HEALTH AND WELL-BEING IN PRISON DESIGN

A THEORY OF PRISON SYSTEMS AND A FRAMEWORK FOR EVOLUTION

Alberto Urrutia-Moldes

Health and Well-Being in Prison Design

This book establishes a new framework for prison design to promote the health and well-being of all prison users. Based on international research in Norway, Finland, the US and Chile, and drawing on the expertise of key International Advisors, this book uniquely reveals the perspectives of both designers and prison authorities concerning well-being in prison architecture. It is the first book to compare perspectives between prison models while providing essential guidance for the design of prison environments to promote the rehabilitation of inmates and their desistance from crime.

The promotion of health and well-being for people in prison is vital to enable rehabilitation. Traditional prison architecture severely weakens both rehabilitation efforts and opportunities for desistance. Only a handful of prison systems in the world have shown significant changes in their prison designs. Underpinned by Critical Realism and the PERMA theory of well-being, this book reveals significant new insights to inform prison design. The author presents international case study research with interviews with prison authorities and designers from four countries and the three different prison models, as well as key international United Nations advisors. For the first time the visions of prison designers are contrasted with those of prison authorities, bringing a new synthesised understanding of the differences and similarities in their approach to the health and well-being of both inmates and staff from which to generate a new framework for design considerations.

This book illuminates new directions for prison design and is essential reading for policymakers, academics, and students involved in the study and development of criminology, corrections, and penology. It is also an indispensable source of up-to-date knowledge for prison authorities, public health officials, architects, and designers involved in the design of prisons and any other type of coercive detention facilities.

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(2008) and a BSc in Construction Management (1993), both from the University of the Bío-Bío in Chile. After graduating as Construction Manager, he started working in the construction industry for private companies until 1998, when he was appointed head of the regional office of infrastructure at the Bío-Bío Regional Directorate of the Chilean prison service in the city of Concepción. In this capacity, Alberto was responsible for addressing the needs of the 24 prison and parole facilities across 14 cities in the Bío-Bío region. He was later appointed as the head of the projects and planning office at the same regional directorate. In tandem with his job in the Chilean prison service, he has worked since 2006 as a part-time lecturer in construction management at the School of Construction Engineering at the University of the Bío-Bío. In 2012 he co-organised – with the Faculty of Architecture at the University of the Bío-Bío – the first conference in prison architecture held in Chile, and then co-edited the book *1st Seminar of Prison Architecture for Social Reinsertion*, which contains the main presentations of the two-day conference. In 2014 he moved to the UK, where he started his PhD programme, being awarded a Doctoral degree in March 2020.

Innovations in Corrections

An emphasis on innovation is evident in the field of corrections. While changes in policies and public opinion regarding sentencing philosophies such as mass incarceration bump up against the reality that budgets continue to be tightened and the division of these revenues is more competitive, innovative strategies become all the more valuable. The premise behind innovation is effecting improvements without sacrificing the overall safety and security of the institution. Through research and evaluation, we seek to identify what works and what does not work.

1. **Hallett et al.,** *The Angola Prison Seminary: Effects of Faith-Based Ministry on Identity Transformation, Desistance, and Rehabilitation*

2. **Shah,** *The Meaning of Rehabilitation and its Impact on Parole: There and Back Again in California*

3. **Pealer,** *Correctional Rehabilitation and Therapeutic Communities: Reducing Recidivism Through Behavior Change*

4. **Ward,** *Rural Jail Reentry: Offender Needs and Challenges*

5. **Pedlar et al.,** *Community Re-Entry: Uncertain Futures for Women Leaving Prison*

6. **Cross,** *Juvenile Justice and Expressive Arts: Creative Disruptions through Art Programs for and with Teens in a Correctional Institution*

7. **Roush,** *Recalibrating Juvenile Detention: Lessons Learned from the Court-Ordered Reform of the Cook County Juvenile Temporary Detention Center*

8. **Middlemass and Smiley,** *Prisoner Reentry in the 21st Century: Critical Perspectives of Returning Home*

9. **Birch and Sicard**, *Prisons and Community Corrections: Critical Issues and Emerging Controversies*

10. **Urrutia-Moldes**, *Health and Well-Being in Prison Design: A Theory of Prison Systems and a Framework for Evolution*

Health and Well-Being in Prison Design

A Theory of Prison Systems and a Framework for Evolution

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To my wife Sanna, for her tireless support, encourage-
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Acknowledgements

Introduction

What is this book about?

