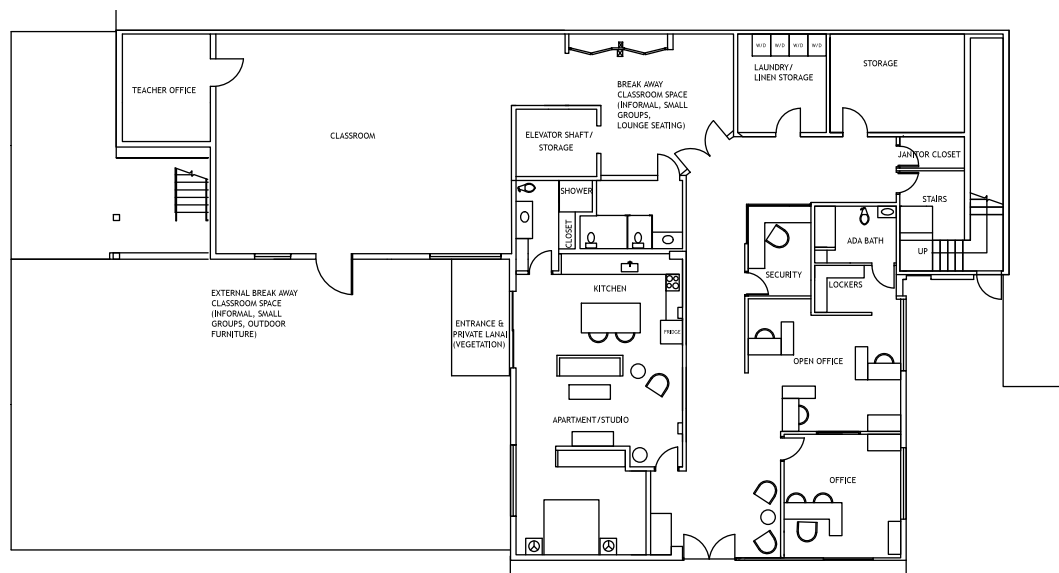

Figure 31: First floor plan classroom.

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[252] Junge, S. K., Manglallan, S., & Raskauskas, J., (2003). Building life skills through afterschool participation in experiential and cooperative learning. *Child Study Journal,* 33(3): 165-174.

Bedroom Layouts

The following plans represent 6 different options for bedroom layouts. The layouts were planed in careful consideration of the research compiled on the psychological design implications of rehabilitation settings. Special attention was paid to stress inducing elements covered in chapter IV such as the impacts of privacy allowances, over crowding, architectural aesthetics, light, windows, and nature. Accommodating these essential aspects to rehabilitation must be delicately balanced with the care needs of girls coming entering the facility who might have danger seeking behaviors that put them or others at risk.
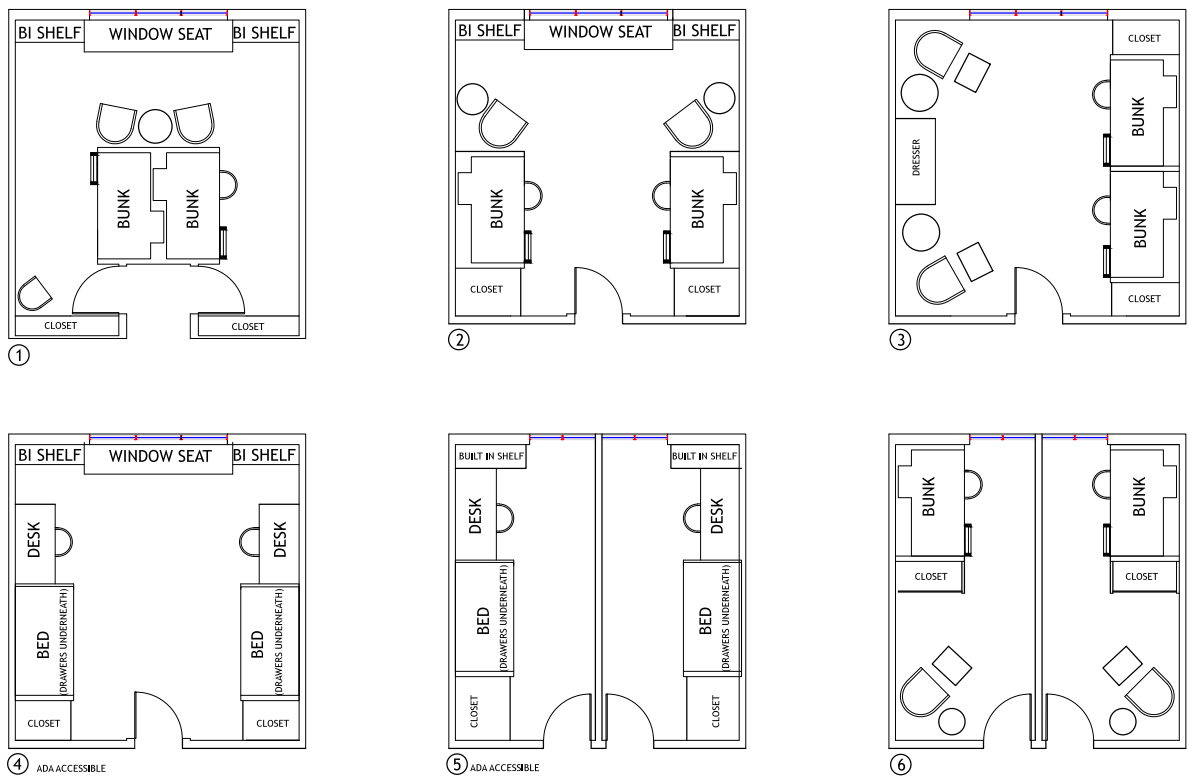

Figure 33: Room Layouts

Option one is a successful layout for both reasons of spatial efficiency and allowing the girls to have their own private space with in the room. They both enter from independent doors, but have a shared common area should they choose to spend time together. This allows them to have both private space and social interaction in a more intimate environment, as opposed to the larger spaces out side of the room. The bed is elevated off of the ground to allow for desk space below, and provide maximum spatial efficiency within the room. This room does however have blind spots, and does not allow a clear line of sight from the door; therefore occupants of this layout must be determined to be emotionally stable, and low risk. This option will likely be for girls who have been in the program for a few months, and have reached a higher security clearance with in the facility. Options 5 and 6 also offer maximum privacy. Option 5 accommodates ADA accessibility, while option 6 maintains the bunk format for greater space efficiency.
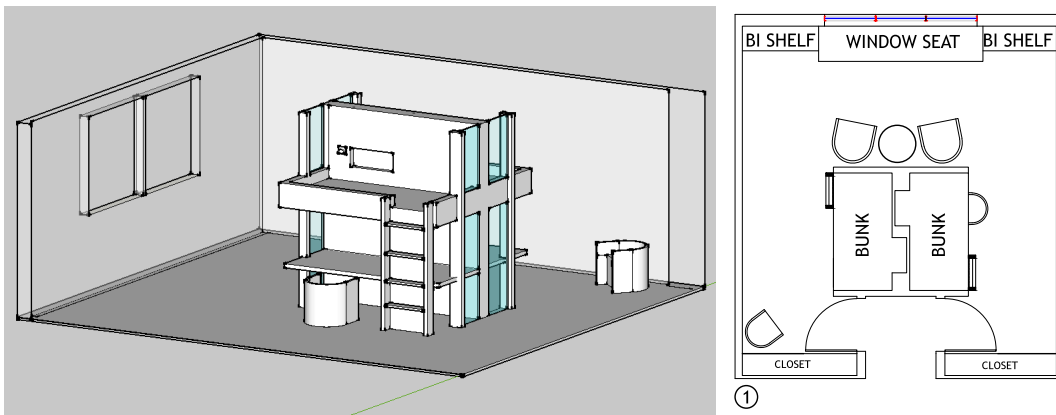

Figure 34: Option 1 room layout.

