The housing problem can be, and often is, solved in a manner that creates homelessness. Kim Dovey; “Home and Homelessness: Introduction.” (Dovey 1985, 1)


**ABSTRACT:** *Defensible Space* is a seminal text on the relation between urban design and personal safety. It focuses on the importance of territory, boundary and visibility in the design of spaces that are conducive to activity and safe, comfortable inhabitation. *Ownership*, for Newman, is critical to the success of any space and promotes its care and upkeep. *Visibility* is the foundation of public safety – to see and be seen. The book explores specific spaces associated with public housing in order to glean conclusions which can be applied to more expansive design conditions. A person’s “home base” becomes central to self-image and the basis of territory. But what if the users have no home or home base?

This paper presents post occupancy evaluation findings of a homeless shelter dorm station design + build architecture student project completed in December 2012. Fourteen architecture students in a socio-political + design-build studio at Philadelphia University programmed, designed, and prototyped dorm stations for a “safe haven” homeless shelter managed by Project H.O.M.E. in Philadelphia. Project H.O.M.E. fabricated the stations which were then assembled and installed by a team of students, faculty and volunteers. Founded on the belief that architecture can provide for social need, effect behavior and support social change, the studio required the students to complete research on the homeless condition, the social agency and the political context for public services. This paper will touch upon this research as a means of qualifying the solution and POE.

The post occupancy evaluation utilized interview, questionnaire, and observation data gathering methodologies. The evaluation involved three primary subject groups including administrators, staff, and residents. Specific dorm station design conditions were addressed including:

- **Boundaries in the Definition of Territory**
- **Personalization and Ownership**
- **Visibility, Privacy and Safety**

**1.0 INTRODUCTION**

Project H.O.M.E. is the largest private social service agency in Philadelphia and the founders believe the primary determining factor creating homelessness is poverty. They prefer a general working definition of homeless as “a person who does not have a fixed, regular and adequate nighttime residence. This person may be sleeping on the streets, with friends or family, in cars or abandoned buildings or in shelters.” Project H.O.M.E.’s mission is “to empower people to break the cycle of homelessness, address the structural causes of poverty, and attain their fullest potential as members of society.” Their central core value is “dignity,” whether it is in how they provide services or reinforcing that character within their residents.
Project H.O.M.E. provides housing on three levels; entry level “safe havens,” transitional housing and permanent housing. Most social service agencies struggle with “treatment first” or “housing first” philosophies. (Padget 2007, 5) With treatment first, agencies require residents to undergo treatment as a condition of the housing. In cases of addiction, residents are not permitted to partake in their vices and use can result in expulsion from the facilities. Project H.O.M.E. primarily utilizes the housing first model where residents have few conditions other than vices are not permitted on site. Residents can arrive drunk or high, but they cannot partake while on site. These are considered “wet facilities” and this model focuses on developing trust with residents as a foundation for building dignity. It is the belief that many residents will leave if required to be “dry” or participate in formal treatment. Project H.O.M.E. prefers to provide a stable environment prior to initiating treatment. This is an important distinction as the design and performance of the dorm stations was directly affected by the condition of the residents – resulting in this case with construction that needed to be extremely durable from abuse, easily cleaned and disinfected.

The entry-level safe haven shelters are the first step off the street. The Women of Change Safe Haven, the site for this project, is a small scale women’s environment for the most vulnerable homeless population many of whom are older, physically frail and suffer from mental illness, addiction and health issues. Twenty-five chronically homeless, seriously mentally ill women, ranging in age from 21 to 60, are housed in one dormitory room with adjacent community, health and dining rooms. The shelter space is leased meaning any construction could not be physically attached to the building in any way.

The residents of Women of Change lost their privacy partitions due to repeated bed bug infestations and abuse (Figure 1). Shelters world-wide suffer from a lack of appropriate partition systems often relying on fabric or wood office systems which are not adequately durable and create suitable environments for insects. Without partitions to create even the most basic levels of privacy, the residential environment at the safe haven had become unsafe and unhealthy.