The purpose of architecture has been defined as improving human life (John Lautner, 1911–1994), and as a combination of shelter and pleasure, by providing well-being and making people feel good (Zaha Hadid, 1950–2016). It has also been argued that the State, on behalf of society, has the right to punish people who break the law and hold them captive within architecture. The State, using its legal, judicial, and political structures, can keep people captive for a certain period. However, the overwhelming majority of people who are incarcerated are, sooner or later, released and put back into society. Thus, the State has the duty to treat prisoners with respect due to their inherent dignity and value as human beings, and the duty to protect prisoners' physical and mental health and the prevention and treatment of disease based on clinical grounds only [1]. Considering the above, prisons should be designed for promoting the health and well-being of their users as a matter of principle. However, prison architecture cannot be analysed in a vacuum. Although the physical environment created by buildings can significantly affect prisoners' emotions and health, their well-being is, to a large extent, a consequence of their perceived treatment, which exacerbate pain when staff are "indifferent, punitive or lazy in the use of authority" [2(p534)]. Therefore, while analysing the design process of prisons it is essential to take into account the overall approach of the prison service. This book investigates what factors have to be considered in prison design, as well as how prison authorities and prison designers from Scandinavia (Norway and Finland), North America (the US), and South America (Chile) address concepts of health and well-being in their prison projects, representing three very different but typical financial, cultural, and social scenarios.

Prison services are unique and complex systems that are exposed to multiple and often conflictive demands. Usually within a single prison service, we can find supportive theories and unique design approaches that reflect the social, cultural, and financial realities of the time. However, there are also

similarities between prison services in terms of their approaches to punishment, rehabilitation, human rights, and human dignity. Prison services can be clustered according to these similarities and differences to visualise their typological characteristics and investigate their roots, causes, and evolution. In this regard, this book proposes a theory of typologies of prison systems, identifying the four ideal types, and then investigating three of them using a case study approach.

In prison design research, where despite numerous initiatives linking health and well-being to architecture, there is a limited amount of academic research addressing the issue in prisons, and the vast majority of the literature is mainly historical [3]. Case studies are useful when topics are poorly researched [4], helping to retain the essential characteristics of events. Case studies are accurate instruments for examining sequences of causation or causal mechanisms because it is often possible to generalise from a single case [5] while improving the odds of identifying the context in which a specific causal mechanism operates. Given the early stages of this research topic, a case study method was considered appropriate.

Why health and well-being in prisons?

The general well-being of both the prisoners and the prison staff is heavily influenced by their physical and mental health, which is under stress daily. Many common issues in prison such as overcrowding, loss of privacy, social isolation, low stimulation, restrictive and repetitive routine, and prisoner social hierarchy could precipitate or exacerbate mental health problems, such as violent behaviour, depression, anxiety, drug misuse, self-harm, and suicide [8]. Several studies have also found that people's health, or rather the presence of illness, is associated with a lower level of well-being [6–9].

However, reaching acceptable levels of well-being in prisons requires significantly greater effort from decision-makers and stakeholders than in other settings, because the prevalence of mental disorders among prison inmates has been continuously reported as significantly higher than in the general community [7]. A comparative study in Australia between prisoners and the community [10] found an 80% prevalence in the 12 months studied for any psychiatric illness among prisoners, in contrast with 31% in the general population. Similarly, another study [11] which compared mental issues among citizens and prisoners in western countries found that "any personality disorder" was pertinent in 65% of men and 42% of women prisoners, in contrast with 5 to 10% in the general population (men or women).

Improving the quality of the built environment can help to substantially change the mental health of its users, which in turn would help to diminish psychological issues, such as anxiety and depression [12,13]. Since most of the

inmates will return to the community sooner rather than later, inmates should not be suffering worse physical or mental health upon their release than when they were imprisoned.

