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HOMELESS SHELTER DESIGN: MODELS FOR WELLBEING

YELENA MCLANE

FLORIDA STATE UNIVERSITY, TALLAHASSEE, USA

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ABSTRACT

Homelessness is a persistent social issue in communities around the world. The work of assisting marginalized populations, including homeless persons, must extend beyond drafting policy documents and churning individuals through institutionalized support systems. One way to help persons exit homelessness is to design better buildings that provide temporary accommodations while also aiding in coping with trauma, facilitating the provision of social support services and affecting positively users' sense of well-being (Rivin and Moore 2001). Emergency shelters are generally defined as places to which persons can go to get off the street, receive food, access personal care amenities, and receive non-emergency medical treatment and counselling. Many existing shelters, however, fail to offer these services in ways that dignify their clients (Wasserman and Clair 2009), making them options of last resort. In this mixed-methods study, I use historic analysis, space syntax tools and qualitative data assessments to explore two case studies to assess the implications of different spatial typologies, defined by visual and physical accessibility, configuration of navigational pathways, and intelligibility (Hillier 2007), on the potential of buildings to support individual dignity and psychological well-being among users. The findings detail the relative merits of two arrangements—(1) the traditional workhouse model, which relies on segregation, control of movement, surveillance, and disorientation to manage habitant populations; and (2) the trauma-informed model, which deploys attributes of communal housing to increase the sense of agency and self-respect experienced by lodgers and staff—to inform the decision-making of designers, stakeholders, and support personnel in their efforts to de-marginalize and empower individual clients.

KEYWORDS

Homelessness, Shelter, Workhouse, Well-being, Trauma-informed design

1   INTRODUCTION

1.1   The Problem of Homelessness

Homelessness remains a persistent and pervasive social problem. Despite efforts to curb the number of people "living on the streets," homelessness in the United States increased by two percent between 2019 and 2020, according to the 2020 Annual Homeless Assessment Report to Congress (2021). On a single night in 2020, 580,466 individuals experienced homelessness. About six in ten (61%) were staying in emergency shelters or transitional housing, and nearly four in ten (39%) were "sleeping rough," in abandoned buildings or in other places not suitable for human habitation.

The global pandemic has only exacerbated the problem, with increased rates of evictions caused by lockdowns and many businesses closures. In Los Angeles County in 2020 there were 66,436 people experiencing homelessness—a 13% increase over 2019 (LAHSA 2020). (The 2021 count was cancelled due to Covid-19, and the 2022 count is scheduled for February.) In New York City, homelessness has reached its highest level since the Great Depression (Coalition for the Homeless 2022). In October 2021, on average there were 48,723 unhoused persons, including 15,346 children, sleeping each night in the municipal shelter system.

Homelessness is a profoundly traumatic experience. On top of the initial trauma of losing one's home, daily struggles include finding a place to sleep, protecting oneself from elements, obtaining food, accessing bathroom facilities, addressing health needs, and avoiding violent confrontations, all of which make for stress levels that rarely subside. Persons experiencing homelessness suffer from depression, epilepsy, personality disorders, diabetes, sight and respiratory problems, tuberculosis, drug and alcohol abuse, and suicidal ideation at rates at least twice as high as persons living in stable housing (Office of the Deputy Prime Minister, 2004). The increasing awareness of the complexity of the situation has created interest in many communities in providing access to short-term accommodations while also offering clients means for reducing the stresses associated with exiting homelessness. Enhancing the methods by which service providers encourage social and workforce reintegration can ease the enormous social and economic costs associated with the problem.

1.2   Background

In general, there are two program types aimed at helping unhoused persons get off the street: those that provide medium to long-term transitional and permanent housing, and those that provide temporary accommodations, which include emergency shelters and safe havens. In 2020, in the United States there were just over 396,000 beds available for individuals experiencing homelessness. Transitional housing programs made up about 23 percent of those accommodations, while 76 percent (about 300,000) were in emergency shelters (Department of

Housing and Urban Development (HUD), 2021, p. 75). In pure numbers, demand far surpasses supply.

Shelters are designed to help unhoused persons get off the street to avoid immediate dangers or harm (Hurtubise, Babin and Grimard, 2009). They range widely in the number of beds (from a few to several hundred) and generally provide clients with per-night accommodations with daily readmissions. Shelters typically offer a number of critical services, including showers and laundry facilities, hot meals, medical triage care, counselling, and computer and internet access. Some shelters offer vocational training and assistance with finding employment.

Shelters may accept women and men, youths, elderly, domestic violence victims and families. Admissions policies differ from open to all on a first-come-first-served basis to restricted only to clients who come with referrals from partner organizations. Some are in pre-existing buildings that have been retrofitted for shelter services, while others are specifically designed as new buildings or sub-units of larger complexes.

1.3   Shelter Clients' Perceptions

Not all unhoused persons use shelters. Youths are less likely to use shelters and prefer "couch surfing" or sleeping rough (Brooks et al 2004), while families tend to rely more on shelters or other surrogate housing. In the United States, Black and Hispanic persons are disproportionately represented among shelter users (Hurtubise, Babin and Grimard 2009).

Attitudes towards traditional shelters among homeless persons also differ. There are several reasons why homeless persons might avoid using shelters:

- Concern for personal safety and security of their possessions;
- Fear of aggression or abuse perpetrated by older clients against younger clients;
- Distrust of staff and case managers;
- Disrespectful or humiliating treatment by shelter personnel and other clients (Wasserman and Clair 2009); and
- An overall perception that shelters are too restrictive on clients' behaviors and activities (Hurtubise, Babin and Grimard, 2009).

For many, going to a shelter means accepting that they are homeless, making it an option of last resort. Some compare shelters with prisons or hospitals, which does not help with feelings of anxiety or vulnerability. Many shelters are not much better than the streets inasmuch as they too fail to dignify the needs of the body, let alone address the complex psychological needs of the persons that they serve. Experiences of prolonged stress, often accompanied by an emotionally harmful, violent, or life-threatening event or series of events, can result in unhoused persons developing traumatic stress disorders (APA 2013).

