Should Prisons be Pretty? Influence of Prison Layout and other Architectural Characteristics on Life in Prisons^{1,2}

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Architecture and spatial design of any building is proved to have a major impact on human behaviour and experience. So is the case with prison design, which can affect different aspects of prison life, such as prisoners' wellbeing, prisoners and staff relations, prison social climate, prisoners' adjustment etc. The goal of the paper is to outline the prevailing theoretical thoughts and empirical findings regarding the impact prison architecture and design choices have on persons residing in correctional facilities, prisoners and staff alike. First, the historical development of different prison layouts and its impact on life in prisons is presented. Following is the identification and description of various interior and exterior factors that play a role in living and working conditions in prisons. The position of the architect and other relevant actors in planning and developing prison design is discussed in the conclusion.

Keywords: Architecture, Prison design, Prison layout, Life in prison.

Introduction

Prison architecture and building design is one of the important issues in prison research and policy and has been the interest of scientists and experts for more than a century. The intersection between penology and architecture raises many interesting social, moral and ethical questions, and

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the role of architect in the prison design is contested in the sense that he imagines functional, comfortable and eve-pleasing objects for persons who are in conflict with societal norms and values. A prison is understood as a place in a process of becoming through people's experiences, because of the circulation of stories and representations that together construct a picture of what place a particular prison is (Fransson et al., 2018, p. 24). Prisoners, staff, architects, planners and constructors should all have a saying in the process of prison design. The outlook of correctional facilities in society, its interior and exterior, are reflections on dominant penal philosophy and treatment of prisoners in a society. Prison architecture refers to buildings, interiors and other physical installations, as well as the outdoor of these buildings, vards, green surfaces, pathways etc. Some researchers indicate that prison is a socio-material construct drawing attention to how architecture is experienced, how it communicates with the people inside, makes people relate and talk, and in this way affects the prisoners (Fransson, 2018, p. 178). Architecture, prison artefacts and people melt together and create forces, producing energies and atmospheres in the prison (Frichot & Loo, 2013). Looking at prison architecture in this way, as open and dynamic, we can notice how staff and prisoners use the prison space, how prisoners indicate their will to belong, and use their time, identifying with the place (Fransson, 2018, p. 178). The design of any building can influence people's experience and behaviour, as well as interactions among users of the space, as documented in environmental psychology research (see Gifford, 2007; Sommer, 1974). Following this line of thought, it can be said that design of prison exterior and interior can affect different aspects of prison life, such as prisoners' wellbeing (Engstrom & van Ginneken, 2022), prisoners and staff relations (Beijersbergen, 2014), prison social climate, prisoners' adjustment (Atlas, 1989; Grant & Memmott, 2008; Morris & Worral, 2010; Schaeffer et al., 1988; Wener & Olsen, 1980), etc. The goal of the paper is to outline the prevailing theoretical thoughts and empirical findings regarding the impact prison architecture and design choices have on persons residing in correctional facilities, prisoners and staff alike. First, the historical development of different prison layouts and its impact on life in prisons is presented. Following is the identification and description of various interior and exterior factors that play a role in living and working conditions in prisons. The position of the architect and other relevant actors in planning and developing prison design is discussed in the conclusion.

Prison layout and experience in prison

The typology of prisons is constantly changing throughout history. The first prisons of the modern era, in which prison sentences were served, are known as the systems of common prison (Kron et al., 2011). There was no classification of prisoners regarding gender, age, state of health and nature of crime committed. The outlook of the correctional facility was in service of preventing escape. Torture, beatings, unsanitary conditions and abuse were commonalities in this type of prisons; the overpopulation, health problems, even death were prevalent. During the 18th century a significant shift occurred regarding the penal philosophy and treatment of prisoners. which was also reflected in the way prisons were designed. Among the pioneers of this process was Jeremy Bentham, English philosopher who emphasised prisoners' surveillance, control and discipline (Bentham, 1995). Bentham envisioned prison buildings as circular structures with a domed roof and cells arranged in tires on the circumference of the circle. This type of design is called panopticon, and it was so influential that it remains in prison systems around the world till present-day (Picture 1). Prison staff is in the centre of the building, and from that position they were able to watch prisoners' behaviour and interactions without their knowledge of the surveillance ("seeing without being (Beijersbergen, 2014, p. 64). The basic principle of the prison typology was to monitor the maximum number of prisoners with the minimum number of guards.

Picture 1 Jeremy Bantam's panopticon

Source: The works of Jeremy Bentham vol. IV, 172-3

Bentham's Panopticon has inspired considerable theory as well as physical solutions for prison architecture with centralised planning (Spens, 1994). One of the most notable examples was the Pennsylvanian system introduced in the first half of the 19th century, which included several prisons constructed in radial layout (Franke, 1995; Johnston, 2000). The facilities consisted of cell buildings that converge on a centre, which permitted surveillance and control of prisoners' activities from the central inspection centre. Prisoners were isolated in solitary confinements, disabling contact and communication, because it was believed that this would lead to self-reflection and remorse (Beijersbergen, 2014, p. 64). Separate cell was built for each convict to avoid the negative aspects of previous joint imprisonment and the negative mutual influence of the convicts, such as physical violence and collusion between prisoners. security problems, and unhealthy conditions (Spens, 1994). Isolation of prisoners had a severe negative impact on their physical and mental health, instead of expected remorse for crime committed. Regardless, the Pennsylvanian system had major influence on later thought and practice of prison design, bearing in mind that every modern prison is internally celllike organised.