The above key studies demonstrate the need for the provision of a better and healthier physical environment in prison housing (cells) and living areas. However, most of the studies on health and well-being in prisons deal with the prisoners themselves [6,8,9] rather than with the environmental conditions that affect them. Relatively few, if any, have dealt with health and well-being from the perspective of the prison staff and their advisors. Moreover, very few studies [14,15] have covered actual factors of the carceral environment that affect well-being, and even fewer studies have approached health and well-being in prison design from a cross-continental perspective [16].

The relation between health and well-being

The concept of well-being has been symbiotically linked to the concept of health. The World Health Organization (WHO) defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [17(p1)]. Despite critics that suggest this definition would leave most of us unhealthy most of the time, the WHO definition remains unchanged. Health and well-being also became a fundamental human right in the International Covenant on Economic, Social and Cultural Rights [18] which states that it is "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health". Implementing health and well-being as a human right within prisons, however, has been challenging, despite efforts made during the last three decades to globally promote this to be transformed into national policies, as discussed next.

The challenge of health and well-being in prisons

The values of health and well-being have steadily influenced public policies over the last 30 years, including the prison setting. In 1986, during the first International Conference on Health Promotion, held in Ottawa, the WHO launched the Ottawa Charter for Health Promotion [19], which is considered a seminal document and a template for health promotion worldwide [20].

It incorporates three basic health promotion strategies:

- To advocate for health,
- To enable people to take control of those things which determine their health, and
- To call for professionals, social groups, and health personnel to mediate between differing interests in society for the pursuit of health.

The Ottowa Charter established that promoting health "goes beyond healthy lifestyles to well-being" more generally in society [19(p1)]. It was not until 2012 that a group of experts convened by the WHO recognised that health influences overall well-being, yet well-being also affects future health. The meeting proposed the following new definition of well-being: "Well-being exists in two dimensions, subjective and objective. It comprises an individual's experience of their life as well as a comparison of life circumstances with social norms and values" [21].

However, materialising this definition has proved to be a difficult task. Developing better-designed prison facilities to improve the health of people in prison must also consider the improvement of their well-being, but this requires a clear identification of the architectural factors that must be considered, as well as the understanding of the various barriers that are preventing the consideration of these factors. This book provides designers and prison authorities with the missing elements for the materialisation of the WHO definition of well-being in the design of prison facilities, offering a new framework for its implementation.

Structure of this book

The book is divided into four interrelated parts:

Part I presents the theoretical and historical foundations that support the whole study. Chapter 1 builds the theoretical basis for this book by explaining its theoretical and ontological perspectives. It introduces the roots of well-being, its relation with health and their importance regarding prisons, and offers an explanation of critical realism as ontological theory. Chapter 2 presents the various approaches that justify punishment and imprisonment and will build a typological theory of prison systems. Chapter 3 presents the historical evolution of prison architecture from late antiquity to the origins of each of the three prison models considered in the study: the Security, the Rehabilitation, and the Hybrid prison models. The final chapter of the first part of the book will present a brief historical account of each prison model from the beginning of the twentieth century to the present day.

Part II explores how well-being has been addressed in prison and what are the factors to be considered. Chapter 5 presents the importance of promoting health and well-being in prison design, while Chapter 6 discusses the key human factors that act as stressors of health and well-being, and should be carefully considered in the design of prisons.

Part III presents each of the four cases considered in this book. Chapter 7 addresses the case of the International Advisors, Chapter 8 presents the Hybrid prison model case, Chapter 9 addresses the Security prison model case,

and finally, Chapter 10 discusses the case regarding the Rehabilitation prison model.

Part IV synthesises the information from Part III and provides recommendations for reform. Chapter 11 compiles the themes and Meta-themes individually collected from each case, to then identify cross-model Meta-themes and build the dimensions. These themes and dimensions are then used in Chapter 12 to present a new framework for prison design. Finally, prison typology is interrogated against the proposed framework, and the typological differences and organisational incongruences are examined through the lenses of the organised hypocrisy theory to identify useful recommendations for reform.

Part I

Theoretical and historical foundations

Chapter 1

Theoretical standpoints

The roots of well-being

Philosophers have traditionally divided well-being approaches into two theoretical approaches: hedonism and eudemonism. We will start by clarifying the roots of both hedonic and eudemonic approaches, to understand what they are, why they are different, and why the eudemonic one appears best to address prison design.