1.4   Homelessness, Trauma, and the Built Environment

In myriad ways, built environments affect occupants' perceptions and influence their thoughts, reactions, and behaviours (see, for example, International Well Building Institute 2020; Kemp 2010; Dilani 2009, Williams and Bargh 2008, Kemp et al 1997). With regard to homelessness in particular, researchers have found that social support service environments and residence spaces serve critical functions in mitigating or exacerbating the emotional, psychological and physical well-being of unhoused persons (Grittner and Burns, 2020; Akesson, Burns and Hordyk 2017, Butterworth 2000).

Negative experiences within one's surroundings may lead to the internalization of and self-identification with these experiences. In other words, a person may equate their inability to do something with the problems they encounter in the spaces they inhabit. These internal representations may have physical bodily manifestations, including difficulty moving, difficulty speaking and pain (Kearney & Kaplan, 1997). "A cluttered room, with insufficient space between objects, [may be] believed to clutter one's thoughts" (Williams and Bargh 2008, p. 302). In turn, these perceptions and stimuli can influence one's external reactions to the environment and the adversities that it presents while generating negative feelings about oneself within the environment. Under extreme situations, they can function as emotional 'trigger' events, affecting self-esteem and progress toward personal goals (Hopper, Bassuk and Olivet 2010). Some examples of 'spatial' triggers may include open windows and secluded stairwells, which can increase the sense of vulnerability for one's person or belongings; visual clutter—shortage of exits, unclear wayfinding, blind turns, indistinguishable repeating doors and corridors, which is disorienting; and narrow hallways, stale air, fluorescent lighting, absence of connections with the outdoors, which may bring about uncomfortable, institutional associations (Grabowska et al. 2021). The Substance Abuse and Mental Health Services Administration (SAMHSA) (2014) confirms that avoiding trigger affects and re-traumatization is of central importance to building a sense of personal well-being, which is key to exiting homelessness.

In 2014, SAMHSA developed a trauma-informed care (TIC) approach to serving vulnerable populations—those suffering from alcohol or substance abuse, mental disabilities or victims of domestic violence. An affiliated report detailed a framework for offering support services, which includes safety, privacy and empowerment. This approach recognizes that physical environments affect individuals on emotional and deep psychological levels and emphasizes the need for built environments that promote the physical, emotional and social health of individuals suffering from these conditions and which are designed to avoid circumstances or incidents that may lead to re-traumatization (SAMHSA 2014; Hopper et al 2010).

Many architects and designers recognize the importance of TIC principles when designing for vulnerable populations, particularly shelters and residences for unhoused persons. This recognition has led to developing a trauma-informed design (TID) approach, which embraces

TIC, WELL Building Standard, and architectural design process (Pable and Ellis 2020; Grabowska et al 2021). The goal is to create person-cantered environments that reduce or eliminate triggers that can perpetuate the sense of trauma, and which help space users to overcome past traumatic experiences, and ultimately which increase users' sense of well-being (Grabowska et al 2021). Pable has conducted several studies (see, for example, 2015) and presented findings in a summary report (Pable and Ellis 2020) identifying TID principles relevant to designing facilities for unhoused persons. When applied to architectural space planning, these principles may serve as effective tools to support exiting homelessness by providing for environments that are calm, respectful of residents' dignity, optimistic, and empowering.

Homeless shelters have historically been highly hierarchical places designed for hiding unhoused persons away and punishing them for making the morally and socially "wrong" choices, which led to their destitution. Under this model, the spatial organization imposes a strict system of hierarchy—with "guests" at the bottom and staff persons at the top—and each groups' behaviours, movements, interactions, activities are tightly controlled (Markus 1993; Hillier and Hanson 1984). This leads, by intention, to users feeling dominated or overpowered. Very different spatial cues, those that offer users the ability to "read" the building, to make their own navigational and behavioural choices and to facilitate relationships with and within the building, are key to promoting self-esteem and a sense of empowerment (McLane and Pable 2020). Recently, a group of researchers and practitioners based in Denver, Colorado, developed a set of practice-based concepts that facilitate the kind of trauma-informed design that seeks to overcome those traditional, hierarchical tendencies within homeless shelters: (1) adding well-ordered spatial complexity and depth while maintaining overall legibility of configuration; (2) encouraging visual and physical permeability; and (3) providing for gradual transitions between outdoor and indoor spaces, public, private, and personal spaces, and large and small spaces (Grabowska et al 2021).

1.5   Method of Inquiry

I have employed a mixed-method approach comprised of historic, post-hoc spatial analysis and qualitative assessments of two emergency homeless shelters to explore spatial typologies and design characteristics that: (1) contribute to problems with safety, security, and lack of trust and respect, as perceived by guests; and (2) support a sense of dignity, control, and overall well-being among guests.

I begin by placing contemporary shelter design in its historical context by tracing social attitudes towards homelessness and their manifestations in architectural forms. Traditional workhouses and almshouses were modelled on segregation, surveillance and control. Many remnants of these notorious structures persist in present day shelter typologies. It is important that we identify these inheritances and inform stakeholders, architects and facility managers—those who make decisions about what gets designed and built—about the implications of continuing to build

shelters predicated on treating guests like inmates. Although it may run counter to our intuition about the relative enlightenment of our times, in present-day architectural practice, many of these outdated and oppressive schemes are both utilized and celebrated as successful models for addressing homelessness. I will conclude by offering an analysis of two recently opened shelters that illustrate two different approaches to addressing the acute needs of unhoused persons.