While allowing the girls privacy is of course a concern, it will not always be possible depending on the emotional conditions in which the girls arrive to the facility. Some girls

will be coming to the site in a traumatized and potentially suicidal state. These high risk girls must be watched at all times and will not have the advantage of a private room. Room options 3 and 6 would be a good fit for these patients. Special attention is paid to eliminate blind spots with in the room, insuring clear line of sight from the door way. Option 4 is an ADA accessible room. The girls will also have a roommate to monitor their progress and notify our staff if any concerning behavior is exhibited.
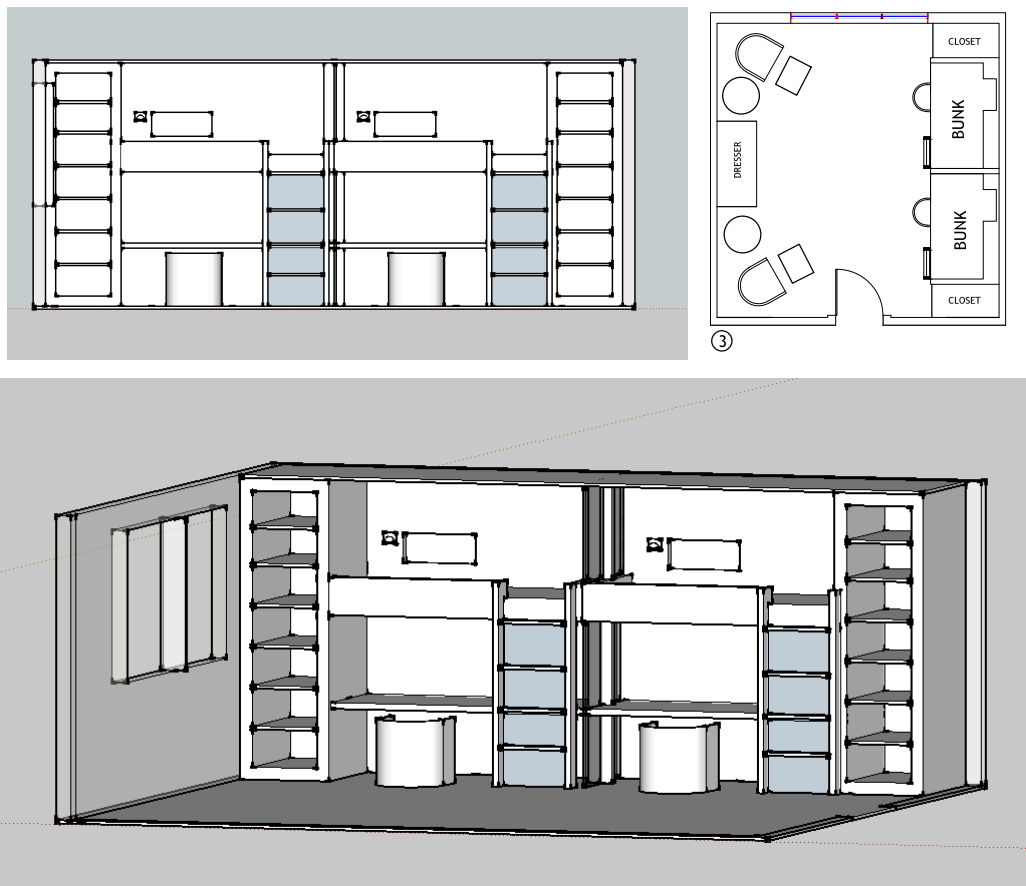

Figure 35: Room Option 3

There will be various room layouts through out the facility, each catering to different needs and emotional states of the girls. There will be transitional phases that the girls will

go through as they move through out the program. As the girls get more privileges and earn the right to more privacy, their room environment will reflect these changes. Once the girls are released from the program the goal is for them to integrate seamlessly back into society where they will be able to function with out the assistance of the facility. It is important to prepare the girls for this transition by allowing them to grow and learn through transition within our facility.

Phase-Oriented Treatment

The phase oriented treatment program is used to identify the root causes of the resident's behaviors, teach alternative socially appropriate coping skills, and treat the underlying psychological symptomatology. It is an evidenced-based, victim-centered, trauma-focused, strength-based therapeutic tool designed to shape the residents behaviors with the use of operant conditioning techniques. The program has six phases, **P**reparing, **E**stablishing **A**ssimilating, **R**ole Modeling, **L**aunching, **S**ucceeding, referred to as P.E.A.R.L.S. The sequential order of the treatment needs to be such that lessons learned in one phase serve as a building block for following levels. The levels are phase-oriented and sequential, but they are not linear. Residents may skip levels or revisit levels based on their individual needs.[253] Through the program, residents are guided and supported in positive character development, learning to earn and maintain trust, protection from re-victimization, improvement of interpersonal and socialization skills, and the development of appropriate

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[253] Complex Trauma in Children and Adolescents, National Child Traumatic Stress Network. Retrieved at www.NCTSNet.org.

coping mechanisms for troubling emotional states. There is a general consensus that treatment for complex trauma should take place on a phased-based, or sequential approach.[254]

The Motivational Levels of PEARLS increase in complexity and expectations as the resident moves further along in the program. The architectural design of the building has an intrinsic relationship to the phase oriented treatment plan. As the girls transcend through the levels of PEARLS their living quarters respond to these transitions. Throughout the Preparing and Establishing levels they will be in rooms closest to the staff security office and common areas where they can be easily watched. In the first four levels they will be in shared rooms and as they move through the levels and gain more trust and privileges they will transition to private rooms. The shared living quarters allow for not only facilitated staff monitoring but also peer surveillance. If a resident is aware that their roommate is struggling in any way, they are encouraged to notify the staff so the issue can be appropriately and safely addressed. The Role Modeling as well as the Launching and Succeeding corridors are located along the front façade of the building, where the girls are at a higher risk of escape or communication with un authorized people out of the program, therefore the girls who reside here must earn a level of trust from the staff. The latter rooms are also individual, and are reserved for the girls who have been proven trustworthy to be left alone, where they will not be a risk to themselves or others.

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[254] Warner, E., Spinazzola, J., Westcott, A., Gunn, C., & Hodgdon, H. (2014). The Body Can Change the Score: Empirical Support for Somatic Regulation in the Treatment of Traumatized Adolescents. *Journ Child Adol Trauma*.
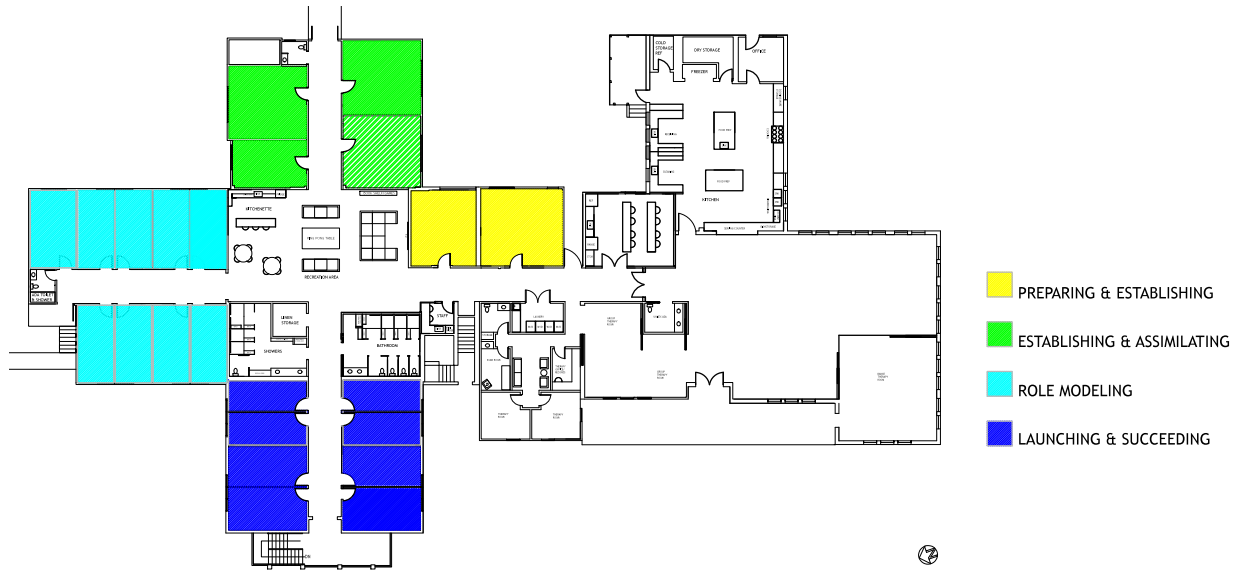
Figure 36: Room layouts reflect the phase oriented treatment plan.