Initiatives for improving conditions in American prisons resulted in introducing the Auburn system, which allowed prisoners to work in groups during the day but kept in solitary confinement during the night. The Auburn system and corresponding architecture have been described as "machine-like" where prisoners are kept in tiny cells under total control (Fowler, 2015). As in the Pennsylvanian system, prisoners were prohibited from any communication or contact with each other, including non-verbal communication. However, results regarding the prisoners' improvement, turned out to be as ineffective as in the previous system. The Auburn philosophy and corresponding architecture were largely determined by builders who had the main responsibility of containing all the inmates in an orderly way, not by architects who could have created a more humane solution within the necessary constraints (Johnston, 2000, p. 76).

In Europe, development of penal systems from the mid-19th to the mid-20th century, reflects the cultural, economic, political and social transformations. There was a "constant pressure to find ways to define more enlightened, humane, but adequate punishment for committed crime" (Popović, 2022, p. 25). Hence, the dominant penal philosophy produced prisons that ought to be secure, clean and in line with the goal of rehabilitation, which resulted in, among the rest, similar prison architecture (O'Brien, 1995). In the second half of the 19th century, progressive English and Irish systems were introduced. The core idea of these systems was the

progression of convicts to better prison treatment with the possibility of parole (Kron et al., 2011, p. 67). In the English variant of the progressive prison convicts lived in cells, but unlike previous systems, they could have some benefits based on good behaviour like open cell doors, better food, books to read and even occupational training. In the next phase prisoners were serving the sentence together, which meant that the convicts were placed in common rooms, where the beds were separated only by partitions. In this phase, convicts worked together in production plants or in their own rooms, and their progression or upgrade to next category depended on commitment and behaviour.

Irish, also known as the handrail system, brought major changes in how prisons were built, since the priority was to categorise prisoners in different groups based on specific criteria. Soon, this system progressed in correctional facilities organised as pavilions. Classification of prisoners that required a pavilion in prisons was costly and modern architectural solutions moved forward to combine pavilion and radial design of correctional facilities. Prison building had several blocks with different categories of convicts who were surveyed from one centre. Costly extras like windows and spaces for dining, exercise, and counselling are limited and the goal is to spend as little as possible per cell (Fowler, 2015). This strategy required less officers and enabled isolation of the block if a riot, fire or other difficulty arose. Surveillance and maintenance costs could further be decreased with modern CCTV technology (Kron et al., 2011, p. 69-70).

In modern day there are various types of prison architecture which reflects the changing paradigm on purpose of sentence from punishment to prisoners' rehabilitation and reintegration (Johnston, 2000). The requirements of today's prisons are that they should cover the prisoner's material, physical, physiological and social needs. More attention is placed on the relationship and interaction between staff and inmates and the idea of surveillance has switched from a Panopticon-like idea of absolute visibility to a focus on awareness of happenings and direct supervision, which has led to changes in the design of the facilities (Spens, 1994).

In the second half of the 20th century, in some countries, high-rise prisons were built which consisted of multiple small stacked pavilions that form a multistorey building. Each pavilion has dozens of cells and a communal living room. This type of so-called "human" prison is designed to help prisoners feel "at home", where they could learn social skills and acceptable behaviour through group activities (Beijersbergen, 2014).

In the late 20th century, solutions that were also used in residential buildings began to be proposed, such as diagonally placed windows that offer the possibility of looking into the distance and offer privacy. Actions are being

taken for more humane detentions and the construction of prison space. Some new requirements were also defined: the design should be flexible to allow simple changes to the building, which could make prisons more in line with the ideas of penal philosophies. Many old prison buildings were upgraded at the beginning of 21st century, implementing the participation of prisoners in the design of some parts of correctional facilities.⁴

Scandinavia is known to have one of the most progressive penal systems that is reflected in the architecture of prisons. In these countries there could be found the so-called "open" prisons, and although with maximum security, prisoners reside in rooms or cottages that have large windows with no bars, wood furniture, painted walls, sometimes a TV, radio or a small refrigerator (Fowler, 2015). In open type prisons, convicts serve sentences with minimal surveillance, and could engage in jobs outside the correctional facility, which enhances their chances for re-integration and decreases the possibility to reoffend. The buildings are in ways that enable prisoners to move easily between their rooms, school, workplace and recreational activities in the best possible way (Brottveit, 2018, p. 208). However, some researchers criticised open prisons stating that prisoners experience "pains of freedom" instead of "pains of punishment", which can cause distress of "liberty under constraint" (Shammas, 2014). These types of correctional facilities also maintained some dehumanising practices, such as a relatively extensive use of pre-trial custody and isolation (Dullum & Ugelvik, 2012).

Based on existing research, we could not draw conclusive evidence on the relationship between different types of prison layout and experience and life in prison, or which type of prison layout has best outcomes for prisoners' wellbeing. Some argue that radial prison layout separating officers from incarcerated persons with bars or bulletproof glass have been found to create a sense of depersonalization, disengagement (Wortley, 1996), and increase the risk of prison suicides (Liebling, 2002). Prisoners incarcerated in panopticon-like prisons rate more negatively relations with staff than those residing in campus, radial, or high-rise layouts. Furthermore, the same study found that incarcerated individuals within campus-style designs had more direct lines of sight with staff and, compared to other designs, reported higher rates of positive relationships

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⁴ Such example is proposal od and Italian architect Giovanni Michelucci known as the Gardens of Reunion (*Giardino degli incontri*) in the Prison Complex of Sollicciano completed in 2007. This place in prison is designed as meeting places for the inmates and their families (Tracada, 2011; Giofrè, 2018).

with staff (Beijersbergen et al., 2016). Another study also suggested that campus prison layouts positively impact on inmates' behaviour, access to nature and prisoners-staff relations (St. John et al., 2019). Based on prison layout many choices regarding other prison architecture characteristics are dependent, which impact different aspects of life in prison, for prisoners and staff alike.