2   HISTORICAL TYPOLOGIES OF SHELTER DESIGN

2.1   Historic Attitudes towards Homelessness and their Spatial Manifestations:

Workhouses and Casual Wards

Through much of Western history, homelessness was thought of as a social malady extending from extreme poverty and associated with itinerancy. In the aftermath of the Black Death, when labor was in short supply, laws were concerned with making the able-bodied work by prohibiting idleness. In post-feudal societies centered on attachment to land, guilds, or masters, the itinerant and unemployed poor were perceived to be disruptors of the existing social order (Mollat 1986). Localized poverty was socially accepted as a natural extension of God's order, but itinerant vagrancy—by which the poor came in from other places to take from a community that was not their own—was morally and socially appalling and had to be punished under the law. The 1601 Act for the Relief of the Poor (also known as the Elizabethan Poor Act, or The Old Poor Law) was among the earliest English laws that implicated the the poor and destitute as at fault for their own hardships and made them responsible for their own well-being. Such "Poor Laws" did, however, distinguish between persons who were unfit or unable to work because of infirmity and those who were unwilling to work (Mollat 1986). Those in the first category were the "worthy" poor and deserving of help. The "unworthy" poor were not only undeserving of assistance, but were denounced as criminals for begging, which merited harsh punishment (Beck and Twiss 2018). In many English towns, law enforcement officials patrolled the streets on the lookout for vagrants, and when they caught them, they would impress them into workhouses.

Workhouses were typically located away from public view—down back streets, on the outskirts of towns or in the country. They were in well-worn or dilapidated buildings. The sad appearance and state of these facilities reflected the law's intent to provide a bare minimum to the worthy poor and to reform those who refused to work (Beck and Twiss 2018). Design recommendations from the period noted that the "height of rooms, the thickness of walls, etc. etc., shall not exceed the dimensions of the cottage of the honest, hard-working, independent laborer" (Poor Law Commissioners 1835; Markus 1993, p. 141). As social institutions, workhouses served two primary purposes: to hide this "pathology" from society at large, and to motivate and teach the poor to pursue all avenues of self-provision so as to avoid falling into a state of destitution. Although theoretically the law distinguished between carceral punishment and workhouse employment, in practice the two often merged, so that by the end of the seventeenth century

workhouses became de facto penal institutions (Fowler 2014; Markus 1993). These were "disciplinary machines" intended to absorb the idle, the poor and vagrants in order to "provide pre-emptive protection against political uprisings and agitation" (Kodalak 2015, p. 108).

In addition to workhouses, there were separate one-night accommodations for itinerant vagrants, spaces equivalent to today's emergency shelters, which were called "casual wards." Individuals were admitted into casual wards in the evening, segregated by gender, given food, showering facilities, were medically examined and assigned labor (Rose 1988). They had to leave in the morning after breakfast (Paddington Workhouse Board of Guardians 1889). Often these were integrated into workhouses. As such, I will focus on workhouse typologies and the designs of casual wards as extensions of those typologies.

2.2   Design of Workhouses

Throughout the eighteenth and nineteenth centuries, there were multiple attempts to "improve" and "rationalize" the workhouse model to increase efficiency of inmate labour and the means of running it. The New Poor Law of 1834 created a centralized nationwide network which controlled the distribution of aide and management of the poor. These reforms mandated development of a new workhouse architectural typology that was built upon the objective of incarcerating paupers in one building while controlling and coercing them into labour through isolation, segregation and surveillance. The English architect Sampson Kempthorne was commissioned to design architectural prototypes for the new workhouse management model, and he succeeded in translating government policies into effective and functional architectural designs that were widely adapted across the country and its colonies. This secured Kempthorne the sobriquet of "official workhouse architect" (Kodalak 2015, p. 64). Kempthorne's designs were plain and functional, sometimes assuming the "formality and pretension of grandeur" of civic architecture (Morrison 1999, p. 3). He used three main approaches: the hexagonal, cruciform and simplified 200-pauper model (Figure 1). The hexagonal and cruciform plans were particularly efficient at surveillance and enabled upkeep with minimal staffing. The most widely adapted model, however, was the cruciform type as flexible and least expensive (Kodalak 2015).

Workhouse entrances were tightly controlled. After being admitted, inmates were segregated by sex and then classified based on age and physical and mental state. Children were taken from their parents and kept in dormitories away from families. The institution provided food, clothes and lodging in exchange for performing tedious tasks like breaking rocks, grinding bones, or "picking oakum" (unknotting old tar-soaked ropes).

The living conditions were similar to those in jails, and conveniences were meagre. Interior spaces offered rudimentary "comforts," often without basic health considerations for heat or ventilation. Windows were small and placed high upon the walls. Although they allowed some daylight in, other than a small section of sky, inmates could not observe what was happening