In the Spring of 2011, Project H.O.M.E. teamed with Philadelphia University Fifth Year Architecture students to program, design, and prototype a design for a homeless dorm station (Figure 2). The design was fabricated and installed the following December. As part of the fabrication, construction documents were generated by the students involving interactions with the contractors, facility administrators and included a value engineering process to align the project with available funds.
2.0 STATION DESIGN AND PROGRAMMING

2.1 House, Home and Homelessness

Initial student design proposals offered familiar homelike environments based on the premise that shelter residents would prefer housing similar to the student’s own. Quickly discovered, the causes of homelessness are extremely complex and extend beyond the simple provision of shelter. Well described in The Soloist, it is a typical reaction when working with the homeless to assume they simply want what “we” have. (Lopez 2008) In most cases, this is far from the actual reality. In dealing with the homeless, one must reframe an understanding of “house” and “home.”

Provision of shelter can solve “houselessness” - an episodic temporary loss of shelter. The more difficult problem is with chronic homelessness. HUD’s definition of chronic is, “someone who has experienced homelessness for a year or longer, or who has experienced at least four episodes of homelessness in the last three years and has a disability.” Generally, 16% of the homeless population is considered chronic. The women of this specific shelter suffer serious mental illness compounded by addictions and behavioral afflictions. The majority exhibit a deep distrust and irritation with authority and their homeless peers, undoubtedly developed by their previous experiences in the “institutional circuit of shelters and the streets.” Summarized by Deborah Padget, there are three dimensions of the relationships between housing, health and psychological well-being: 1) the material benefits of housing as shelter, 2) the health threats associated with substandard housing and neighborhoods, and 3) the psychosocial benefits of housing as ‘home.’ (Padget 2007, 2) While the provision of shelter and the addressing of health threats can more easily be achieved, the psychosocial issues of home are especially complex in the case of the mentally ill.

For Joseph Rykwert, a house is a physical condition – the “fabric” of shelter. Home, though, is inherently metaphysical and requires no “building.” (Rykwert 1991, 55-56) For Kim Dovey, a home is “a kind of relationship between people and their environment.” (Dovey 1985, 1) Rykwert continues with home as a “communal and neighborly manner of dwelling,” and that “a house, whether it is rural or urban, can be a true home only in such neighborly circumstances.” What makes a house a home here are the communal relationships surrounding the physical shelter which create a place of meaning and personal attachment. The first issue to evaluate in designing a homeless environment was whether the solution provided the basic conditions of house, first, and home, second. In this instance, the mental capacity of the residents was a governing factor.

The term “ontological security” “and the lack thereof” has been used to describe the experience of those with serious mental illness. (Lange 1965) The “subjective sense of being at home” is the “feeling of well-being that arises from a sense of constancy in one’s social and material environment which, in turn, provides a secure platform for identity development and self-actualization.” (Giddens 1990) For Dupuis and Thorns, ontological security is a sense of confidence and trust in the world as it appears to be. It is a security of being. (Dupuis & Thorns 1998, 27) For Deborah Padgett, “It is ironic that those people whose ontological security is most threatened due to mental illness are also those least likely to be in housing circumstances that would promote ontological security.” (Padget 2007, 2)

In expanding the discussion, for Dupuis and Thorns “the home can provide a locale in which people can work at attaining a sense of ontological security in a world that at times is experienced as threatening and uncontrollable.” Ontological security can be assessed, and strengthened, through four primary conditions: 1) Home as the site of constancy in the social and material environment, 2) Home as a spatial context in which the day to day routines of human existence are performed, 3) Home as site free from the surveillance that is part of the contemporary world which allows for a sense of control that is missing in other locals, and 4) Home as a secure base around which identities can be constructed. (Dupuis and Thorns 1998, 29)

While on the surface simply a partition project, the central charge for this design + build project was to re-establish ontological security for the residents by provision of not simply dividers but
enclosing stations that created spatial boundaries for daily routines and could become a secure “home” base. To truly make a difference in the resident’s lives, it was necessary to consider the basic tenets of home as a secure platform for identity development and self-actualization utilizing the four primary conditions above as form determinates, and evaluation tools.