Prison architecture characteristics important for life in prison

Prison layout is not the only factor regarding the architecture that could have an impact on different aspects of life in prison, for prisoners and people working in correctional facilities. Small details, like different objects and things, which in ordinary life outside prison seem insignificant and taken for granted, become important inside the prison in order to construct a meaningful existence. Beijersbergen (2014) addresses five characteristics of prison design that are important for actions, experiences and relations in prisons. Those characteristics are facility size, unit size, how old is the prison building, sight lines and use of double bunking. Engstrom and van Ginneken (2022) further broadened the list of design features that could influence the experience and life in prison, organised in two categories. First one relates to the personal living space of inmates, including lightning, materials, noise, colour and other factors usually related to a prison cell. The second, named general prison space, relates to other spaces in the prison except the cell, as well as the outlook of the correctional facility, yard and exterior of the prison in general. The discussion of these and other relevant factors in this article is presented in relation to two categories: prison building interior and prison exterior.

Prison building interior

Natural or artificial light is one of the most important features of prison design and could impact different aspects of life in prison. Both absence of natural light and poor lighting on the one hand and inadequate darkness for sleep, could have various negative consequences on wellbeing and behaviour (Wener, 2012). Exposure to sunlight during the day, and smart lighting design inside are recorded to foster benefits for physical and mental health, as well as feeling "like home" atmosphere (Jewkes, 2010; Jewkes & Moran, 2014; Spens, 1994; St. John, 2020; Wener, 2012). Level of noise affects different aspects of human life in any environment, let alone prisons which are known to be noisy. Level of noise that is disrupting everyday activities of persons in prisons (inmates and staff

alike) is recorded to have many negative consequences, such as negative relations between staff and prisoners (Beijersbergen et al., 2016), stress and illness (Moore, 1981; Stansfeld & Matheson, 2003).

One of the basic human needs is related to the *comfortable temperature* in living space. It is recorded that dissatisfaction with unfavourable living conditions that result from inability to control temperature could relate to higher rates of misconduct and violence in prisons (Atlas, 1984; St. John, 2020). Being able to control the temperature in the space where prisoners spend almost entire day, could restore sense of autonomy, comfort and satisfaction with prison interior (Frontczak & Wargocki, 2011; Glass & Singer, 1972; Jewkes, 2018).

Fresh and clean air is one of basic living requirements since bad ventilation could cause discomfort or some medical issues, such as fatigue, headaches and breathing difficulties (Karthaus et al., 2017). The quality of air in prison depends on the size of the space, design, materials used and mechanical system. The composition and origin of building materials, or in some cases the secondhand smoke could also impact the air quality in prison environment (Evans, 2003; Semple et al., 2017). There is higher risk of respiratory problems and transmission of infectious diseases in spaces with poor ventilation and limited air flow, coupled with cells cramped with inmates (Ryan et al., 2020). Beside physical health, ability to control this element of life in prison, could positively impact prisoners' autonomy, selfworth and general satisfaction with building interior (Frontczak & Wargocki, 2011).

Quality of living space is significantly influenced by *materials interior* parts are made of. The use of hard materials (concrete, brick, metal) is common in prison environment since their main characteristic is resistance to human and natural impact (Wener, 2012). Considering their corrosivity, less durability and higher cost, carpet, wood and cork are rarely present in prisons. However, research indicates several positive outcomes when soft and diverse materials are used in prison environment such as reduction of noise (Wener, 2012), breaking monotony and boredom (Hancock & Jewkes, 2011; Spens, 1994), and increased comfort (Jewkes, 2018). Furniture manufactured from soft materials beside comfort could support cleanliness in prison living conditions, which could impact the sense of identity, dignity and self-respect (Sloan, 2012).

Aesthetic aspect of prison design is regarded as an important factor in the quality of prison living conditions. Attractiveness of the space serves several purposes, mainly to ease the time serving in prison and to communicate the message of value and respect to prisoners (St. John, 2020). Colours and texture, for example, presence or lack of them, are

noted to have an impact on prisoners' wellbeing (Hancock & Jewkes, 2011). Research also indicates that introduction of more curved shapes rather than traditional sharp and angular ones could promote a domestic atmosphere and positive experience of living in prison (Papanek, 1995). Possibility of *viewing something other than prison building* or other inmates everyday has a significant impact on incarcerated persons mental and physical health (Karthaus et al., 2017). Research indicates that a decent view has various positive consequences such as reducing boredom, fatigue, and irritability and increasing experienced comfort and perceived safety (Clearwater & Coss, 1991). It is common practice in prisons to block windows with bars, paint or windowpanes, or to place windows too high in the wall (Jewkes, 2010; Moore, 1981), therefore obstructing the prisoners view outside the correctional facility.