outside (Kodalak 2015). Wall-mounted oil lamps and candles offered little light, keeping interior spaces dimly lit. According to an influential 1909 Poor Law report, the "overcrowding, insanitation, filth, neglect, and gross indecency…were simply indescribable" (Webb and Webb 1909, p. 44).
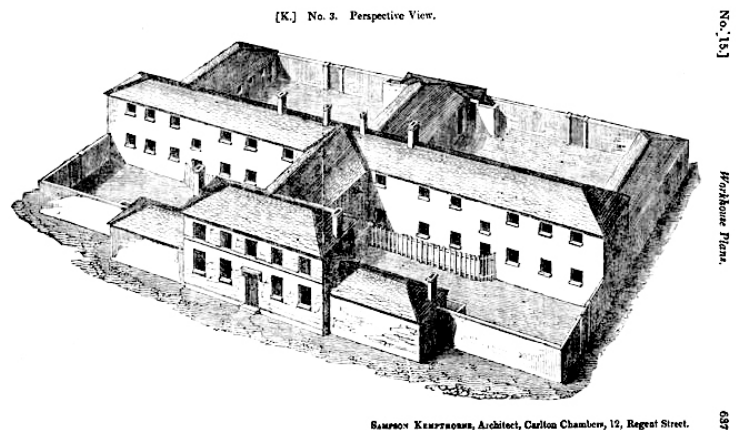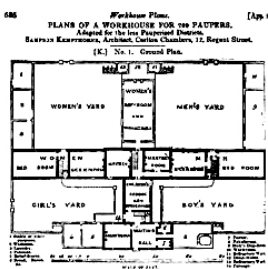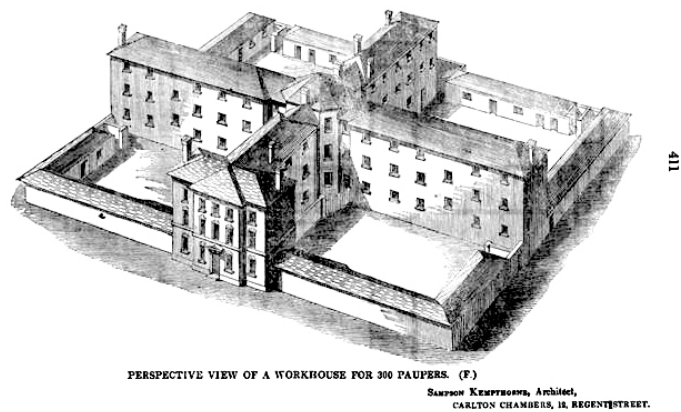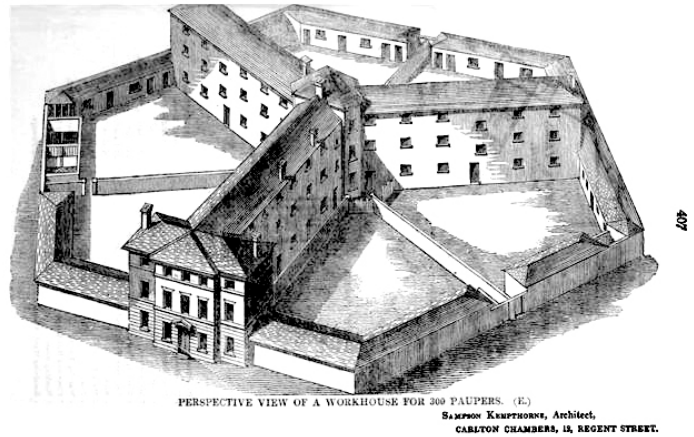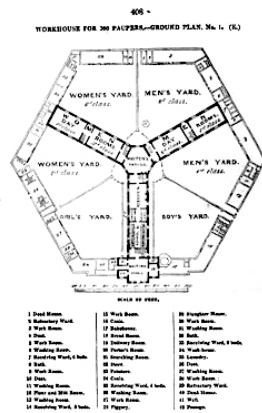

Figure 1: Sampson Kempthorne's three workhouse models: the hexagonal, cruciform and simplified 200-pauper scheme (Images: Public domain)

Kathryn Morrison noted that "theoretically, adults were free to quit the workhouse at short notice, but with no alternative means for subsistence many were only released by death. The

system operated through shame and fear: the specter of the workhouse was designed to spur men to work hard" (Morrison 1999, p. 1).

The guards' and overseers' rooms were typically placed close to the front of the building or in the central tower, while inmates occupied the deepest spaces, segregated by partitions and strategically located staircases, which also served as visual and physical barriers. This allowed for constant surveillance of inmates from behind closed doors or from the central tower. Overseers could observe inmates during work hours in airing yards and exert control over their movements between spaces inside the building. By design, constant visual exposure denied inmates the most basic need for privacy, further deteriorating their mental conditions. Over time, Kempthorne's original cruciform model evolved from a single room width to include corridors. Such semi-panoptic or corridor-based plans became separate wards or buildings scheme that further segregated groups of inmates like the mentally ill, the sick, or children (Kodalak 2015).

Casual wards, although part of the workhouse structure, had separate entrances and spaces. The principles of spatial organization were that of the workhouse with the distinction that inmates were placed in small keeping cells along single or double-loaded corridor and locked (Figure 2).

Figure 2: Old Casual Ward in Hackney Workhouse; general room and sleeping cell in the Wandsworth Workhouse Casual Ward. Images: © London Metropolitan Archives (City of London)

In the United States, assistance for the needy and destitute was modelled after the English system, and in essence it adhered to spatial organization models described above. The types were similar to those in England, with suburban "poorhouses" being equivalent to the workhouse (Meltsner 2012). Typically, these were masonry structures designed to accommodate large numbers of inmates and keep the sexes apart, with separate areas for children and the sick and separate kitchens and workrooms.

The Poor Law system of workhouses and casual wards existed well into the 1940s when it was replaced by the welfare state. Although workhouse structures were renovated to serve as shelters for the elderly, sick and mentally ill, the configurations of their interior spaces—particularly the

vertical circulation and inaccessible staircases—continued to impose tight control and isolation on residents, rendering most of the upper floors of the buildings unusable (Kodalak 2015).

Hillier and Hanson referred to this type of spatial arrangement as a "reverse building" (1984, pp. 184–185). Direct relations with the outside world and between inmate groups are severed, mediated only by guardians and gatekeepers. Flow of communication may potentially only take place within primary spaces—workrooms, canteens, dormitories and airing yards—in which inmates spend most of their time during the day and at night. In the absence of free agency and by denying inmates privacy, the interior configurations become an ever-present system of meta control. This punitive spatial program was intended to strip inmates of any sense of dignity, individuality or self-respect they may have had prior to being admitted to the workhouse.

From the perspective of architectural typologies, there are several key spatial features that defined the experiences of inmates and overseers in workhouses, poorhouses, and casual wards, which are detailed in Table 1.

Table 1: Spatial Features of Workhouses and Casual Wards in Reversed Buildings.