2.2 Program Dichotomies
Through the programming workshops, the following goals were identified for the project and partition system: 1) To improve the resident’s living conditions, 2) To provide a safe environment for residents and caregivers, 3) To provide a degree of personal privacy, 4) To provide a comfortable, stress free environment, 5) To provide durable stations that can be disassembled, cleaned and easily moved, and 6) To provide cost effective, readily repairable and easily maintained stations.

Through identification of the goals alongside the mission of Project H.O.M.E. for dignity as a foundation for self-esteem, it was decided that individual stations would be provided for each person regardless of how tight the spaces would become. The quantitative program for each station was provision of a dorm-sized bed, storage, circulation space, and a privacy element all within fifty-five square feet. As programming continued, three design dichotomies emerged which greatly affected the deliberations and eventual design.

2.3 Program Dichotomy One: Privacy versus Safety
For Leon Pastalan, “Life in society generates such tensions for the individual that both physical health and psychological health demand periods of privacy for various types of emotional release.” (Pastalan 1970, 93) The number one survey request from the users was for an increase in privacy. Project H.O.M.E. initially listed “opportunities for privacy” as a vital component for establishment of resident dignity but were quite strict on this being minimal for safety reasons. Contrary to the conditions of privacy run the issues of safety and security which are founded in visibility. In comparison of Newman’s and Crowe’s texts, a set of five safe design criteria emerge. People feel safer in spaces that are: 1) bright and well lit, 2) are colorful, 3) are clean, 4) are visible (one can see into them and be seen from them), and 5) are claimed and owned. Residents expressed during the programming phase the want for a place in the shelter that was private and “theirs” – a place they could be responsible for. (Figures 3, 4, 5 & 6) Privacy leads to ownership and for Crowe, it is “axiomatic that people will take care of space and assets in which they have a proprietary concern.” (Crowe 1991, 103) The ability to create opportunities for privacy while allowing sightlines and visibility for safety created the most obvious design dilemma. Threats to safety for residents and staff in the facility were evident at the time of programming.

2.3 Program Dichotomy Two: Insects, Cleanliness & Durability versus Home
It was a very high priority for Project H.O.M.E. that the stations not harbor insects, be easily cleaned and extremely durable. Bed bug treatments can run into the tens of thousands of dollars per incident when factoring in facility down time and staff costs. Woods and fabrics support insects. Insects avoid slick plastics and metals which are easy to clean and maintain
making them ideal choices. The haptic qualities of these materials, though, can be impersonal, institutional, and not homelike.

2.4 Design Dichotomy Three: Nice, But Not Too Nice
The most caustic programming condition was the requirement that the stations not be “too nice.” If the design was too comfortable residents would not want to leave. Current trends in homeless services support “rapid re-housing,” a national best practice of moving the homeless quickly into permanent housing instead of emergency shelters. With the want for the residents to “claim” the stations and establish ownership, the character was of great focus during the design phase – if too alienating resident ownership would be difficult to obtain but if they were too well liked the users might not be motivated to leave.

2.5 Station Design
The final station solution is a plastic and steel system comprised of three components which can be detached and reconfigured in a variety of modular arrangements – a head board, a side privacy panel and a circular privacy end unit. Each component is comprised of plastic sheets layered with painted steel tube frames resulting in lightweight durable construction. For the side wall a thin layer of plastic is woven with the structure exposing bars for hanging storage to both sides as well as stabilizing the lightweight panels. All three components provide a variety of space for storage and have varying degrees of translucency offering a balance of visibility and privacy. The headboard has sliding drawers while the curved privacy unit offers a high desk/ shelf and lower shelves for additional storage. The components are raised above the floor for ventilation/ cleanability and extend 1.4m above the floor allowing easy visibility over the top. The storage unit has translucent plastic panels to the corridor allowing partial visibility for staff observation while offering a degree of privacy.

3.0 POST OCCUPANCY EVALUATION

3.1 POE Tools and Areas of Focus
In completion of the evaluation, the primary tools for gathering assessments were observation, interviews and questionnaires – one for the staff/ administrators and a separate one for residents. While a number of staff completed the questionnaires, the nature of their work and shortage of time limited the number of responses. The residents, given their degrees of mental illness, struggled with the questionnaires. As such, observations and interviews for all three user groups were the primary means used to obtain data. Topics for discussion included:
1) Station Layout, 2) Program functionality, 3) Privacy and Safety, and 4) Territory and Ownership.