Hedonic perspective

The Greek philosopher Aristippus, a pupil of Socrates, proposed the concept of hedonia saying that the goal of life is to experience the maximum amount of pleasure while minimising pain. Philosophers generally associated with imprisonment, such as Hobbes (1588–1679), DeSade (1740–1814), and Bentham (1748–1832), followed Aristippus' ideas. Since then, the focus of the hedonic approach has evolved from physical pleasure to a broader approach, that includes the preferences and pleasures of the mind [22]. For hedonic psychologists, the terms well-being and the hedonic approach have similar meanings. They both consist of subjective happiness that includes all judgements about the good/bad elements of life. The classical behavioural theories of reward and punishment, and theories focused on cognitive expectations [23], typically associated with theories that justify the use of prison, are rooted in hedonic psychology, because their model of criminal behaviour considers humans as acting out of freedom of choice, using rational decisions that balance the costs (pain) and benefits (pleasure) of their potential acts.

The concept of subjective well-being (SWB), proposed by Diener in 1984, is the most widely used hedonic approach [24]. It aims to evaluate the balance of three components: life satisfaction, positive affects, and negative affects. SWB incorporates both your hedonic experiences (sensations, emotions, and mood) and your evaluation of how well you think life is going. Diener

sees SWB as an umbrella term that combines how we think, and feel about our lives [25].

In their work "Pursuing Happiness," Lyubomirsky and colleagues further propose that happiness (or SWB) is affected by three factors: genetic, life circumstances, and intentional activities (see Figure 1.1).

They suggest that the genetic set point of well-being is different for each person, and accounts for about 50% of the changes in well-being. Moreover, life circumstances – which may include factors related to people's nationality, and their geographical, and cultural characteristics, as well as demographic variables such as their age, gender, and ethnic origin – account for more or less 10%. Finally, activities – which is a very broad category including a wide variety of things that people do and think in their daily lives – explain around 40% of the changes in subjective well-being.

Prison architecture and its environmental design can thus be placed within life circumstances, because most of the time, inmates in prison cannot choose or modify where they have to live. This opens up a promising window for influencing the improvement of inmates' well-being by fulfilling their basic human needs. However, once these basic needs are fulfilled, it is not possible to improve people's well-being, solely by improving life circumstances [26(p118)]. To use architecture and design to improve people's well-being beyond this

What Determines Happiness?

Intentional activities 40%

Genetic 50%

Life circumstances 10%
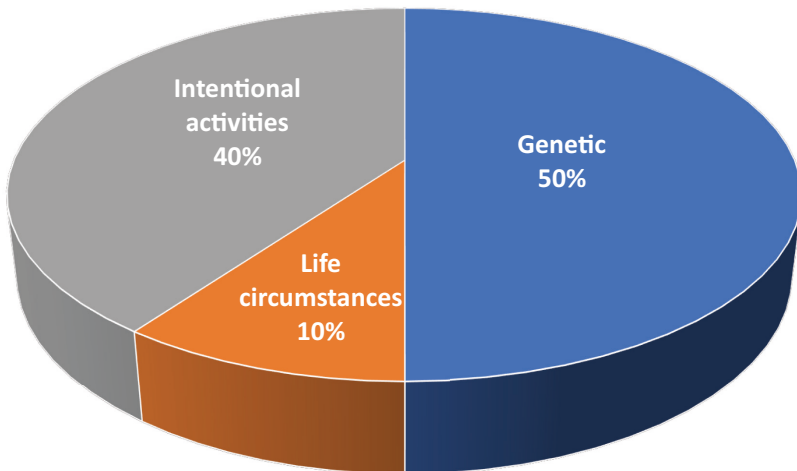
Figure 1.1 The components that determine happiness

point needs a further focus on creating built and natural environments that facilitate and promote rewarding intentional activities.

Although among psychologists SWB is currently the dominant concept to explain happiness, there are critiques about simplistically presenting a complex issue, stating that well-being cannot be reduced to only immediately gratifying experiences [27]. Others [28] propose a broader discussion of the concepts and possible methods involved, arguing for example that people may score high satisfaction with the education being offered when it is objectively very poor, reflecting their lack of perspective to make judgements, rather than showing the good quality of the offered education. A eudemonic perspective addresses these concerns by avoiding simplified answers to complex issues and addressing concepts of objectively valuable behaviours, as shown next.