Workhouse/casual ward cruciform model spatial typology characteristics for inmates	Workhouse/casual ward cruciform model spatial typology characteristics for guardians and overseers
Symmetrical and subdivided room layout Single width room arrangement or corridor system of moving throughout the building	
Tree-like room arrangement (non-distributed, asymmetric, deep)	Tree-like room arrangement (distributed, symmetric, medium deep)
Dormitory-style sleeping for large numbers of inmates located at the deepest points	Individual apartments/small staff rooms
Communal eating and day rooms	Staff eating rooms
Communal partitioned airing yards	
Spaces support hierarchy by tightly controlling navigation and activities: - Central entrance under constant surveillance - Segregation based on physical ability, gender, age - Large communal areas under constant surveillance (sleeping wards, workrooms, hygiene facilities) - Navigation is non-distributed and offers no or little choice	Spaces support control and sever relationships through segregation
Visibility: inmates are under constant surveillance but they themselves are denied long lines of sites or the ability to observe life outside the confined spaces	Visual surveillance: localized and centralized
Visual access to outdoors and other spaces limited or blocked (there were only small windows placed high on the wall forced, which allowed inmates to see only sky or bare walls of airing yards	Normal-size windows provides visual access to outside
Absence of private spaces where personal needs could be attended to	Yes, private spaces/rooms are available
Spatial meta stricture controls behaviours and is aimed at savouring relationships and denying agency and individuality to inmates	

Inmates' experiences in these facilities were defined, in combination, by social attitudes that denigrated the poor and the destitute, policies that were adopted to "help" the afflicted through

segregation and incarceration, and architecture that "rubbed in the inmates' sense of degradation" such that "they emerged from each ward more physically and mentally crumpled than before" (Rose 1988, p. 158).

Although there have been significant shifts in popular attitudes towards poverty and homelessness in the Western world over the last one hundred years, the approaches to planning, managing and designing emergency shelters today share a number of spatial and functional characteristics with traditional workhouses. I will describe one such example in the following section.

3   CASE STUDY 1: A TRADITIONAL APPROACH

Hope of the Valley / NoHo Bridge Housing Shelter, adaptive reuse facility in Los Angeles, California, USA (2020)
Type: overnight shelter
Capacity: 85 beds (60 men and 25 women, with companion animal accommodations)

The Hope of the Valley/NoHo Bridge Housing Shelter is located in a North Hollywood warehouse at the end of an industrial road, within walking distance of a bus stop connecting the shelter to other Los Angeles metro areas. The building was renovated, and the design reflects well-established approaches to accommodating unhoused persons' essential needs. The plan is streamlined with spaces dedicated to key services including personal hygiene and medical triage, overnight stays (men and women share one large space divided by a nine-foot partition), eating, internet access and social services (mental health, intensive case management, substance abuse, veterans' affairs, job training and placement, and permanent supportive housing assistance).

On the surface, the new interior looks light and uplifting. The designers sought to convey positivity by painting the walls in light blue and white and incorporating irregular patterns of fluorescent strips on the ceiling's drop-down forms—referred to as "clouds"—to mask the exposed ductwork of what had previously been an industrial building. Daylight enlivens the community dining room and the women's sleeping area (Figure 3). Given the intensity of homelessness in Los Angeles and the gross disproportion between demand and supply, NoHo offers a functional housing solution for persons who would otherwise lack safe places to eat and sleep.

Figure 3: Hope of the Valley / NoHo Bridge Housing Shelter: multipurpose/dining room; dormitory circulation pathway and women's dormitory sleeping cubicle. Photos: Bob Glatt

Upon closer examination of the layout, however, a few less charitable elements of the plan become evident. The small intake lobby leads to crowding and the forced organization of arrivals into queues. The limited seating in the "recreation" spaces located along the dormitory circulation pathways—conspicuous and observable from all angles—are likely to be underused because they offer no privacy. Further analysis suggests that typologically the design of the shelter is rooted in the workhouse model, in which residents are continuously surveyed, their movements and activities tightly controlled, and their independence and safety compromised.

The shelter was designed as an efficient, highly controlled environment, offering little room for guest or staff autonomy, which may seem to enhance security. Upon checking in, guests are directed through clearly delineated corridors and pathways towards communal sleeping rooms. At that point they are left with little choice of where to go: they may have dinner or spend some time in the multipurpose room (using a computer in they are lucky) or go to their designated dormitory bedspace. All three primary spaces in the building—the multi-purpose dining room, the sleep areas and the bathrooms—are placed furthest from the entrance. Placement of these spaces deeper in the configuration may be rooted in human' biological perception that "distance equals safety" (see, for example, Williams and Bargh 2008), but all of the spaces in the shelter, including sleeping pods, are accessible to every person staying there, which means that the security of guests' possessions is certainly compromised, and their physical safety may also be at a risk proportionate to the distance one would need to cover to escape the space in the event of an altercation or emergency (Figure 4). The most visually integrated spaces are the corridors, while intake, staff offices, and dormitories are least integrated and visually connected. On the one hand, this configuration does offer some degree of visual privacy in the dormitory, but, on the other hand, it again increases security and safety risks, particularly towards the very back of the room.
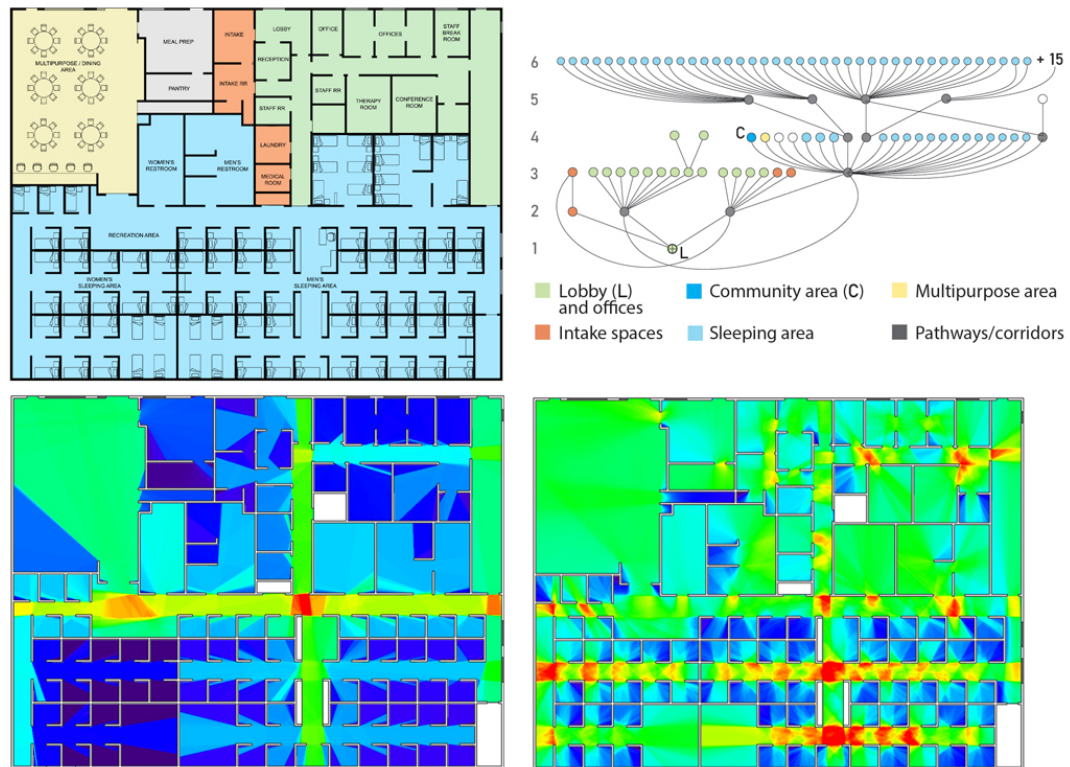
Figure 4: Hope of the Valley / NoHo Bridge Housing Shelter: floor plan, justified graph and VGA integration and overt control