Figure 7: Original Dorm Layout. Source: (PhilaU Students)
Figure 8: Revised Dorm Layout. Source: (Author)

4.0 SUMMARY OF INITIAL POE FINDINGS

4.1 Station Layout
The provision of individual spaces for residents lowered the number aggressive incidents dramatically with some staff estimating the drop to be between 75 and 80%. The layout was based on a resident observation that it was disconcerting to wake up and find someone watching you. It was planned such that no resident could see another’s head while laying down (Figure 7). This layout resulted in differing arrangements for the two sides of the room, though, and three different unit characters. The resulting inequality created issues amongst the residents, especially those with greater degrees of mental illness, and necessitated a layout change after a period of only six months. The stations were rearranged during which time numerous residents walked from unit to unit measuring the stations to make sure they were all the same size. (Figure 8). Equality became so important that the even the slightest differing detail would trigger an emotional episode. Evidenced by these emotions, the residents had developed a strong sense of ownership in their stations to the point of meticulously comparing each with their neighbors. Unfortunately, the limitations of the space resulted in two – two person stations which have since created much angst for those particular residents. Students are currently designing a stand-alone dividing partition for these two stations which is proving to be a difficult assignment from a safety standpoint.

4.2 Program and Functionality
While the design satisfied the immediate needs for sleeping and the daily routines of life, residents and staff took issue with storage and residents “stuff.” For the homeless, the ability to store and protect their belongings can mean the difference between staying or leaving a shelter and is extremely important. (Lopez 2008) In the curved privacy units, the lower shelves are difficult to access and clean which is actually more troubling for the staff than the residents. The top shelf is too large and is constantly overflowing. Each of the residents has a lockable storage closet and the general consensus by the staff was that too much storage space was provided in the stations. Too much room = too much stuff = purging and angst.

When asked what was missing, a phone charging spot was unanimously identified first, and a dorm reading light second, by both staff and residents. Phones have become the number one possession for the homeless and the unavailability of outlets is resulting in scattered groups of residents huddled around receptacles guarding their devices as they charge. It can be argued that in this situation, the phones are promoting physical social interaction in addition to the social airwaves.

4.3 Privacy and Safety
The number one response from residents, staff and administrators, regardless of the question, pertained to privacy. The amount provided is extremely successful to the point that more is desired. Initially, Project H.O.M.E. strongly requested only minimal privacy opportunities for safety reasons due to the vices and mental state of the residents. Staff make “census” rounds every thirty minutes marking down attendance and they need unrestricted visual access to all spaces in the facility. Any private, non-visible area could offer opportunity for improper
behavior and challenges to safety. Ironically, in contrast to the original condition, no staff or residents currently feel unsafe in the dorm day or night even with the individual stations.

Given the lightness of the partitions and the ability to see/hear under and over them to monitor residents, the design has provided enough comfort that staff is now willing to allow more privacy. This is having a positive effect on the demeanor of the residents most of whom now drape a towel across the entry openings. There does not seem to be the hard line stance of visibility originally aggressively required. Interestingly, a privacy design flaw became evident in the diameter of the round holes in the side wall panels to accommodate the steel frames. Sized for on-site assembly tolerances, the holes are large enough to peek through. 75% of the residents have covered these holes with tape, paper or clothing. (Figure 12)

4.4 Personalization, Marking of Territory and Ownership

Claimed and owned spaces result from the striking of territory and the responsibility for order that results. Ownership is by nature a defensible condition and safe areas are bounded by adjoining territories that best offer surveillance and protection. With the lack of dorm partitions and the clashing zones of privacy, it became obvious that the shelter had lost its resident territories and as such was besieged with social duress, vandalism and an overall lowered sense of safety and wellbeing. The claiming of territory begins with the marking of personal boundaries. The ability to personalize a space “creates links with the places when residents fill them with meaning. In this way, the place as a physical space is converted into a psychosocial space.” (Werner, Altman & Oxley 1985) Territory is marked through the act of personalization, ownership established and the dwelling can become a home.