Existence or prevalence of *double bunking* in prisons is generally believed to have a negative impact on different aspects of life in prison. Spending time in units with double bunking is reported to have several negative consequences on prisoners' wellbeing, such as negative mood, perceived privacy, higher levels of experienced crowding, more behavioural and health issues (Cox et al., 1984; Grant & Memmott, 2008; Schaeffer et al., 1988; Wener & Olsen, 1980). In a study conducted in several Dutch prisons, results indicate that double bunking has been associated with more distant and less frequent officer-prisoner interactions (Beijersbergen, 2014).

Privacy of living space in prison is a direct outcome of decisions in prison design. Privacy of inmates has several aspects, namely, auditory, spatial and visual which are crucial for a more human prison environment (Moore, 1981). In this sense, a cell is the space where an inmate spends the most of his imprisoned days, hence the design and outlook of the cell can greatly impact the sense of privacy. Use of specific materials, type and furniture arrangement, selection of colours, design of the cell doors, presence or absence of divider to a toilet, are factors contributing to prisoner's privacy (Engstrom & van Ginneken, 2022).

Considering the strong empirical evidence supporting the positive impact on prisoners, the *design of visitation space* should also be taken into consideration when discussing the issue. Some research results indicate that the visitation rooms that are too small, without adequate heath, cooling, place to sit and are uncomfortable in general, send a message of neglect and disregard toward this important part of prisoners' life (Comfort, 2003). Some suggest that comfortable furniture, bright colours, secured privacy, child friendly design of visitation rooms could contribute to increasing frequency of visits, as well as better experience for both prisoners and visitors (Karthaus et al., 2017; Siegel & Napolitano, 2021).

Prison exterior and experience and behaviour in prison

Regarding the correctional facility and unit size, we could say that there is consensus among researchers and practitioners in the field that smaller prisons, with fewer prisoners and smaller units are more favourable than large scale prisons with many people incarcerated (Farrington & Nuttall, 1980; Fairweather, 2000). Study on quality of life in Norwegian prisons demonstrated that decentralised and less hierarchical structure of the prison, with several levels and fewer employees, together with social aspects, creates a flexible and dynamic organisation (Johnsen et al., 2011, p. 523). Research shows that staff-prisoner relationships are more positive in small rather than medium or large scale prisons (Johnsen et al., 2011: Beijersbergen, 2014). Moreover, large buildings and units are associated with cold and unwelcome atmosphere and social and physical distance, as well as health issues (McCain et al., 1976; Paulus, 1988). When it comes to misconducts and violence the research results are less unequivocal, since some studies indicate less violence in smaller prisons (Snacken, 2005), while other point out frequent problems in smaller prisons (Farrington & Nuttall, 1980; Jiang and Winfree, 2006; Huebner, 2003). Related to size of prison is the question of (over)crowding which refers to building occupancy and density in relation to capacity (Engstrom & van Ginneken. 2022), which is also the factor determined partially by prison architecture.⁵ The age of a prison is also believed to impact the interactions and experience in prison setting. Differences between older and newer prisons could manifest in arrangement of space, size, lightning, colours, furniture etc. Research results suggest that conditions for both staff and prisoners are better in newer prisons (Shefer & Liebling, 2008) and that older prisons are not well suited to present-day needs and activities. However, some researchers found the prevalence of property and drug-related violations in older buildings (Morris & Worral, 2010).

It is widely believed that *prisons should be located* at a reasonable distance from the city. Cities are centres of political, economic, cultural and social life in the contemporary world (Paraušić, 2020). Considering the importance of urban transportation in citizens' daily life (Kolaković-Bojović & Paraušić, 2019), there should be a good transport connection between the city and the prison, which would facilitate visits by families

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⁵ The research findings in this regard are not conclusive, since some scholars indicated that "dormitory may have more physical space per person than a single or double cell, but a dormitory will have a much higher social density with many individuals sharing one room" (Engstrom & van Ginneken, 2022, p. 492).

and friends of prisoners, but also minimise travel time to work for staff. Analysing the location of prisons in Italy Giofrè, Porro and Fransson determined that present-day prisons are built on the city outskirts or countryside. These findings confirm that, in these cases, there is the will to move, or to build, prisons far from the city, away from people and their sight, preventing integration with community life. The prison is "something" that nobody wants "in his backyard" (Giofrè, Porro & Fransson, 2018, p. 59).

There are many initiatives to create as *many green surfaces as possible in prisons*, bearing in mind the positive influence they have on inmates. It is not just the more natural and humane look of the venue, but some argue that trees and flora attract birds, insects and other wildlife (Jewkes 2014; Jewkes & Moran, 2015), that can stimulate senses and feelings that prisoners experienced outside of the correctional facility. As Johnsen argues: "Nature is not neat and tidy, there are no straight lines, it is uneven and keeping one's balance when walking or running in this landscape can be challenging, especially going up and downhill" (Johnsen, 2018, p. 79). In existing research, nature in prison environment is reported to have significant positive consequences, such as sense of psychological support (Moran & Turner, 2019), positive emotional response (Jewkes et al., 2020), less self-harm among the incarcerated population, and violence both toward staff and among the incarcerated (Moran et al., 2020, 2021), but also positive experience of prison staff (Pavićević et al., 2020).