***Preparing*: To make ready for a purpose, use, or activity.**

Anticipated average length of the *Preparing* level: (Approximately 1 month)

At this level, residents are preparing for their stay in the Pearl Haven home. While on the

Preparing level, residents learn necessary components of the program for their

incorporation into the milieu of the home. They are taught the importance of safety for

themselves and others, and the importance of appropriate social, coping, and interpersonal

skills. Residents on the *Preparing* level are taught the following: the home's expectations,

the PEARLS' motivational system, daily schedules, chore rotations, cleaning skills,

expected behaviors, appropriate language, manners, the prohibition of glorification of the

Game in the home, and boundaries. At this level, residents will earn points for all positive

behaviors observed, and will lose points for all negative behaviors observed. *Preparing*

level residents receive prompts throughout the day as reminders of expected behaviors.

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Residents on preparing must earn +1,000 at total up time to earn their privileges for the following day. The goals of this level are as follows: for residents to stabilize, begin the initial stages of learning to appropriately express their emotions, adequately adjust into the milieu of the home, and to ensure residents have been properly and clearly taught all expectations of the home. Residents on *Preparing* level meet with their case manager on a daily basis to discuss their successes and areas of improvement within the program.

For the first 2 weeks, the staff will assist residents with completing their chores. During these 2 weeks, the Team manager rotates chores to ensure the new residents are provided an opportunity for hands on learning of what is expected with each chore. Staff will also assist new residents in completing all aspects of their major chores the first time they are assigned.

Staff teach the residents Focus Skills through modeling and utilizing positive and negative points. Artificial external rewards and consequences are the primary forms of reinforcement at the *Preparing* level.

Successful Completion of the Preparing Level: Successful completion of the *Preparing* level is evidenced by:

- Completing at least one cycle of all daily chore rotations (this can be done with the assistance of staff).
- Verbal acknowledgement of the importance of respecting self and others (residents are asked to provide at least 3 personal rationales as to why this is important).

- Display effort in putting learning into practice as evidenced by earning daily
  privileges on 4 days out of the week for at least 2 weeks.

- Participating in all required activities on 4 days a week for at least 2 weeks (attitude
  and behaviors not considered at this level unless major issues occur, i.e. attempts at
  elopement, etc.).

- Participation in individual therapy (to be confirmed by therapist).

Establishing – **To place or settle in a secure position or condition.**

Once residents have been adequately prepared for the expectations of the home, they begin
working on the *Establishing* level. On *Establishing* level, residents learn what trust is and
how to establish themselves as trustworthy individuals. Residents on the *Establishing* level
move from theoretical knowledge of what is expected, to the initial display of concrete
ways to exercise trust, good manners, appropriate language, positive attitudes, good study
habits, and respect for others.   The use of prompts on the *Establishing* level are minimal,
with residents earning negative points for behaviors already established as undesirable.
With the decrease in prompts, residents are taught the importance of being consistent with
their compliance. Residents learn that they are in control of their behaviors, and the
resulting positive and negative consequences. Residents on the *Establishing* level continue
to be primarily externally motivated by points; however, natural consequences (both
positive and negative) will be dispersed when deemed appropriate. Even with the decrease
in prompting, residents on the *Establishing* level are still expected to earn +1,000 points at
total up time to ensure they work to process and make amends for negative behaviors.

When residents on the *Establishing* level choose to share their history with staff, the staff member will accept what the resident tells them about their past as truth (even if they know it is not true). This is done since staff are aware that residents at this level do not yet trust staff. Staff will encourage residents to share significant disclosures with their therapist and will inform the clinical director or his/her qualified designee, regardless if the resident chooses to bring the topic up in therapy.

Successful Completion of the Establishing Level:

Residents who are successful at this level are expected to avoid outbursts, arguments, or problematic social behaviors and are now expected to begin appropriately verbalizing emotions and self-regulation in times of distress. The residents' readiness to begin the next level of the motivational system is evidenced by:

- A 30% decrease in acting out behaviors (evidenced by their behavior chart).

- Their ability to verbalize what trust is, and provide examples of how they have begun to earn trust in the home.

- Acceptable participation in therapy (to be confirmed by therapist).

- Their ability to appropriately identify some of their triggers.

- Their ability to identify at least 3 appropriate coping mechanisms proven to work for them (they must provide examples of when they have utilized these coping mechanisms).

- A majority staff acknowledgement of the residents' adequate adjustment into the milieu of the home by establishing their role within the milieu.

Assimilating – To take in and incorporate a culture as one's own and understand it fully, to adapt.

Residents who have successfully established their place in the home will begin _Assimilating_ from the subculture of CSEC back into mainstream society. Because residents at this stage have been in the home for a substantial amount of time, it is expected their "real" problems will begin to surface. Residents are expected to access their new found coping skills when difficulties arise to avoid reverting to their old ways of coping. Residents on the _Assimilating_ level will have fewer leniencies with regards to earning points, as they are now held at a higher expectation to access appropriate coping skills when they are emotionally deregulated.

Residents on the _Assimilating_ level will show consistency in their actions, words, and interpersonal relationships. They no longer self-identify with the subculture of CSEC, and instead categorize themselves in mainstream society. Residents on the _Assimilating_ level are expected to begin role modeling appropriate behaviors for newer and younger residents, and towards the end of the level, begin taking on minimal leadership roles.

On the _Assimilating_ level, residents are expected to internalize what they have learned thus far in the program, and are also expected to access positive coping skills without prompts. Residents at this level are only rewarded for spontaneous actions or actions beyond what are expected of them (i.e. helping a peer who struggles with chores without being asked to do so), not because they have to or because they are getting points. There is a natural

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decrease in the use of points, where staff will use verbal praise and encouragement for residents complying with standard expectations. Residents on the *Assimilating* level must earn +500 points by the end of total up.

Successful Completion of the Assimilating Level:

Residents completing the *Assimilating* level have learned to recognize their distress signals, utilize relaxation strategies, and once calm, reflect on how and why they were triggered. Residents mastering the *Assimilating* level will display:

- The ability to appropriately express a variety of emotions focusing on when, where, why, what, how much, and how best to communicate them.
- A maximum of 3 outbursts a month.
- The ability to quickly self regulate if/when they becomes deregulated.
- Verbalization of their personal outlets for stress and anger.
- The ability to accept responsibility for their role in their trafficking experience (to be done with their therapist).
- Evidence of taking on at least 1 leadership role in the home.
- Completion of all academic requirements.
- The ability to spontaneously help others.
- Consistency in their actions, words, and interpersonal relationships to those in mainstream society.

Role Modeling – A person whose behavior, example, or success is or can be emulated by others.

Residents on the _Role Modeling_ level have successfully integrated into the home, begun to identify themselves with mainstream society, and are now focusing on being a positive example for those coming up behind them. The goal of the _Role Modeling_ level is for residents to learn to lead by example, improve their sense of self-worth, be assertive not bossy, and show they can help others achieve their healing. At this level, residents are taught the definition of role modeling and how to utilize their personality to positively influence the behaviors of others.

Additionally, residents on the _Role Modeling_ level will demonstrate an understanding of the difference and relationship between thoughts, feelings and behaviors and how to overcome the negative effects of trauma[255]. At this level, residents will learn the advanced skills of: recognizing and identifying their negative thoughts; distinguishing between thoughts and feelings; understanding the relationship between feelings, thoughts, and behaviors; and correcting 'wrong' thinking by creating helpful positive thoughts.

Residents on the _Role Modeling_ level are expected to show signs of growth, as evidenced by their ability to avoid regressing to old learned behavioral habits when triggered, but to instead access more advanced coping skills. For example, a resident who becomes upset will no longer turn to the positive coping skill of taking a time-out in the middle of a task,

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[255] Johnson, B., Ph.D. (2012). Adapted Trauma-Focused Cognitive Behavioral Therapy, Step-by-Step Overview and Checklists. _Adapted from & Based on TF-CBT by Dr's Cohen, Manarino & Deblinger_.

but will instead complete the task by practicing positive self-talk or deep breathing. This is done so the resident learns to function in the community where it may not always be appropriate or possible for her to take a time-out.