In evaluation of the station design, the definition of the space and its ability to be personalized are the strongest attributes (Figures 9 & 10). Each person’s dorm space is bound on three and one-half sides creating physical, interpersonal borders. The entry to the space is tight, .5m, which creates a very clear and definable threshold (Figure 11). The plastic panels layer upon, and weave around, the steel supports offering many joints to display personal stuff which act as identifying markers. Items in the curved storage units are visible through the translucent privacy panels further identifying a person’s station and entry.

The personalization of the stations has breed a strong possessive quality in the majority of the residents many of whom became agitated and upset when students entered “their” places during the rearrangement. They only settled down after seeing that their spot had just been moved and not changed. It is the hope of all involved that this quality will act as a foundation for transition out of the cycles of homelessness.

CONCLUSION
We not only give a sense of identity to the place we call home, but we also draw our identity from that of the place. Dialectics of home involve more than inside versus outside. Home is a place of security within an insecure world, a place of certainty within doubt, a familiar place in a strange world, a sacred place in a profane world. (Dovey 1985, 10)

The majority of the Women of Change population is quick to convey that their presence in the shelter is a temporary condition. They spend large amounts of time out in the city and only a few “hang out” in the dorm or community spaces. Most have a distrust of public housing and shelters - likening them to institutional straightjackets. In the attempt to strike a balance between the program dichotomies, the students inadvertently created an abstract enclosure system not rooted in any typical cultural experiences of house or home. The steel and plastic is foreign to most home languages but fits well the needs of the Client. Project H.O.M.E. is happy to report no bed-bug infestations have occurred in the ten months since original install. The “inorganic” materials ironically create an anonymous “blank slate” condition which residents generally feel comfortable to personalize and claim for themselves in establishment of a home base. It is the hope that this base can provide a temporary foundation for reconstructing identities and the promotion of ontological security. The POE confirmed that the design provides a safe level of privacy and territories are well established as residents have taken ownership of the stations. While the final solution does not create an environment most would equate to a homelike “good place”, for a person with “no place”, the stations offer residents “some place” to occupy on their way towards permanent housing.7

REFERENCES


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Laing, RD; The Divided Self: An Existential Study in Sanity and Madness. (London: Pelican Press1965)


National Alliance to End Homelessness; http://www.endhomelessness.org/pages/chronichomelessness


ENDNOTES

1 Project Team: Project HOME Client Team: Paul Sassani, (Past) Vice-president of Property and Assessment Management, Chris Rivera, (Past) Director of Facilities; Sue Smith, Vice President Operations; Robin Bonfield, Director, Women of Change Safe Haven; Alex Shaw, (Past) Social Case Worker; and select residents of Women of Change. PhilaU Team: David Kratzer, Associate Professor of Architecture; Justine Tarrant, Matthew Link, Matthew Marcarelli; Christopher Class, Elliott Schwartz, Tom Lee, Jeff Delaquilla, Tyler DiRenzo, Kimberly Smeltzer, Lauren Printz, Nick Germani, Veronica Keefer, Nicky Petrozzo, Adrienne Williams. Additional Workshop Participants: Wendy Krupnick, Director, Occupational Therapy Program, Philadelphia University and twenty-six Occupational Graduate Students. Industry Partners: Cavo Design-Build, Philadelphia; Curbell Plastics, Moorestown, NJ; Metal Stock, Philadelphia, PA; Northeast Plastics, Philadelphia, PA; Rodon Signs, Jenkintown PA; Tom’s Automotive, Philadelphia; Corian Division, Dupont Corp.; Trespa Meteon Panels.

2 www.Project H.O.M.E.org All quotes in this paragraph are from the website.


4 http://www.endhomelessness.org/pages/chronic_homelessness

5 These criteria are paraphrased in comparison of the texts from Newman and Crowe.

6 City of Philadelphia Office of Supportive Housing, 2009.

7 Final sentence is an obvious play on the etymological enigma of utopia as “no place” and eutopia as “good place.” The studio returned often to the discussion of utopia and its subjective frames of reference in the design of architecture for the “public good.”