Differentiation between internal and external architectural traits and their influence on life in prison is purely analytical and should not be definitive. Categories such as aesthetic, colours or material used could be applied to prison interior, as well as exterior, and are not exclusive. One interesting case is related to security measures and technology, since cameras and various inspection devices are placed in the prison buildings but in the prison outdoor environment as well. Although security measures are necessity in correctional facilities, placement and design of technological solutions in prison environment could have tremendous impact on living and working conditions for inmates and staff.⁶ Besides evident overlapping, the researchers could extend future investigations on how

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⁶ Liebling et al. (2012) found that the combination of a prison's layout and the overt use of surveillance cameras can contribute to a sense of self-consciousness or paranoia among incarcerated individuals. Alternatively, some evidence suggests that security technologies can replace the need for harsher security measures, like metal gates and bars, and create a perception of safer and more comfortable living environments (Engstrom & Ginneken, 2022).

different spatial features of correctional facilities interact and how could they be combined to create a positive prison environment.

It should be noted that the above-mentioned spatial factors influencing the prison experience mostly relate to the adult male prison population. Juvenile offenders placed in correctional facilities are s very vulnerable group in the sense that their physical, mental and social development will be permanently influenced by experience in prisons. Hence, besides the already outlined, there are other prison design factors that will be important to wellbeing of incarcerated minors. The female perspective on lived experience in prison could also be very specific and their view on spatial characteristics of prison environment could vary depending on the context (see Ćopić & Batrićević, 2024). Prisoners that are disabled, chronically ill or aging will have different spatial needs when compared to other imprisoned persons, regarding the accessibility through a prison. Bearing this in mind there is still a research gap regarding the relationship between socio-demographic characteristics of inmates and different architectural factors of prison venues.

It should be noted that prison architecture is one of many dimensions influencing the overall quality of life in prisons. Future research could focus on how prison design and spatial factors interact with other dimensions of life in prisons such as relations in prison, the fairness of treatment and access to justice, the competence and conduct of prison staff, the predictability and fairness of prison rules and procedures, the level of safety and security within the prison environment, opportunities for prisoners to learn and grow and the physical and mental health of individuals within the prison population.

⁷ This is also the case for teachers since they need to adapt to special teaching conditions, if we take in consideration the importance of implementation of different teaching practices (Kovačević Lepojević, Bukvić Branković et al., 2024) and their relationship with students' behaviour and wellbeing (Kovačević Lepojević, Trajković et al., 2024).

Conclusion

When thinking about prison design, one important question emerges, the one related to the role architecture and the architect have in creating correctional facilities. By its nature, design of building interior and exterior should provide the users a sense of comfort, aesthetic experience that will enhance the quality of their life. However, the prevalent thought throughout history was to create a place where prisoners, as social deviants condemned by society, should live in scarcity, loneliness and constant surveillance in order to repent. Extensive research has demonstrated that these conditions have severe negative consequences for prisoners' wellbeing and health. Why would an architect create a space that has such negative effects on human life and morale?

Different approaches to crime, penal and justice systems and the public's beliefs about punishment are inevitably reflected in the architecture of prisons. In this sense, Fowler (2015) opposes two distinct penal philosophies and correctional facility design in United States and Scandinavian countries. Exploring the two extreme approaches to prison design, to determine how the differences affect the inmates and the overall effectiveness of the prison system, she addresses the importance of considering the human experience in the design of prisons (Fowler, 2015, p. 374). There lies the need for the architect to design a space that will contribute to the rehabilitation of convicts and ease the pains of punishment.

In prison architecture, there has been a standardisation of basic prison functions, leaving very little room for the development of prison typology. The role of the architect is still significant, in terms of design, adaptation to the location, and even through aesthetic expression. However, the real progress of prison typology is preceded by thinking about new programs, which will fully utilise the spatial framework of that institution for the purpose of improving the quality of life within its borders. To ensure the wellbeing of inmates and staff, the interior and exterior design of space should bring comfort, create safe conditions for treatment and work of everyone in the correctional facility and mitigate stress and anxiety related to prison buildings.

Prison design optimistically should be relegated to an interdisciplinary group that includes the participation of experts in various sectors, from the urban planner and architects to the sociologist and so on, including the end users when possible. The approach to the topic of prison architecture must necessarily focus on the various categories of users, starting from identification, in the design process, of what the actual needs are, in compliance with the regulations in force – without losing sight of the fact

that the prisoner is a person like everyone else (Giofrè, 2018). Prison's location and design, its connotations of material and of sensory perception, can promote and encourage a specific use and good perception of the space, and might influence the prisoners' behaviour.