On the *Role Modeling* level, residents are taught to pick themselves up when they make a mistake or are corrected, and to move forward with a positive attitude. They will also display the ability to overcome disappointments without being derailed. For example, a resident who receives disappointing news from her family, probation officer, or social worker will be able to appropriately express her disappointment and still carry out required tasks throughout the day.

Residents on the *Role Modeling* level are no longer on the point system. They will earn positive praise for completing required tasks and for displaying spontaneous actions or actions above and beyond what is required. They will continue to work on their individualized Focus Skills with undesirable behaviors resulting in the loss of allowance (not to exceed $1 per infraction). Residents who lose allowance for negative behaviors will be offered the opportunity to earn back half of their allowance by completing a process sheet, where they clearly define what actions were wrong, the reason why they engaged (or did not engage) in such actions, and how they will refrain from making the same mistake in the future. Process sheets must be unique to the problem at hand and must show insight and growth into the residents' understanding of their behaviors.   Staff will process the sheet with residents and guide them in areas where they may expound if necessary. If

residents fail to make additions or are resistant during the process, they may not earn back the full half of their allowance.

Reports from *Role Modeling* residents' therapist must reflect active engagement, willingness to go outside of their comfort zone in treatment, and their ability to apply what they learned in therapy to the outside world.

Towards the end of this level, residents will gain the knowledge of how improved self-regulation increases trust from others. They will begin to earn unsupervised time on the premises in 5-minute increments. Residents who struggle with unsupervised time will work closely with staff and their case manager to improve areas of concern. Unsupervised time may be suspended or extinguished for residents displaying behaviors dangerous to themselves or others.

Successful Completion of the Role Modeling Level:

Successful Completion of the *Role Modeling* level is evidenced by the ability to:

- Refrain from emotional outbursts.
- Verbalize how they demonstrate positive role modeling to their peers.
- Successfully access a minimum of 30 minutes of unsupervised time.
- Display marked improvement in therapy (therapist to confirm).
- Complete a 2-week period where they earn no less than half of their allowance.

- Understand and verbalize their negative thoughts and provide concrete examples of how they thwart such thoughts.

- Understand and verbalize the distinction between thoughts and feelings.

- Understand and verbalize the relationship between feelings, thoughts, and behaviors.

Launching – **To set going; initiate**

On the *Launching* level, the focus for residents shifts from the milieu of the home to preparing for their transition back into the community. Residents on the *Launching* level combine the skills previously learned in the program and begin to implement these skills within the home and out in the community. Residents at this level learn to identify any avoidance areas in their lives and develop a plan for dealing with the fear/avoidance areas. The goal of this level is for residents to learn how to live free of fear with a sense of safety, establish and work towards future goals, and begin the transitioning process.

Residents at this level begin unsupervised time outside of the home, and will begin to access services outside of the home. *Launching* level residents work with their case manager to find mental health, medical, and other service providers outside of the home to ensure proper treatment will continue once they transition into the community.

Launching level residents no longer complete formalized sheets on their behavior and daily activities. They are expected to follow through with requirements, adhere to their individualized treatment plans, and either begin searching for part time employment,

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applying to college or trade school, or begin volunteering part time for an outside organization. Residents at this level are expected to be primarily internally motivated; however, they will continue to lose allowance or unsupervised time for more serious undesirable behaviors. Working, attending outside classes, and/or volunteering are not seen as privileges, and therefore, will not be taken away from the resident unless they may result in direct harm to themselves or others.

Minor regression at this level is expected, since residents will likely experience fear regarding their upcoming transition. Residents' therapist and staff will work closely with them in addressing, normalizing, and extinguishing these fears whenever possible.

Residents on the *Launching* level who will transition back to non-offending families will begin increased time with their families (not to include overnight stays) where they will eventually stay with their family all day during the weekends and holidays. Residents without non-offending families will begin extended passes with their mentors or designated program staff to slowly and safely transition back into the community.

Successful Completion of the Launching Level:

Successful completion of the *Launching* level is evidenced by:

- Successfully managing unsupervised time.
- Making a supported decision on future goals with their case manager and therapist.
- Actively working towards their future goals.

- Understanding and verbalizing their transition plan.

- Accruing a minimum of 1 month of positive feedback from non-offending family or mentor regarding prolonged unsupervised time.

- Identifying and verbalizing any avoidance areas in their life.

- Developing a plan for dealing with fear and avoidance areas with their therapist or case manager.

Succeeding **– To achieve the correct or desired result.**

The final level of the motivational system is *Succeeding*. At this level, residents are called upon to use all skills they have acquired during their stay to become a productive member of society. The goal of the *Succeeding* level is for residents to demonstrate readiness in transitioning back into the community.

Residents on *Succeeding* will be assisted towards their future goals, which may include, but are not limited to: full time employment, part time employment, entering into college or a trade school, enrolling in high school, transitioning back to their non-offending family, transitioning to a therapeutic foster home, or finding independent living.

Residents who are returning to their non-offending families or are transitioning to therapeutic foster homes will begin overnight stays with the prospective families, should circumstances permit. Issues that arise while they are out with the family will primarily be addressed within the family home and do not automatically result in the visitations being discontinued or the revisiting of a previous level. The prospective family will be supported

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in creating consequences which, when relevant, will be followed through at the Special Treatment Facility once the resident returns (i.e. if the family chooses to ground the resident for a week, she will be grounded when she returns to the home for the week). In an effort to maintain stability, the rules and interventions utilized for the Special Treatment Facility and the prospective family will remain consistent, as much as possible. For example, if grounding at the prospective family home means the resident can watch television but not hang out with her friends, she will be able to watch television while at the Special Treatment Facility, but must refrain from outings.

Residents on the *Succeeding* level create an individualized privilege package that is agreed upon by the clinical director or his/her qualified designee, her prospective family, and her outside therapist. The prospective family will take over the responsibility for ensuring the resident makes it to all of her appointments and will complete Home Pass Reports for each time she is under their care.

Successful Completion of the Succeeding Level:

Residents who successfully complete the *Succeeding* level will show readiness to reintegrate back into society as evidenced by:

- Clearly communicating feelings and desires.
- Recognizing and successfully coping with doubts and uncertainties.
- Identifying safe people and places.
- Learning to say "no" (especially regarding their bodies).

- Asking for help (and being persistent, not pushy or demanding).

- Distinguishing between "good and bad touches" and "good and bad secrets" (including "ratting").

- Maintaining schooling requirements or employment.

- Understanding their rights and legal protection.