Eudemonic perspective

For Aristotle, as a eudemonic Greek philosopher, true happiness is found in doing what is worth doing, which express virtue. He refers to hedonic happiness as a vulgar idea that would convert humans into slaves of desires, differentiating the hedonic goal of happiness *per se* from eudemonic, which is rooted in human nature and whose realisation is conducive to human growth [29]. From the eudemonic perspective, living a good life means living to one's fullest potential by virtue or excellence. Well-being, therefore, is not simply the pursuit of pleasure, but rather "the struggle for perfection that represents the realization of true potential" [30(p100)]. Pursuing meaningful goals is not only a robust pathway to more positive emotion and more life satisfaction, but in times of adversity such as the time spent in prison, meaning-making is also a powerful resource that can help reduce psychological harm [31]. Perhaps the major difference between the eudemonic perspective of well-being and the hedonic view is that, while the latter focuses on feeling good, eudemonic theories target both the process of living well and the value of positive states, other than positive emotion [32]. At the start of the 21st century, eudemonic perspectives of well-being developed a new branch in the field of psychology. This branch is known as Positive Psychology and is explored next.

Positive Psychology

Positive Psychology emerges as the newest wave of psychology following the previous disease, behaviour centred, and humanistic psychology models. Historically, psychology has been largely focused on the causes of pathologies, healing, and repairing damage to allow people to return to a functional

life. Conversely, Positive Psychology calls for the study of healthy people, to understand what actions lead to well-being, positive individuals, and thriving communities, focusing on meaning, human strengths and happiness, and the conditions and processes that contribute to the optimal functioning of people, groups, and institutions. Positive Psychology is based on three main principles, namely: the study of positive emotions; the study of positive traits such as strengths, virtues, and abilities; and the study of positive institutions [33]. These three principles are interlinked when positive institutions promote virtues that, in turn, make it possible to generate positive emotions such as confidence, hope, and trust. Positive psychology stresses the need for promoting "positive institutions", that move individuals to become more responsible, altruists, civilised, moderated, tolerant, and better citizens.

Positive psychologists stimulate a positive perspective, bringing to the surface the best properties in life. They aim to understand three central issues: the nature of the effective functioning of a human being; who has successfully evolved and learned skills; and how to explain the fact that, despite all the difficulties, the majority of people manage to live lives of dignity and purpose. However, Positive Psychology has not been without its critics. For example, positive qualities, such as optimism, can sometimes harm well-being, whereas apparently negative processes (like anxiety) may at times contribute to it [34]. Others argue that Positive Psychology depends strongly on positivity, which is correlated with inaccuracy regarding reality (positive illusion) [35]. They also suggest that there is a correlation between highly positive people and negative behaviours such as suppressed psychological growth, inability to self reflect, and radical intolerance, also linked with the most extreme forms of behaviour in human history, such as the Nazi party or the Stalinist era. These critiques, however, have also been refuted [36(p91)] because the aim of positive pyschology is to build up what is known about human resilience and strength, while integrating and complementing this positive knowledge with the existing, more negative knowledge base [37]. Many critiques are also no longer applicable, as Positive Psychology has become more mature in recent years [38]. Positive psychologists argue that although traditional psychology has made great strides in understanding what goes wrong, these have come at the cost of understanding what the strengths and virtues that allow people to live a good life are [37(p105)].

Unlike hedonic theories that only focus on feeling good or on a positive subjective evaluation as the target outcomes, eudemonic theories target both the value of positive states (other than positive emotion and positive evaluations) and the process of living well. The current primary eudemonic theories here are Self-Determination Theory, Psychological Well-being Theory, and Seligman's Well-being Theory.

Self-Determination Theory is focused on *Input resource variables* of well-being, such as income or the personality trait of extraversion. Psychological Well-being Theory is focused on internal states influencing well-being (*Processes variables* such as good mood and the expectation of success). However, Seligman's Well-being Theory combines both *Inputs and Processes* with *Outcomes variables*, which are the intrinsically valuable behaviours that reflect the attainment of well-being, which makes it the most appropriate lens for researching well-being with prison design. The explanation of his theory, its strength and criticism will be covered next.