References

- Atlas, A. I. A. (1989). Reducing the opportunity for inmate suicide: A design guide. *Psychiatric Quarterly*, *60*(2), 161-171. https://doi.org/10.1007/BF01064942
- Atlas, R. (1984). Violence in prison: Environmental Influences. *Environment and Behavior*, 16(3), 275–306. https://doi.org/10.1177/0013916584163001
- Beijersbergen, K. A. (2014). *Procedural justice in prison: A study on determinants and consequences of a procedurally just treatment of prisoners*. [Doctoral Thesis]. Vrije Universiteit Amsterdam
- Beijersbergen, K. A., Dirkzwager, A. J. E., van der Laan, P. H., & Nieuwbeerta, P. (2016). A social building? Prison architecture and staff–prisoner relationships. *Crime & Delinquency*, *62*(7), 843–874. https://doi.org/10.1177/0011128714530657
- Bentham, J. (1995). Panopticon or the inspection-house. In M. Bozovic (Ed.), *The panopticon writings* (pp. 29–95). London: Verso.
- Brottveit, G. (2018). The Becoming of Punishment as an Unpredictable and Moveable Torment. In: Fransson, E., Giofrè, F. and Johnsen, B. (Eds.) *Prison, Architecture and Humans* (pp. 201–223). Cappelen Damm Akademisk
- Clearwater, Y. A., & Coss, R. G. (1991). Functional esthetics to enhance wellbeing. In A. A. Harrison, Y. A. Clearwater & C. P. McKay (Eds.), *From Antarctica to outer space* (pp. 331–348). Springer
- Comfort, M. (2003). In the tube at San Quentin: The "secondary prisonization" of women visiting inmates. *Journal of Contemporary Ethnography*, *32*(1), 77–107. https://doi.org/10.1177/0891241602238939
- Ćopić, S. & Batrićević, A. (Eds.) (2024) *Prison Environment: A Female Perspective*. Institute of Criminological and Sociological Research. https://doi.org/10.47152/PrisonLIFE.D4.7
- Cox, V. C., Paulus, P. B., & McCain, G. (1984). Prison crowding research: The relevance for prison housing standards and a general approach regarding crowding phenomena. *American Psychologist*, *39*(10), 1148–1160. https://doi.org/10.1037/0003-066X.39.10.1148
- Dullum, J. and Ugelvik, T. (2012). *Penal Exceptionalism. In Ugelvik and Dullum. Penal Exceptionalism: Nordic Prison Policy and Practice*. Routlegde: New York.

- Engstrom, K. V., & Van Ginneken, E. F. (2022). Ethical prison architecture: A systematic literature review of prison design features related to wellbeing. *Space and culture*, *25*(3), 479–503. https://doi.org/10.1177/12063312221104211
- Evans, G. W. (2003). The built environment and mental health. *Journal of Urban Health*, 80(4), 536–555. https://doi.org/10.1093/jurban/jtg063
- Fairweather, L. (2000). Does design matter? In L. Fairweather & S. McConville (Eds.), *Prison architecture: Policy, design and experience*. Architectural Press.
- Farrington, D. P., & Nuttall, C. P. (1980). Prison size, overcrowding, prison violence and recidivism. *Journal of Criminal Justice*, 8(4), 221–231. https://doi.org/10.1016/0047-2352(80)90002-1
- Fowler, M. (2015). The Human Factor in Prison Design: Contrasting Prison Architecture in the United States and Scandinavia. *103rd ACSA Annual Proceedings: The Expanding Periphery and the Migrating Center* (pp. 373–380).
- Franke, H. (1995). *The emancipation of prisoners. A socio-historical analysis of the Dutch prison experience*. Edinburgh: Edinburgh University Press.
- Fransson, E. (2018). The Lunch table. Prison Architecture, Action-forces and the Young Imprisoned Body. In: Fransson, E., Giofrè, F. and Johnsen, B. (Eds.) *Prison, Architecture and Humans* (pp. 177–199). Cappelen Damm Akademisk
- Fransson, E., Giofrè, F. & Johnsen, B. (2018) Prison Architecture as a Field of Study: A Multidisciplinary Contribution. In: Fransson, E., Giofrè, F. and Johnsen, B. (Eds.) *Prison, Architecture and Humans* (pp. 19–27). Cappelen Damm Akademisk
- Frichot, H. & Loo, S. (2013). *Deleuze and Architecture*. Edinburgh University Press: Edinburgh.
- Frontczak, M., & Wargocki, P. (2011). Literature survey on how different factors influence human comfort in indoor environments. *Building and Environment*, 46(4), 922–937. https://doi.org/10.1016/j.buildenv.2010.10.021
- Gifford, R. (2007). *Environmental psychology: Principles and practice (fourth edition)*. Optimal Books.
- Giofrè, F. (2018). Prisons and Architecture. The Italian Framework. In: Fransson, E., Giofrè, F. & Johnsen, B. (Eds.) *Prison, Architecture and Humans* (pp. 101–128). Cappelen Damm Akademisk
- Giofrè, F., Porro, L. & Fransson, E. (2018). Prisons Between Territory and Space: A Comparative Analysis Between Prison Architecture in Italy and Norway. In: Fransson, E., Giofrè, F. & Johnsen, B. (Eds.) *Prison, Architecture and Humans* (pp. 39–64). Cappelen Damm Akademisk