Final Design Proposal
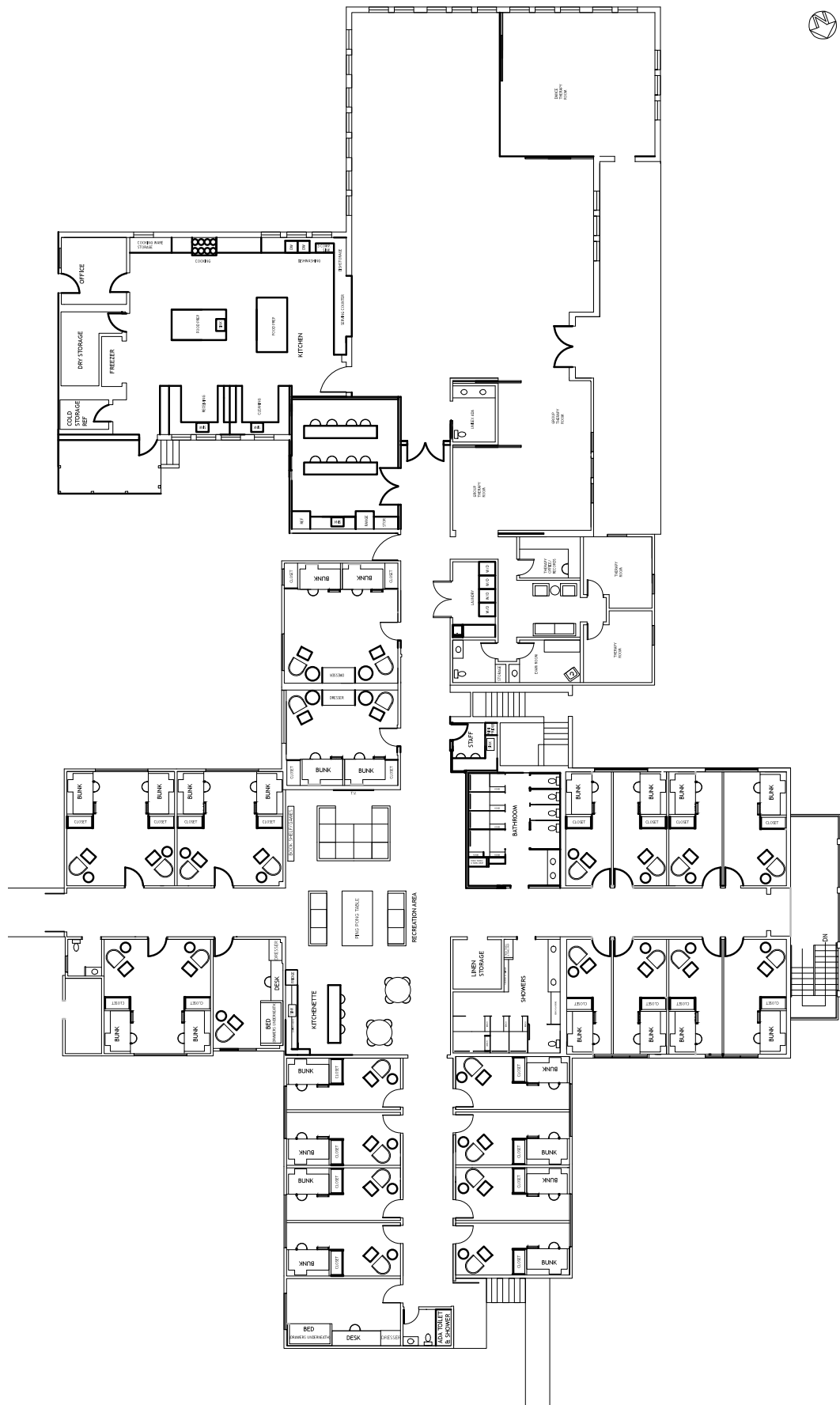

Figure 37: Proposed Site Plan.

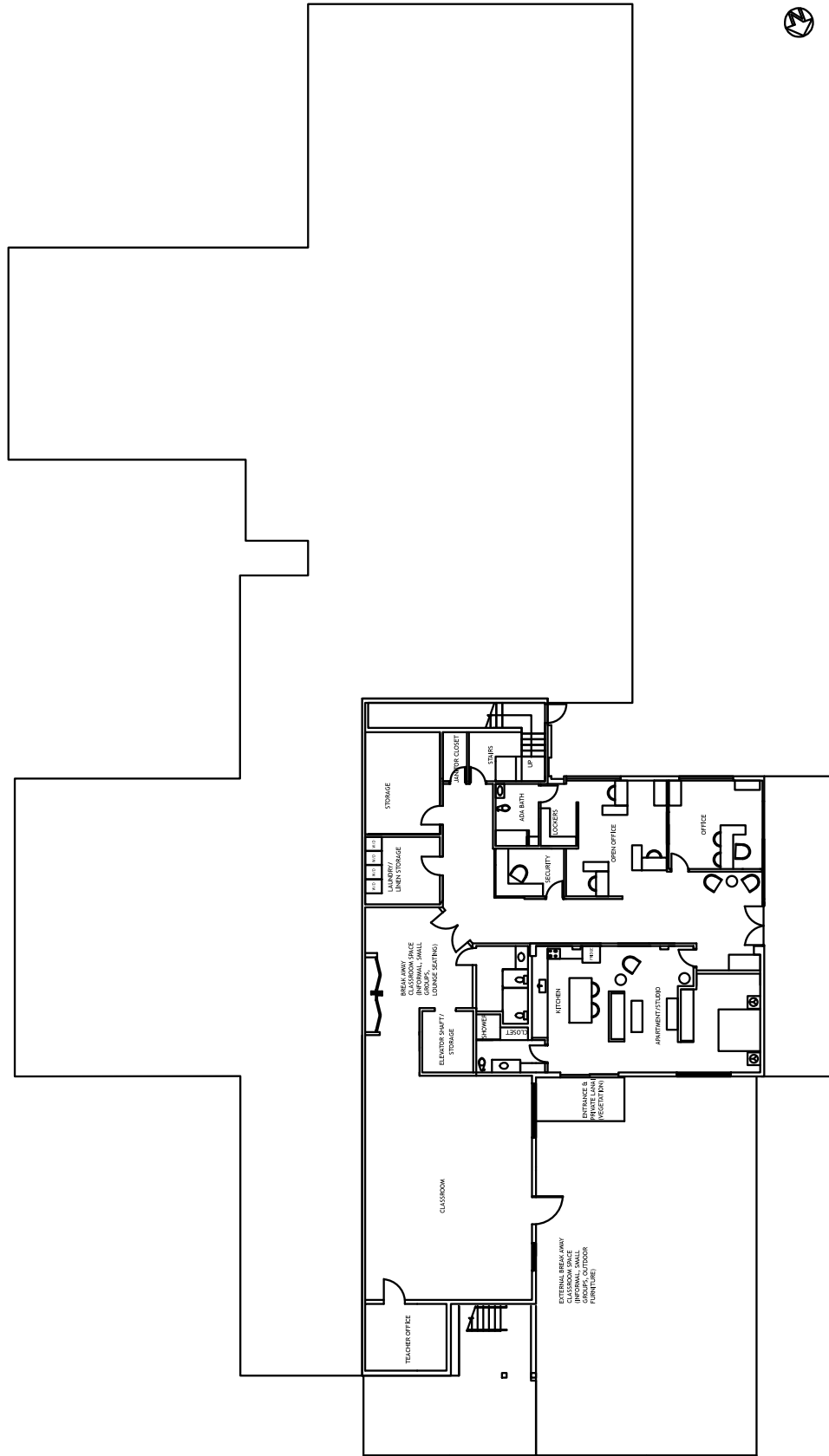187

Figure 38: Proposed 2nd floor plan.
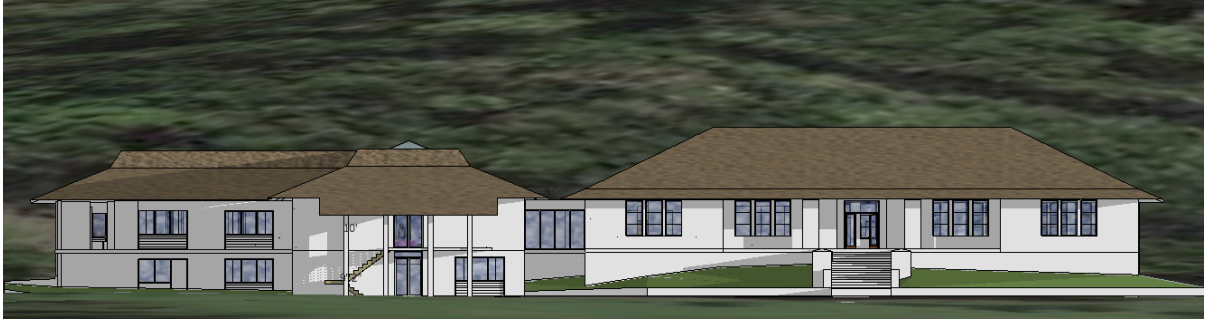
Figure 39: Proposed 1st floor plan

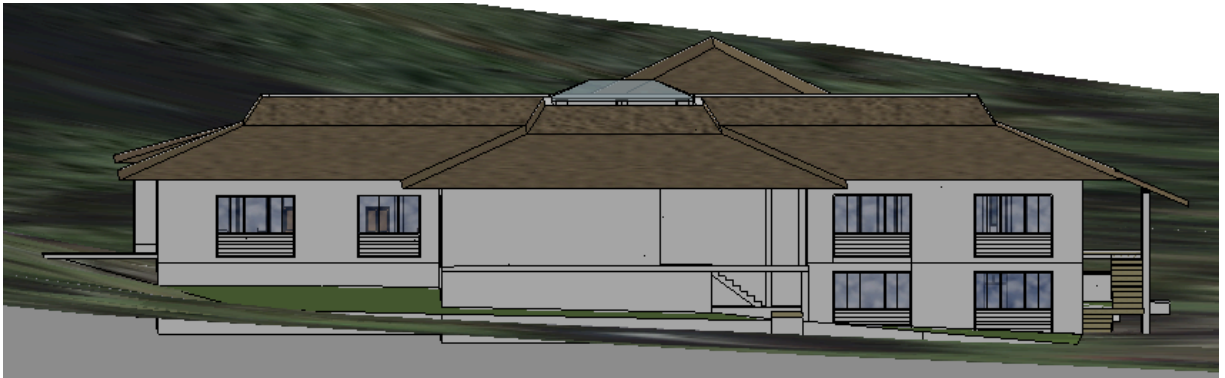Figure 40: West Elevation.