Seligman's theory of well-being

Seligman argues that well-being is a construct that consists of five key components: Positive emotions, Engagement, Relationships, Meaning, and Accomplishment; forming the acronym PERMA [39]. Each of these components is explained in more detail below.

Positive emotions: Happiness and life satisfaction, as subjective measures, are relevant to the well-being theory but cannot sustain well-being by themselves. Positive emotions can include feelings of belonging, feeling safe, feeling satisfied with their work, and/or learning. It manifests when people are proud, curious, excited, and relate to events from the past (e.g. being satisfied, and feeling serenity), the present (e.g. calm, excitement and pleasure), or the future (e.g. optimism, faith and hope).

Engagement: This is the psychological state in which individuals are absorbed by, and focused on what they are doing, and its evaluation is subjective. Engagement is also defined as "flow" [40] which is a state of being completely absorbed in doing a task. Work is one of the most important sources of "flow". This is important concerning prison design, where inmates either do or do not have a chance to do meaningful work.

Relationship: People need to establish healthy relationships with others to achieve well-being, and create sources of support that can be used in anxiety moments or during sharing moments of ecstasy and joy. For example, women prisoners who report having good friends in prison are 41% more likely to feel control over their daily lives than those who don't [41]. Other findings suggest that, in general, those who engage emotionally with others tend to develop more adaptive strategies to face situations considered difficult [39]. How a prison is designed in terms of layout, architectural programme, and whether spaces that promote social interaction are included will determine whether or not these types of positive relationships can exist.

Meaning: This component relates to the search for purpose in life. A meaningful life consists of belonging and serving something one believes is greater than the self, and is defined and measured independently from

positive emotion or engagement. Studies have shown that people who belong to a group and pursue shared goals are happier than people who do not [42]. Therefore, the design of prisons that promotes social contact or the acquisition of labour skills can help here.

Accomplishment: This last component describes what people effectively do to achieve well-being through living a productive and meaningful life [43]. Setting tangible goals, and keeping them in sight, will help to achieve well-being through hope and anticipation. However, prisoners are usually infantilised by being denied undertaking almost any action that is not authorised or supervised by staff, which create mental barriers to feeling capable of self-realisation [16]. If the design of prisons can promote the feeling of accomplishment, it would mean that inmates would be able to enjoy a higher degree of autonomy and control over their surroundings and decisions without jeopardising the security of the facility or the safety of their staff.

Taking account of these components, PERMA can be criticised using the same arguments that Positive Psychology faces. However, assessing subjective well-being across multiple domains, including anxiety and depression, offers a more systematic understanding and promotes overall well-being [44].

PERMA theory and design

Researchers have tried variously to translate the PERMA components into a more understandable language for designers. One proposed design framework aligns three design components (designing for pleasure, designing for personal significance, and designing for virtue) with the equivalent five components of PERMA: designing for pleasure (positive emotions and engagement), designing for virtue (Meaning), and designing for personal significance (Relationships and Accomplishment) [45].

Another interior design approach for elderly persons in residential care centres (RCCs) attempted to translate psychology jargon into more concrete terms for architects, by re-naming the five PERMA components, and formulating – for each component – design goals to increase elderly persons' well-being in RCCs [46]. Others have applied this approach by considering interior architecture as a feature of people's circumstances and a space for their intentional activities that can be stimulated through design [47]. Instead of viewing the built environment as a static entity, this design approach facilitates spaces that promote desirable activities and stimulating experiences that provide pleasure and meaning to its inhabitants.

Although there is no current evidence concerning the overall use of PERMA theory in prison design, PERMA components have permeated design in other sectors which have certain factors in common with prisons. For example, one UK project developed qualitative and quantitative design

inputs from PERMA resulting in health and well-being objective and sub-jective outcomes that are linked with economic values of healthy homes and healthy neighbourhoods [48]. While in Belgium, the PERMA model was used to produce architectural recommendations to augment SWB for eld-erly persons [46] accommodated within social institutions.