Although topologically the NoHo shelter does not fit traditional workhouse space plans, we discussed earlier, it does share many spatial characteristics with workhouse design.

Table 2: Spatial Features of Traditional Workhouses and Recently Completed Homeless Shelters

Workhouse / Casual Ward spatial characteristics (baseline)	NoHo Overnight Shelter spatial characteristics	Kearney Emergency Shelter spatial characteristics
Legend: Significant alignment with baseline		
Partial alignment with baseline		
Little or no alignment with baseline		
Gender/age/health-based segregation	Gender segregation (women/men)	Gender segregation (women/men)
Corridor system of spatial arrangement	Corridor system of spatial arrangement	Corridor system of spatial arrangement
Tree-like room arrangement (non-distributed, asymmetric, deep)	Tree-like room arrangement (non-distributed, asymmetric, deep)	Tree-like room arrangement (non-distributed, asymmetric, deep)
Dormitory-style sleeping for large numbers of inmates located at the deepest points	Dormitory-style sleeping arrangements for large numbers of guests located furthest from the entrance	Dormitory-style sleeping arrangements for large numbers of guests located furthest from the entrance
Communal eating and day rooms	Communal multipurpose room (eating and computer area)	Communal eating

Spaces support hierarchy by tightly controlling navigation and activities: • Central entrance under constant surveillance, controlled admissions • Ability/gender/age-based segregation • Large communal areas under constant surveillance (sleeping wards, workrooms, hygiene facilities) • Navigation is non-distributed and offers no or little choice	Spaces control behaviours: • Central entrance under constant surveillance, controlled admissions • Gender-based segregation • Large communal spaces under surveillance (dormitories and pathways, multipurpose room, bathrooms) • Navigation is primarily non-distributed and offers no or little choice	Spaces control behaviours: • Central entrance under constant surveillance, controlled admissions • Gender-based segregation • Large communal spaces under surveillance (dormitories and dining) • Navigation is non-distributed, but offers some choice
Communal partitioned airing yards	Communal courtyard (very small, pets are allowed)	Communal courtyard
Visibility: under constant surveillance but themselves are denied long lines of sites or ability to observe live outside of the confined spaces	Visibility: most guest spaces are under surveillance, poorly integrated and therefore illegible as a whole	Visibility: most guest spaces are under surveillance, poorly integrated and therefore illegible as a whole
Visual access to outdoors and other spaces limited or blocked	Visual access to outdoors only from multipurpose room. Dorms have no outdoor visual access.	Ample visual access to daylight and outdoors
Absence of private spaces where personal needs could be attended to.	Partially private spaces where some personal needs could be attended to.	Partially private spaces where some personal needs could be attended to.
Spatial meta stricture controls behaviours and is aimed at savouring relationships and denying agency and individuality to inmates.	Spatial meta stricture is aimed at providing basic accommodations and care in a controlled environment.	Spatial meta stricture is aimed at providing dignified accommodations and care in a controlled environment.

By comparing these characteristics, we can readily see the legacy of traditional workhouses. To summarize this approach implications for client well-being and facilitating relief from the stresses and trauma of homelessness (if only temporarily), I will note three factors:

First, the spatial configuration determines patterns of movement, which is by far the dominant and most important form of space use (Hillier 2007). The workhouse-model configuration, with its linearly arranged pathways, efficiently moves guests through the building to their nightly accommodations, which are located at the back of the building. This allows little choice or control over where to go or what to do, thus denying even the smallest degree of agency to the guests.

Second, the congregate nature of the multi-purpose dining room and sleeping area creates a condition of co-presence in all primary spaces in the building. Although low partitions are used to create semi enclosed individual sleeping pads and offer guests some modicum of privacy (compared to more common bunkbed arrangements), the overall perception of the space is that it remains physically and perceptually visually permeable—for both the cubicle inhabitants and for those passing by—and it offers only partial relief from being able to hear others talking,

coughing or sorting through their possessions. This amplifies the situation to one of co-presence and co-awareness. However, it is not uncommon that homeless shelter guests, forced into co-presence in a place for only a short period of time, do not know one another and may not even want to acknowledge one another. Sleeping rough has conditioned many of these individuals not to trust their neighbour. This may put them on alert out of concern for the safety of their possessions and for their own physical safety. Although this concern may be mediated through surveillance by staff members, this comes at the expense of creating Panopticon-like conditions in which "guests" are always being observed. Here, we are talking about dignity.