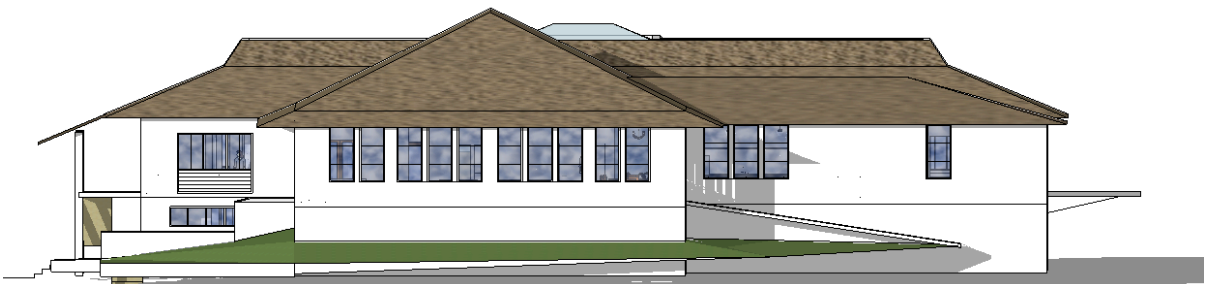Figure 41: East Elevation.

Figure 40: North Elevation.

Figure 41: South Elevation.

Chapter 8

CONCLUSION;

CHALLENGES AND FINDINGS WHILE ADDRESSING DESIGN STRATEGIES

Introduction

The psychological implications of design on human behavior is focused on as the architectural strategy for rehabilitation in this project, however there are many contradictions to the research and the reality of design freedom allowed with in this project. The goal is to use the various architectural elements incorporated in this research to achieve the best environment possible for rehabilitation. This includes spatial planning paying special attention to the issues of physical space including privacy, crowding, and social interaction areas. Architectural aesthetics such as light, color, psychological effects of views and nature, as well as auditory and sensory implications are also considered for rehabilitative strategies. This compiled research has an affect on all areas of design, including the architectural design, interior design and landscape architecture, however the conflicts of safety and codes as well as the dynamics of working with in the demands of the organization results in various compromises which I will discuss in this chapter.

Privacy

Privacy was discussed as theory and research related to the issues of physical space, interpersonal distance, and the control of both aspects. When looking at rehabilitation institutions from a larger scale, the facility can be considered in terms of broad organizational issues of design and management, for example, how a facility is created, how space is organized, and how rules are devised and maintained. As discussed in chapter IV, Privacy plays a very important role in the design issues of rehabilitation facilities, and

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can either help or inhibit inmate rehabilitation depending on how it is addressed within the design context. Irwin Altman was a behavioral psychologist who developed a theory called the Privacy Regulation Theory in 1975. Altman describes a term, *Optimal Privacy*, which represents a match between the level of contact wanted and the contact available, allowed and achieved. This process is dynamic in that the desired levels of social interaction and information access will fluctuate over time. Typically, the individual needs control over the situation in order to achieve privacy, being able to change the situation to fit changing desires for greater or lesser contact. Optimal privacy does not necessarily mean being alone. According to Altman, it is to be alone when being alone is desired, or to be with several others sometimes, or with many people at other times. There are two situations in which privacy may fail. *Crowding* is the state in which attempts at privacy fail because a person has no choice but to be in contact with more people than desired. *Isolation* is when privacy fails because the person wants to interact with more people but is kept from doing so through limitations such as architectural, social or organizational.[256] Privacy plays an important role in self-evaluation and rejuvenation.[257]

There are various types of privacy, including *solitude*, the state of being alone by choice. Solitude distinguished from *isolation*, which refers to being alone at the directive of others. *Anonymity* is achieving aloneness by not being recognized in a crowd, and through *reserve*, withdrawing into one's self. Privacy is also experienced in *intimacy*, which is considered
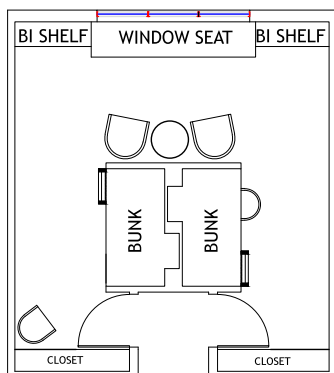
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[256] Irwin Altman, *The Environment and Social Behavior: Privacy, Personal Space, Territory, and Crowding* (1981), 115-116.

[257] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 117.

close contact with others in the context of an emotional exchange.[258] These different types of privacy serve important social and psychological needs.

If a healthy balance of privacy is not achieved, stress will be instilled in the patient resulting in negative effects on rehabilitation. "By defining privacy in terms of control or lack of control over the degree of openness to interaction, we are also able to connect it to the broader literature on environmental stress. *Control* - the ability to regulate the level of exposure to environmental events – has been linked to the degree to which people experience stress and have lasting effects from exposure to stressors".[259] Unpredictable, intermittent stressors appear to have the most negative and lasting impacts.[260] Control is not just the physical ability to manipulate settings, but also includes the ability to predict events. Individuals may try to reduce the stress of loss of privacy changing their behavior, this may be shown by an increase in territorial behavior.

BI SHELF   WINDOW SEAT   BI SHELF
BUNK   BUNK
CLOSET   CLOSET
①

The concept of privacy has been a great challenge in the design process of this facility. Consistently I have been faced with challenges of how to represent the best interests of the girls in relation to privacy, while maintaining a safe environment for the patients to recover

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[258] D. Pederson, *Journal of Environmental Psychology* "Model for types od privacy by privacy functions" (1999), 397-405

[259] Evans & Stecker, *Journal of Environmental Psychology,* Motivational Consequences of Environmental Stress (2004), 143-165.

[260] G. Evans, Environmental Stress (NY, 1982), 120.

albeit their traumatized states, potentially being at danger of harming themselves or others. The room layouts were particularly challenging. Option 1 was the ideal proposed layout. The girls would have their own private space with in the room, while being able to share a common area for more private interaction in a group of two, should they desire to socialize in a more intimate setting, as opposed to the large common room areas. Regardless if the area in front of the window was opened up as a long hall will direct access to security, or if it was included in the camera monitoring system, the organization insisted on being able to see all areas of the room from the immediate door opening. In fact, the original request was to not have a door at all, and to be able to directly see into the room from the hall with no obstructions. As discussed in chapter IV, a study by Zimring, Weitzer and Knight conducted in 1982, showed that when residents with in institutions have private bedrooms with closable, lockable doors, they are more social and less withdrawn. These private spaces allow for retreat opportunities when desired and therefore allow the resident to have the freedom to be more social otherwise. They suggest that the lack of private space encourages more aggressive territorial behavior. The study showed that the designs that increased control over social interaction as well as of physical aspects of light, heat and noise, positively impacted stress and interaction.[261] A compromise was made and the girls were allowed to have doors in their rooms, however a direct line of sight needed to be maintained. This compromise maintained an element of control and healthy balance of privacy with in the room, from the hall, however in the early stages the girls will be required to share the room with another room mate to facilitate monitoring. As the girls

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[261] C. Zimrig, W. Weitzer, & R.C. Knight, *Environmental Health*, Advances in Environmental Psychology, Vol. 4 (NJ, 1982) 171-210

progress through the program, the rooms become singular and more privacy is allotted to the girls.