In this book, PERMA theory will be applied to explore how the well-being of inmates have been treated through the historical development of prisons, and how PERMA components can be promoted or demoted by architectural factors. However, for PERMA to be applied successfully in prison design, there is also a need to understand more deeply why prison organisations and processes are so different. The next section presents the main concepts of critical realism as a means to penetrate behind the surface of reality and identify underlying structures and causal powers, and the ways they act within the prison system and beyond to affect prison design.

Critical Realism: a theoretical lens to understand imprisonment

Critical realism as developed by Roy Bhaskar [49–51] and expanded on by others [52–55] holds that there is an objective world of *entities* that have powers and liabilities, or more generally *causal properties*, which result from the neces-sary relations between their constituent parts [49]. Entities can be material (e.g., oxygen, bricks, or an entire prison building), biological (e.g., a blood cell, a heart, or a human being), or social (e.g., a family, a Criminal Justice Court, or a prison service). Entities have intrinsic *causal properties* (powers and liabilities). So, for example, a heart has the power to pump blood, and a Criminal Justice Court has the power to send a person to prison. However, they also have restricted liabilities, intrinsic to their internal structural com-position. In the case of a heart, it cannot work on its own, without receiving the electric instructions from the brain as an external entity. Similarly, a Criminal Justice Court cannot execute a sentence if it has no means to do so; it requires the existence of other social systems such as the prosecution system, laws, and procedures, as well as external physical systems such as the prison buildings. Entities, in turn, are composed of sub-entities, which have their own powers and liabilities. So, buildings contain walls, which are made of bricks. Similarly, organisations contain departments, which contain units, and so on. When two or more entities interact, they produce events, which are the result of the fit of their specific set of powers and liabilities. So, for instance, riots in prisons can be the result of a different combination of previous events, such as bad physical conditions in prison, an increase of abuse of power from prison officers, or internal fights among prisoners. In critical realist terms, how the individual powers and liabilities of an entity

are combined when interacting with another to produce an event is called a causal mechanism. Therefore, events are the simultaneous operation of multiple causal mechanisms associated with the interaction of multiple entities.

Events can be physical or social. Physical events are commonly found in the world of natural sciences, in which material entities interact. Social events, in turn, occur by the interaction of people, with their rational thinking powers and liabilities, and social entities, with their legal, social, technical, economic, and cultural powers and liabilities.

For a critical realist, regardless of whether events are perceived or not, they occur in the objective world, which exists independently of people's perceptions, language, or imagination [53]. However, how part of that objective world is perceived and experienced by the observer is influenced by subjective interpretations. Therefore, the critical realist world is seen as divided into three ontological domains: the Empirical, the Actual, and the Real.

The "Empirical" domain is the place where only the events that can be experienced and perceived by human senses exist [56]. The "Actual" domain, in which the Empirical domain is encased, is the place that contains all the physical and social events (perceived or not), and the unseen mechanisms that produce them. Therefore, when events are outside the inner domain of the Empirical, they occur even if they are not experienced or interpreted, and these true occurrences are often different from what is observed at the empirical level [55(p20)]. Actualised events, that is, the physical and the social events that occur, observable or not, are the result of the interaction of mechanisms driven by the actualisation of causal powers [57]. However, events also occur as a result of inaction or non-actualisation of forces. These unactualised events or non-events are outside the actual domain. The "Real", the most profound ontological domain, in which the Actual (and therefore the empirical) is encased, is where the non-events are located, as the "underlying potential but unactualised" causal mechanism of objects [57(p7)]. The observable and perceivable domain of the "Empirical" is thus encased in the "Actual", which in turn is encased in the "Real" (see Figure 1.2).

For critical realists, the existence of social events does not provide a complete explanation of the causal forces that produce them. So, for example, a social event situated in the "Empirical" domain can be perceived and witnessed such as an increase in prison violence, but cannot be explained solely based on the observation of the entities visibly involved, such as the inmates, the prison staff, and the prison built environment. Similarly, the failure of achieving the expected goals of a policy cannot be explained only by observing the political, technical, and legal entities involved.