Third, the hierarchical nature of the building is reflected in the layout of its programmatic spaces, with staff and counselling offices located at the front and guest accommodations at the back. This approach is widely adapted in shelter design and is thought to be important for shelter operations because it increases the offices' visibility for the guests, which may increase opportunities for establishing relationships between shelter staff, case workers and guests in need of assistance. It also supports caseworkers' and staff person's twin functions as gatekeepers and overseers. This hierarchical configuration, combined with the windowless design on three of the four sides—only the staff offices and multi-purpose room have windows and exterior access—could be likened to a ship in motion, to use Michael Benedikt's (2020) metaphorical comparison, with the captain's bridge at the front, steered by commanding officers nearby. The passengers dine in the mess hall and sleep deep in the belly of the ship. The forward movement of back dormitory rooms is, however, arrested by interior partitions, corridors and staff rooms that clutter the front of the building. Applying Benedikt's concept of "virtual motion," which suggests that rooms may appear as "drifting" towards a longer, "streamlined" view in the direction of windows, doors or other openings in the room that lengthens occupants' gaze. Blank walls create a feeling that the room is "a cave or bucket or scoop" denying users ability to "tether" the room to the outside world and orient themselves in space (p. 134). The one exception to this is the elongated clerestory window in the partition dividing the multi-purpose room from the women's dormitory. The importance of daylight and visual access to the outdoors has been proven as critical for our well-being as human beings (see, for example, Knoop, M. et al 2019; Femke and de Kort 2018; Annerstedt et al 2015). For temporarily or chronically homeless persons suffering from trauma, stress, depression, mental or physical illnesses, injuries or substance abuse, such spatial-temporal orientation is particularly important.

Overall, if we look at the list of potential triggers discussed earlier in the paper, NoHo Shelter fairs poorly in eliminating those from its design: uncontrolled openings between spaces, poor legibility of spaces, shortage of exits, indistinguishable doors and corridors, narrow hallways, fluorescent lighting, absence of connection to outdoors. Although the stakeholders and designers tried to mitigate these shortcomings, the overall space still adheres to the model that focuses on the (perhaps well-intentioned) goal of providing beds first and foremost rather than offering a holistic environment supportive of the well-being of its residents. So long as the homeless

"industry" continues with this approach, the shelter designs will continue to perpetuate this outdated "pathological" model.

4   CASE STUDY 2: A TRAUMA-INFORMED DESIGN APPROACH

The Kearney Center, a new construction facility in Tallahassee, Florida, USA (2015)

Design: Clemons, Rutheford & Associates, Tallahassee, Florida

Type: overnight shelter

Capacity: 220 beds (single men and women)

The Kearney Center is located in the North Florida region and offers emergency one-night accommodations, medical and counselling services to individuals experiencing homelessness. This new construction building is situated in a mixed-use area close to the outskirts of the city, but with close access to public transportation. The building plan consists of three sections, with one central block and two flanking dormitory wings. The spaces are symmetrically arranged along three central axes formed by corridors. The interiors are spacious, bright, and clean with vibrant accent walls, artworks, and a lot of daylight. The overall impression of the building is one of calmness, like that of an office or a community center, rather than a social services institution (Figure 5).

Figure 5: Kearney Center: reception area, case management offices corridor, cafeteria, women's wing corridor, men's dormitory and public art piece "All Who Knock" by Judy Rushin, installed above the reception area. Photos: Jill Pable

Central to the planning for the shelter were the concepts of TID, which aims to limit the detrimental effects that environmental triggers may have on the well-being of residents. Personal safety concerns were addressed through a combination of spatial layout—by providing two separate wings for women and men—and physical security features. Spatial analyses of the room arrangements reveal that the primary and secondary spaces in the building are logically and hierarchically organized (being asymmetric and non-distributed) and reasonably legible. Following the TID concept of well-ordered spatial complexity, the building offers layered experiences to its guests. This complexity is comprised of nonlinear directional and activity choices, supported by specifically allocated spaces. Upon admittance for the night, guests have a choice of spending time at computer stations located in the lobby area, visiting the medical clinic, heading back to the dormitory, or proceeding to the dining hall or hygiene facilities. This organized complexity is supported by the presence of transitional spaces between primary spaces. The entrance lobby, longer corridors with seating options, community spaces and hygiene facilities located towards the back of each wing each serve as transitional zones on the way to the sleeping quarters. Visually the spaces are integrated at a medium level, with public spaces and corridors being most legible in the configuration (Figure 6). The configuration also offers elements of visual complexity, such as variations of ceiling heights, decorative surface features and lighting, accent wall colours and art. The visual and buffered physical permeability allows for the provision of "non-institutional" elements of security and safety, which contributes to the impression of calmness. Guests also enjoy an abundance of daylight and connection with the outdoors through the multiple large windows in most primary spaces.
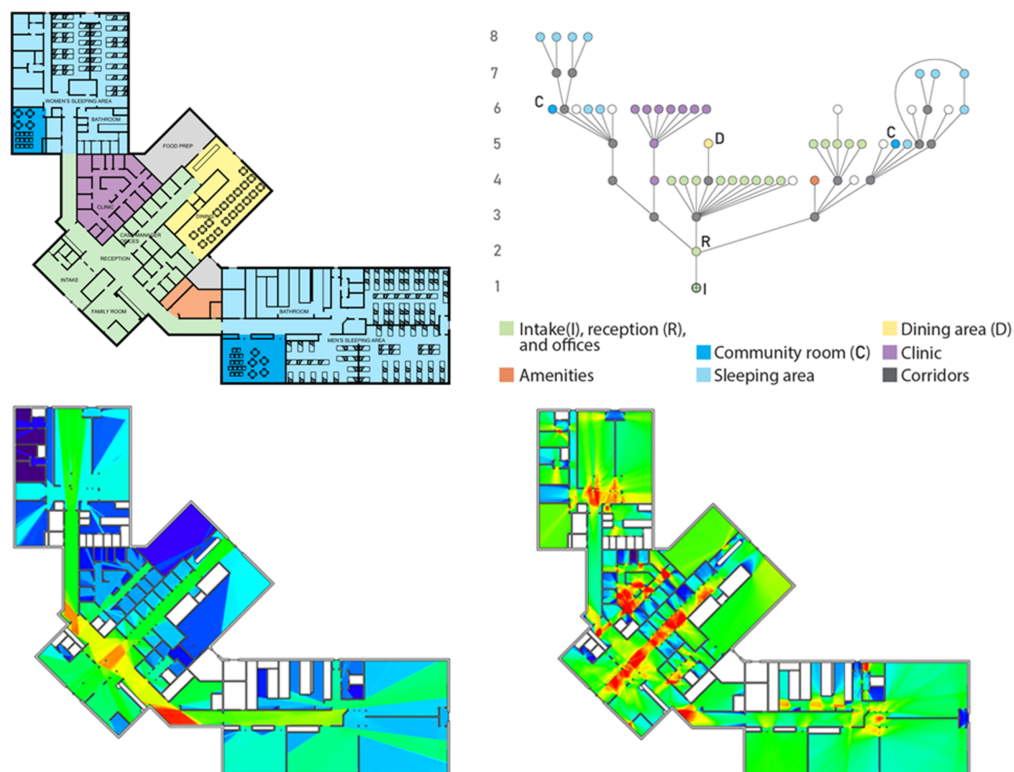