The second significant hurtle I needed to cross in relation to privacy was the bathrooms. We are still in the process of addressing this situation, however the institution had requested that in order to eliminate the need for staff to follow the girls into the locker room, the toilet stalls must directly open to the recreational area, with an opening above the head and below the knees so the girls will be able to be monitored with in the stall from the outside. This was a large point of contention as the psychological implications of such a drastic loss of privacy would be immense. Sound and scent would be easily transferred to the recreational area and would be a source of humiliation and degradation to the girls. We are currently working through a design solution that addresses private stalls adjacent to the recreational area, or locker rooms that will accommodate easier monitoring for the guards with out exposing the girls to loss of privacy.

Correctional and rehabilitation settings are in general extremely poor places for privacy, due to the nature of the legal and social contract that creates the right to incarcerate someone, transferring control over these choices from the individual to the organization.[262] Addressing privacy was one of the most challenging issues I have faced in the design process, and the design issue that will have the most effect of the psychological health of the girls. Maintaining a state of respect and dignity is my greatest concern and I will continue to fight for the architectural design elements that support and address this cause.

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[262] Michel Foucault, Discipline and Punish: The Birth of the Prison. (New York, 1979)

Light and Windows

Humans have an innate connection to light, as they have evolved in a day-lit environment. Our bodies react to changes in lighting conditions, and the way we react depends on the lighting intensity, the spectrum of the light, and the timing of our exposure.[263] Exposure to natural light, based on the planet's 24-hour cycle, plays an important role in setting and maintaining *circadian rhythms*, the body's biological clock.[264] Recent finding indicate that this time setting function does not respond uniquely to natural light, and may be affected by artificial light as well.[265] Excessive amounts of time spent indoors leads to an inadequate exposure of high intensity light found in natural daylight, leading to negative health consequences[266] including disruption of circadian rhythms, affects to hormone regulations,[267] mood disorders[268] and vitamin D deficiencies.[269] While being exposed to the right kind of light at the right times can be very positive on health effects, exposure to light during normal sleeping times has the effect of prohibiting melatonin, which affects sleepiness and mood. People need not just properly lit environments, but also proper light-

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[263] J. Veitch, *Final Report – the 5ᵗʰ International LRO Lighting Research Symposium – Light and Human Health* (Palo Alto, CA 2004)

[264] P. Boyce, C. Hunter & O. Howlett, *The Benefits of Daylight through Windows* (NY, 2003)

[265] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 206-207.

[266] A. Joseph *The Impact of Light on Outcomes in Healthcare Settings,* (NJ, 2006), 209.

[267] (burgess, sharkey, Eastmand 2002) 210

[268] R. Leslie, *Capturing the daylight divided I buildings: Why and how?* Building and Environment (2003), 381-385.

[269] A. Joseph *The impact of Light on Outcomes in Healthcare Settings,* (NJ, 2006), 209.

dark cycles.[270] "Healthy light is inextricably linked to healthy darkness".[271] The problem that many prisons need to address is both too little light and too little darkness.

Each room will have access to a window, providing natural light. Windows serve multiple functions; they let in direct and indirect sunlight, aid in ventilation and temperature control, and serve as a source of information about place, the environment, and nature. They provide stimulation and sensory change, an important tool to allow for remediation for isolation and boredom. Providing views to the outside world and of nature can offer benefits for stress reduction, mental restoration and recovery, and are capable of unconsciously influencing the level of satisfaction with an environment.[272] In areas where one is confined to a small setting, an individual's eye might never have an object to focus on that is more than a few meters away.[273] When an eye is in close focus, the ciliary muscles in the eye contract to thicken the lens and shorten the focal length for viewing. Windows allow for infinite focus of the eye. By allowing the eye longer or infinite opportunities for focus, it allows the eye muscles to relax, reducing muscle strain and relieving tension that could cause headaches.[274] The study on space habitats suggests that "windows are works of art, and other distracters which divert attention from other people

[270] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 211.

[271] J. Veitch, *Principles of healthy lighting: highlights of CIE TC 6-11's report*. (2010, p.2)

[272] J. Heerwagen, *The Psychological aspects of windows and window design* (Oklahoma, 1990), 269-280.

[273] R. Haines, *Space station proximity operations and window design*. Space Station Human Factors Research Review, 1988, 4. 1-18.

[274] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 214.

can promote social distance and reduce perceived crowding".[275] Windows also decrease

crowding by increased perceived spaciousness.[276] Windows offer visual stimuli and variety

and provide an opportunity for psychological distancing and escape in confined settings.

The greatest challenge with the windows at this facility was maintaining the historical

facades and not altering the partitions when separating the rooms in two. If the windows

were altered on the plan they will be divided in the original partitions, sometimes resulting

in one room having a window one third larger than its neighbor. If it was necessary for a

window to be split in two against the original mullions divided in thirds, the goal was to

reserve these changes for the side and back façade so as not to interfere with the front

historic façade. The size of the mullion's were maintained to match the existing window

styles.

It is also important to consider the negative effects windows may have in rehabilitation

settings, there are some consequences of windows that could bring more harm than good.

Although the view afforded by windows is a highly valued element in institutions, being

visually exposed could cause emotional detriment to patients. In correctional rehabilitation

settings, there is often conflict between the visual need for security, and providing an

environment that does not make the inmate feel exposed or on display, which can be

uncomfortable and stressful. A window that faces to outside public space could be used as

an opportunity to inappropriately communicate between a patient and a friend or relative,

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[275] A. Harrison, B. Caldweli, N. Struthers, Y Clearwater, *Incorporation of Privacy Elements in Space Station Design* (Washington, 1988), p.iii

[276] J. Desor, "Toward a psychological theory of crowding," *Journal of Personality and Social Psychology*, 1972, 21(1), 79-83.

via gestures or signs, or could create privacy issues for the patient if recognized by outsiders. Windows can also be seen as posing security management problems, and can present hazards to staff.[277] Windows are profoundly important for correctional institutions for their irreplaceable qualities of light and views, resulting in numerous health benefits; however it is imperative that they are applied in the right context so as not to cause harm to the inmates, staff or surrounding community. To address this a security fence was installed along the perimeter of the property, with sufficient vegetation to keep any public interaction or viewing away from the structure.

Nature

Contact with nature is critical to human mental and physical health.[278] There have been many studies on the effect nature and nature views on behavior, mood and health. They biophilia hypothesis assumes that there is a survival advantage gained from direct contact with nature. The study suggests that exposure to nature reduces stress and that there is an evolutionary advantage conferred by rapid stress recovery.[279]

Guided by this theory, a psychologist by the name of Roger Ulrich developed a notable body of work in 1984 on views and health care. "Investigations of aesthetic and affective responses to outdoor visual environments have a strong tendency for American and

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[277] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 216.

[278] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 217.

[279] S. Kellert & E. Wilson, *The Biophilia Hypotheses,* (Washington, 1993)

European groups to prefer natural scenes more than urban views that lack natural elements. Views of vegetation, and especially water, appear to sustain interest and attention more effectively than urban views of equivalent information rate".[280] These views of nature had a positive impact on feelings, reduced fear in stressed subjects, hold interest, and block or reduce stressful thoughts, resulting in restoration from anxiety or stress. He also found that for those patients that have unvarying schedules and spend a considerable amount of time in the same room, such as surgical patients (not unlike prisoners), views to the outside become especially important. He found a direct correlation between the positive impact of views on the patients emotional state, which had a direct impact on the patients recovery.[281] Other research confirms that views in hospital settings can significantly reducing depression, anxiety, and post treatment delirium.[282]

Another theoretical approach is based on a cognitive explanation by Rachel and Steven Kaplan in 1989, in relation to attention and depletion of attention. According to their study, focusing on scenes, mental tasks, and situations that are not inherently fascinating and pleasant requires concentration and is mentally fatiguing. "Scenes and situations that provide easy fascination can be restorative, in that exposure to them can speed recovery from mental fatigue. They allow a person to rest the inhibitory mechanism on which

[280] R. Ulrich, "View through a window may influence recovery from surgery," *Science, 224* (April 27, 1984), pg1, 420-421.

[281] R. Ulrich, "View through a window may influence recovery from surgery," *Science, 224* (April 27, 1984), pg1, 420-421.