- Glass, D. C., & Singer, J. E. (1972). *Urban stress: Experiments on noise and social stressors*. Academic Press.
- Grant, E., & Memmott, P. (2008). The case for single cells and alternative ways of viewing custodial accommodation for Australian Aboriginal peoples. *The Flinders Journal of Law Reform, 10*(3), 631-646.
- Hancock, P., & Jewkes, Y. (2011). Architectures of incarceration: The spatial pains of imprisonment. *Punishment & Society*, *13*(5), 611–629. https://doi.org/10.1177/1462474511422171
- Huebner, B. M. (2003). Administrative determinants of inmate violence: A multilevel analysis. *Journal of Criminal Justice*, *31*(2), 107–117. https://doi.org/10.1016/S0047-2352(02)00218-0
- James, F. (2018). "It's important to not lose myself" Beds, Carceral Design and Women's Everyday Life within Prison Cells. In: Fransson, E., Giofrè, F. & Johnsen, B. (Eds.) *Prison, Architecture and Humans* (pp. 151–176).
 Cappelen Damm Akademisk
- Jewkes, Y. (2010). Penal aesthetics and the architecture of incarceration. *Prison Service Journal*, *187*, 23–28.
- Jewkes, Y. (2014). Prison contraction in an age of expansion: Size matters, but does 'new'equal 'better'in prison design?. *Prison service journal*, 211, 31–36.
- Jewkes, Y. (2018). Just design: Healthy Prison and the Architecture of hope. *Australian & New Zealand Journal of Criminology*, *51*(3), 319–321. https://doi.org/10.1177/0004865818766768
- Jewkes, Y., & Moran, D. (2014). Should prison architecture be brutal, bland or beautiful? *Scottish Justice Matters*, *2*(1), 8–11.
- Jewkes, Y., & Moran, D. (2015). The paradox of the 'green' prison: Sustaining the environment or sustaining the penal complex?. *Theoretical Criminology*, 19(4), 451-469. https://doi.org/10.1177/1362480615576270
- Jewkes, Y., Moran, D., & Turner, J. (2020). Just add water: Prisons, therapeutic landscapes and healthy blue space. *Criminology & Criminal Justice*, 20(4), 381–398. https://doi.org/10.1177/1748895819828800
- Jiang, S., & Winfree, L. T. (2006). Social support, gender, and inmate adjustment to prison life: Insights from a national sample. *The Prison Journal*, *86*, 32–55. https://doi.org/10.1177/0032885505283876
- Johnsen, B. (2018). Movement in the Prison Landscape: Leisure Activities –
 Inside, Outside and In-between. In: Fransson, E., Giofrè, F. & Johnsen, B.
 (Eds.) Prison, Architecture and Humans (pp. 65–85). Cappelen Damm
 Akademisk
- Johnsen, B., Granheim, P. K., Helgesen, J. H. I. (2011). Exceptional Prison Conditions and the Quality of Prison Life: Prison Size and Prison Culture in

- Norwegian Closed Prisons. *European Journal of Criminology*, 8(6), 515–529. http://dx.doi.org/10.1177/1477370811413819
- Johnston, N. (2000). Forms of Constraint. A History of Prison Architecture. University of Illinois Press, Champaign.
- Karthaus, R., Bernheimer, L., O'Brien, R., & Barnes, R. (2017). *Wellbeing in prison design: A design guide*. http://www.matterarchitecture.uk/research/
- Kolaković Bojović, M. & Paraušić, A. (2019). Electric scooters: Urban security challenge or media panic issue. *Teme*, *43*(4), 1045–1061. https://doi.org/10.22190/TEME191015062K
- Kovacevic Lepojevic, M., Trajkovic, M., Mijatovic, L., Popovic-Citic, B., Bukvic, L., Kovacevic, M., Parausic Marinkovic, A. & Radulovic, M. (2024). The relationship between teachers' disciplinary practices and school bullying and students' satisfaction with school: The moderated mediation effects of sex and school belonging. *PloS one*, *19*(5), e0303466. https://doi.org/10.1371/journal.pone.0303466
- Kovačević Lepojević, M., Bukvić Branković, L., Popović-Ćitić, B., Paraušić Marinković, A. & Trajković, M. (2024). Where there is a will, there is a way: the social teaching practices of primary school teachers during the COVID-19 Pandemic. *Teme*, 48(1), 19–34. https://doi.org/10.22190/TEME230120002K
- Kron, L., Nikolić, Z. & Stevanović, Z. (2011). Prestup, kazna i zatvorenički weltanschauung. *Zbornik Instituta za kriminološka i sociološka istraživanja*, 30(1-2), 49–79.
- Liebling, A. (2002). Suicides in prison and the Safer Prisons agenda. *Probation Journal*, 49(2), 140–150. https://doi.org/10.1177/026455050204900208
- Liebling, A., Crewe, B., & Hulley, S. (2012). Values, practices and outcomes in public and private sector prisons. In V. Helyar-Cardwell (Ed.), *Delivering justice* (pp. 16–24). Criminal Justice Alliance.
- McCain, G., Cox, V., & Paulus, P. B. (1976). The relationship between illness complaints and degree of crowding in a prison environment. *Environment and Behavior*, *8*, 283–290. https://doi.org/10.1177/001391657682006
- Moore, E. O. (1981). A prison environment's effect on health care service demands. *Journal of Environmental Systems*, 11(1), 17–34.
- Moran, D., & Turner, J. (2019). Turning over a new leaf: The health-enabling capacities of nature contact in prison. *Social Science & Medicine*, 231, 62–69. https://doi.org/10.1016/j.socscimed.2018.05.032
- Moran, D., Jones, P. I., Jordaan, J. A., & Porter, A. E. (2020). Does nature contact in prison improve wellbeing? Mapping land cover to identify the effect of greenspace on self-harm and violence in prisons in England and Wales. *Annals of the American Association of Geographers*, *111*(6), 1779–1795. https://doi.org/10.1080/24694452.2020.1850232