Figure 6: Kearney Center: floor plan, justified graph and VGA integration and overt control

The sleeping arrangements are planned in an open dormitory style with double bunk beds. Each of the two dormitories is overseen from an observation station placed at the entrances to the rooms. This is one element that is also rooted in traditional workhouse design, and it is among the most commonly practiced shelter policies for maintaining safety and security. The contrast of approaches between the public spaces and dormitory arrangement is stark. The ramifications of this approach are worth noting. On the one hand it may contribute to higher stress levels among certain guests, while others may experience a respite and enjoy heightened sense of protection from perceived and real threats.

Table 3: Trauma-Informed Design characteristics and spatial characteristics of two recently completed homeless shelters.

TID characteristics (adapted from Pable 2015; Pable and Ellis 2020; Grabowska et al. 2021)	NoHo TID spatial characteristics	Kearney Shelter TID spatial characteristics
Legend: Minimal presence Moderate presence Advanced presence		
Eliminate triggers (open windows, secluded stairways, visual clutter, shortage of exits, unclear wayfinding, blind turns, indistinguishable repetition of doors and corridors)	Minimal: shortage of exits, blind turns, indistinguishable features and corridors	Advanced: clear wayfinding, individually marked spaces and signage
Support privacy and safety	Moderate: partially enclosed pods offer some privacy but compromise safety and security); absence of spaces to escape being in the presence of others	Moderate: open dorms offer no privacy but surveillance increases safety and security; absence of spaces to escape being in the presence of others
Support individual identity and self-esteem (welcoming exterior, honesty of finishes, areas for personalization	Minimal nondescript façade, no areas for personalization 	Moderate: attractive façade, honesty of finishes, no areas for personalization
Physically permeable and visually integrated	Minimal	Moderate
Gradual transitions between public/private, indoor/outdoor	Minimal	Advanced
Organized as well-ordered, complex spatial experiences (variety of small/large spaces, multifunctional spaces, circulation offers choices) as opposed to limited and monotonous experiences	Minimal: little variety of spaces, one multipurpose/dining room, limited variety of spatial experiences	Moderate: variety of large (cafeteria and dormitories) and small (community rooms) spaces; multifunctional corridors and community rooms, circulation offers some choices
Organized as well-ordered, complex sensory environments (rich sensory experiences, variety of ceiling heights, strong aesthetics) as opposed to monolithic ambiance and atmosphere	Minimal (little variety of sensory experiences, monolithic ambiance)	Advanced in public spaces (variety of ceiling heights and treatments, colour accents, large-scale wall graphics, non-institutional light fixtures, art objects); dorms look monotonous and institutional
Connection to outdoor	Minimal	Advanced

5 CONCLUSIONS

This paper has presented a comparative analysis of two specific homeless shelter designs evaluated from two perspectives: that of the traditional workhouse and that of trauma-informed design. The architectural typology of the standard homeless shelter originated in the early nineteenth century, and it has evolved over the past two hundred years from a workhouse model, which was developed as a punitive and correctional institution to the more humane and rehabilitation-focused forms practiced today. As architectural practices shift toward human-centered design, it is important to articulate the extent to which remnants of traditional controlling and oppressive interior spatial schemes continue to affect the well-being of their users. This is particularly important for the vulnerable and marginalized populations served by homeless shelters, in which environmental conditions may resuscitate or perpetuate traumatic experiences. With this in mind, trauma-informed design may be an approach that stakeholders and designers utilize to build more supportive, less stressful environments.

How ethically and effectively to support and center historically marginalized communities is a question of our time. Such ethics must extend beyond the rhetorical spaces of politics or aspirational social policies, it must be manifested in our literal spaces too. Built environments function as mediators between policymakers' intentions and the lived experiences of our citizens, our neighbors, and our friends, and they reflect the actual virtues that we value. The spaces we design are actions that we take: they speak louder than what we tweet or say in a stakeholder presentation. As Benedict (2020) succinctly stated, through buildings' "design and upkeep" we can "understand something about the people who live there." By extension, I might add, we also understand something about the people and societies that built them. In his seminal work, Space is the Machine, Bill Hillier observed that if we hope to resolve the seemingly intractable problem of poor housing, we need to treat "both architectural and social variables at a much finer level of resolution," meaning that the design and analysis process must target smaller, more specific populations. From my experience, while we struggle with the evident and increasing demands for mass housing solutions in our urban and suburban environments, building for target populations does not always have to be based on macro-level demographic, social or economic characteristics. It can and must be based on the attributes of the individuals who need our help. The problem of homelessness offers a most meaningful space in which to pursue this type of design, and there is one last question I want for developers, architects and builders to keep in mind when they work on behalf of homeless and other vulnerable populations: Would we ourselves want to sleep or even spend one minute's time in these spaces that we design for persons who are literally our family members, friends, and loved ones?

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