[282] P.Keep, J. James & M. Inman, "Windows in the intensive Therapy Unit" *Anesthesia,* 35(13), 1990, 257-262.

concentration depends".[283] They found that access to views lead to less frustration, more satisfaction, and fewer self-reported ailments.[284]

Further studies related to the correctional environment have showed evidence that exposure to nature has the potential to reduce aggressive behavior. A study by Rice and Remy in 1998 found that inmates in prison reported less aggressive feelings when working in a garden.[285] Other studies indicated that patients with external views of nature had reduced blood pressures and used lower levels of institutional health care facilities.[286] Windows should play a role in supportive design, helping to achieve rehabilitative goals with in correctional facilities, reducing stress, agitation, irritation, and aggression to increase positive interaction and reform with in the institution. "The inability to be part of and touch nature, or even to view it, eliminates yet one more important option for adapting to and reducing stress and mental fatigue. Not only do inmates suffer from exposure to many sources of stress, they also are denied many or most of the means the rest of us use to deal with stress".[287]

Nature is addressed in many ways at Pearl Haven, and is an important part of the program. The 13 acre property will be used for various recreational activities, including gardening in

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[283] R. Kaplan & S. Kaplan, *The Experience of Nature* (NY, 1989), 218.

[284] R. Kaplan, "The role of nature in the context of the workplace," *Landscape and Urban Planning,* 1993, 26(1-4), 193-201.

[285] J. Rice & L. Remy, "Impact of horticultural therapy on psychosocial functioning among urban jail inmates," *Journal of Offender Rehabilitation*, 1998, 26(3-4), 169-191.

[286] E. Moore, *Environmental Variables Affecting Prisoner Health Care Demands,* (LA, 1985)

[287] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 228.

the green house to learn skills of food production and followed by cooking lessons, there

will be activities such as outdoor soccer, volley ball and various other sports, and animal

therepy including having horses, goats and dogs on the property for the girls to care for.

There will also be an outdoor fire pit as an area for the girls to congregate and share stories

in a tranquil setting. Furthermore, there are many windows with in the Pearl Haven

structure that allow a constant connection to the surrounding agricultural land and

numerous psychological benefits for connections to nature, sunlight, natural ventilation and

view corridors.

Architectural Aesthetics

Aesthetic concern seems to be the last priority of facility design due to budget, falling far

behind the more well-known and highly publicized issues causing stressful environments.

It is important to understand that being in an institution magnifies and intensifies

experiences; even small irritants can become serious stressors over time. This is especially

important with these patients, as there are few options to alleviate or remove themselves

from these situations. Issues that a normal citizen may consider tolerable for a brief period

in a non-controlled society, where the possibility to escape is an option, may become

intolerable with in an institution. In addition to the welfare of the patients, it is also

important to consider that staff members spend considerable about of time with in the

institution walls, in which poor psychological and physical conditions affect their work life

and health, in turn reflecting on the patients. This section will discuss four important

environmental elements that are very influential in inmate rehabilitation. The effects of

light on human behavior and health, the importance and effect of windows, the psychological effects of views, and the impact of color in in interior design on behavior.

In an effort to allow the girls to interact with their environment, as well and create elements of choice and independence, they will be allowed to choose the bedding, accessories and art for their room during their stay. This will hopefully allow for individual expression and an element of personal choice in a very structured program.

Color

The great nineteenth century writer and critic John Ruskin said, "Color is the most sacred element in all visual things".[288] Humans have a strong preference for and powerful emotional associations with color.[289] Color creates strong psychological and physiological effects influencing people's moods and behaviors as well as their perceptions in regards to space, weight, texture, temperature and even ones reaction to sounds, taste and odors.[290] A great deal of attention is paid to color in environmental design, as it can be uses as a tool in various ways. Color plays an important role in room lighting, as the reflectance of light on wall surfaces can enhance or counteract lighting systems.[291] Color has multiple dimensions, such as hue, saturation and brightness, all adding to its complexity. How a pigment on a wall is perceived will be effected by lighting conditions, the brightness and quality of light,

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[288] Lynn Jones and Phyllis Allen, *Beginnings of Interior Environments* (New Jersey, 2009), 111.

[289] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 225.

[290] Lynn Jones and Phyllis Allen, *Beginnings of Interior Environments* (New Jersey, 2009), 120.

[291] Veitch, 2004, 225

as well as the color spectrum of the light itself, so the perception of a color can change

greatly in different contexts.[292]

Color in designed spaces is clearly apparent and easily noticed, and if simply painting a

wall a particular color was truly effective in changing mood or behavior, it would be a very

inexpensive and easy fix on behavioral problems. Unfortunately, there is relatively little

substantial research that addresses the issue of color and behavior as a concept, and little

can be said with confidence about the psychological and behavioral effects of color. This is

largely due to the complexity of color, as many studies have looked at color as a unitary

concept, the effects of an individual color independent to its appropriate context with in the

environment.[293] If color were considered within its proper place in the environment, it may

more likely to have a significant impact. "Contextual use of color produced occupant

effects, and not the explicit color of certain single elements".[294] "Color, then, needs to be

viewed as an ecological construct, relevant as both signal and symbol in the way we

respond to the environment, as part of the ecological niche in which humans evolved".[295]

The message from these reviews is that something as simple as painting a room one

specific color will not generate a powerful response, however that does not render color as

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[292] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 225-226.

[293] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 226.

[294] J. Wise and J. Heerwagen, *The Ecology of Color, Pattern and Texture: A Synthesis of Research for the Design of Office Environments* (1977), pg 2.

[295] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 227.

unimportant or insufficiently powerful for use in a correctional context.[296] Correctional

institutions often suffer from dull monochromatic color schemes causing monotony and

boredom. Color can serve as a potentially positive and stimulating effect for inmates as

well as staff.[297] "The key to the successful use of color is placing it in an appropriate

environmental context, considered with patterns and textures, used to reflect natural

elements that can have positive psychological effects".[298] Much like the distraction of a

view may provide a patient with psychological benefits, color may be used to stimulate the

patient in a positive way. This can be applied by means of a broad varying color scheme

throughout the correctional facility, or in a more targeted approach by creating mood rooms

in a particular area for a specific response.

The use of color at Pearl Haven will address this contextual response to the architectural

phase response of the phase oriented treatment. As the research compiled on the

psychology of color does not necessarily have a firm conclusion that a particular color will

generate a specific response. Rather that an association with that particular color will

generate a response with in the context of the institution. For this reason, there will be

motivational color schemes used to differentiate the phase oriented movement through out

the structure. As the girls move through out the phases, the color schemes will adjust to

these transitions as well, and therefore positive associations will be built with the colors

listed in the higher phases. It is not important which colors these are in particular, rather the

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[296] Richard Wener, *The Environmental Psychology of Prisons and Jails: Creating Humane Spaces in Secure Settings* (Cambridge: UP, 2012), 228.

[297] Wise & Wise, *The Human Factors of Color in Environmental Design: A Creitcal Review*, (CA, 1988)

[298] J. Wise and J. Heerwagen, *The Ecology of Color, Pattern and Texture: A Synthesis of Research for the Design of Office Environments* (1977), pg 228.

positive association that is introduced during the phase changes with in the context of the institution.

Conclusion

The process of growth I have experienced, through out this journey of incarceration design research evolving into an active and real project our community faces of rehabilitating victims of juvenile sexual commercialization, has been deeply humbling. The research of the architecture of incarceration has enlightened me on the foundational reasoning of why our correctional system functions as it does, through all of its pitfalls and complications. It has educated me on global alternatives of creating successful rehabilitation environments, and has changed the way I observe institutional architecture through a lens addressing deeply unsettling privacy issues, and the basic environmental elements we often take for granted such as access to nature, natural light, windows, aesthetics and freedom of choice. Working with in the ramifications of a real project has educated me of the internal conflicts that the codes and the dynamics of safety and liability place on the best intentions and ability to implement the ideal psychological environment for rehabilitation. Before we can successfully adapt the architecture of institutional environments to better suit rehabilitation we must understand the effects of which the environment has on us, and in turn our ability to affect the built environment. This guidance has set the tone for the design process through out this project. The research has provided a valuable piece of information in understanding the complex social implications of design in such controlled settings. I plan to continue to work with Ho'ola Na Pua through out the entire design and construction

process, which will likely last through the next two years. The knowledge and awareness

this dissertation has afforded me will provide the guidance and structure to my design

input, not only for Pearl Haven but many projects to come.

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