- Moran, D., Jones, P. I., Jordaan, J. A., & Porter, A. E. (2021). Nature contact in the Carceral workplace: Greenspace and staff sickness absence in prisons in England and Wales. *Environment and Behavior*, *54*(2), 276–299. https://doi.org/10.1177/00139165211014618
- Morris, R. G., & Worrall, J. L. (2014). Prison architecture and inmate misconduct: A multilevel assessment. *Crime & Delinquency*, 60(7), 1083-1109. https://doi.org/10.1177/0011128710386204
- O'Brien P. (1995). The Prison on the Continent Europe, 1865–1965. In: Morris N., Rothman DJ (Eds.). *The Oxford History of the Prison: The Practice of Punishment in Western Society*, (199–225). Oxford University Press.
- Papanek, V. J. (1995). *The green imperative: Natural design for the real world.* Thames and Hudson.
- Paraušić, A. (2020). Uloga lokalne vlasti u pružanju urbane bezbednosti. *Kultura polisa*, *26*(42), 463–476.
- Paulus, P. B., McCain, G., & Cox, C. (1985). The effects of crowding in Prisons and Jails. In: Farrington, D.P., Gunn, J. (Eds.), *Reactions to Crime: The Public, the Police, Courts and Prisons* (pp. 113–134). Wiley.
- Pavićević, O., Ilijić, Lj. & Batrićević, A. (2020). Susret društvenog i biološkog ozelenjavanje zatvorskih zajednica. Institut za kriminološka i sociološka istraživanja.
- Popović, M. M. (2022). Hygienic and sanitary conditions in the prisons of the Principality and Kingdom of Serbia: A historical overview. *Acta historiae medicinae, stomatologiae, pharmaciae, medicinae veterinariae*, 41(1-2), 24-35. https://doi.org/10.5281/zenodo.7556948
- Ryan, C., Sabourin, H., & Ali, A. (2020). Applying an Indigenous and gender-based lens to the exploration of public health and human rights implications of COVID-19 in Canadian correctional facilities. *Canadian Journal of Public Health*, *111*(6), 971–974. https://doi.org/10.17269/s41997-020-00426-y
- Schaeffer, M. A., Baum, A., Paulus, P. B., & Gaes, G. G. (1988). Architecturally mediated effects of social density in prison. *Environment and Behavior*, 20(1), 3–20. https://doi.org/10.1177/0013916588201001
- Semple, S., Sweeting, H., Demou, E., Logan, G., O'Donnell, R., & Hunt, K. (2017). Characterising the exposure of prison staff to second-hand tobacco smoke. *Annals of Work Exposures and Health*, *61*(7), 809–821. https://doi.org/10.1093/annweh/wxx058
- Shammas, V. L. (2014). The pains of freedom: Assessing the ambiguity of Scandinavian penal exceptionalism on Norway's Prison Island. *Punishment & Society*, *16*(1), 104–123. https://doi.org/10.1177/1462474513504799

- Shefer, G., & Liebling, A. (2008). Prison privatization: In search of a business-like atmosphere. *Criminology & Criminal Justice*, 8, 261–278. https://doi.org/10.1177/1748895808092429
- Siegel, J. A., & Napolitano, L. (2021). Adult and child visiting at urban jails: Perspectives on visitation experiences and policies among visitors and people in jail. *The Prison Journal*, *101*(3), 331–351. https://doi.org/10.1177/00328855211010477
- Sloan, J. (2012). "You can see your face in my floor": Examining the function of cleanliness in an adult male prison. *The Howard Journal of Criminal Justice*, 51(4), 400–410. https://doi.org/10.1111/j.1468-2311.2012.00727.x
- Snacken, S. (2005). Forms of violence and regimes in prison: Report of research in Belgian prisons. In A. Liebling & S. Maruna (Eds.), *The effects of imprisonment* (pp. 305–339). Willan Publishing.
- Sommer, R. (1974). *Tight Spaces, Hard Architecture and How to Humanize It*. PrentinceHall, Inc.
- Spens, I. (1994). A simple idea in architecture. In: I. Spens (Ed.), *Architecture of incarceration*. London Academy Editions.
- St. John, V. J. (2020). Placial justice: Restoring rehabilitation and correctional legitimacy through architectural design. *SAGE Open*, *10*(2), 1–9. https://doi.org/10.1177/2158244020919503
- St. John, V. J., Blount-Hill, K.-L., Evans, D., Ayers, D., & Allard, S. (2019). Architecture and correctional services: A facilities approach to treatment. *The Prison Journal*, *99*(6), 748–770. https://doi.org/10.1177/0032885519877402
- Stansfeld, S. A., & Matheson, M. P. (2003). Noise pollution: Non-auditory effects on health. *British Medical Bulletin*, *68*(1), 243–257. https://doi.org/10.1093/bmb/ldg033
- *The Works of Jeremy Bentham*, published under the Superintendence of his Executor, John Bowring (Edinburgh: William Tait, 1838-1843). 11 vols. Vol. 4. https://www.tandfonline.com/doi/abs/10.2747/02723638.33.1.147
- Tracada, E. (2011). Reformation places and the use of senses in their design: Seclusion spaces and heightened sensory awareness/responsiveness. *International Journal of Interdisciplinary Social Sciences*, *5*(10), 355–370. https://doi.org/10.18848/1833-1882/CGP/v05i10/51929
- Wener, R. E. (2012). *The environmental psychology of prisons and jails: Creating humane spaces in secure settings.* Cambridge University Press.
- Wener, R. E., & Olsen, R. (1980). Innovative correctional environments: A user assessment. *Environment and Behavior*, *12*(4), 478–493. https://doi.org/10.1177/0013916580124005
- Wortley, R. (1996). Guilt, shame and situational crime prevention. In R. Homel (Ed.), *The politics and practice of situational crime. Crime prevention studies* (11–32). Criminal Justice Press.