Sayer [52] argues that the world cannot be approached as if it were no more than patterns of events, to be registered by recording data regarding "variables" and looking for regularities. Instead, social events arise from the
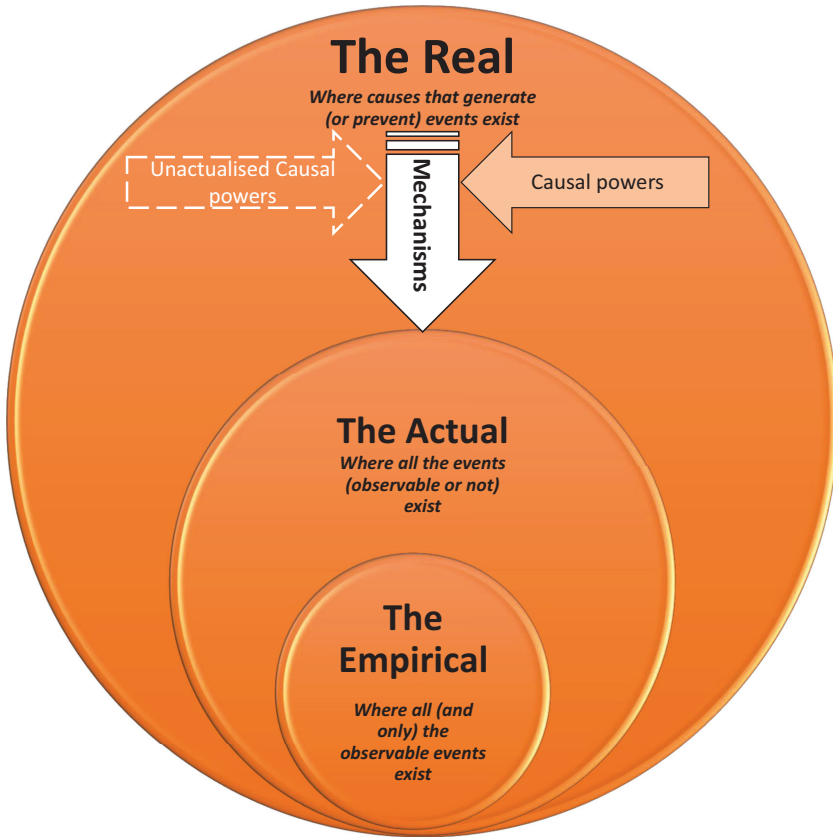
Figure 1.2 Diagram of critical realist theory. The three realms of reality

working of mechanisms that take place within geo-historical contexts [52(p15)]. This geo-historical context must be understood as the relevant circumstances surrounding a specific event in a prison system, taking into consideration that, when looking for explanations, what causes an event to happen "has nothing to do with the number of times we have observed it happening" [52(p14)]. Rather, we have to look at the combination of causal mechanisms involved, identifying which have been activated, under what conditions and "in what ways may the external contingency affect the events that have occurred?" [58(p121)]. Therefore, when analysing the incapacity of the social entities involved to meet the goals publicised as the leading objectives of a prison programme for reform, the questions that we must ask are: what are the internal and external contextual forces that are preventing the goals from being met? And, in what way are those contextual forces conditioning the outcomes?

Prisons and prison design are heavily shaped by such concepts of power and control of movement. These features are not only affected by the architect's personal beliefs and biases, but also by the interaction between different actors in the process of decision-making during the design. By acknowledging that those actors are profoundly influenced by cultural, political, economic, and material factors, it can be argued that their decisions and final products of their work are the results of the actualisation of the dominant political, social and economic powers. Indeed, although the prison is a universal instrument used to cope with criminality, it is also a cultural concept, which has no universal significance due to diverse historical, political, and cultural local realities and values. Because of this complexity, critical realism provides a useful lens for understanding prisons and prison design.

This book, ontologically underpinned on critical realism, explores three different "empirical" scenarios (prison approaches) concerning prison design. The analysis aims to unveil the underlying causal mechanisms which explain how and why the decisions related to health and well-being are made during the prison design process, in an attempt to find out the underlying causes of the process of decision-making in each type of prison approach, while accepting that this is never a complete account of the "Real" [49]. However, to analyse the human factors affecting prison users, a basic understanding is needed of the concepts behind the most predominant theories that justify punishment and the use of imprisonment. Therefore, the next chapter will briefly present six of the most prevalent theories in this area and used them as the basis for building a typological theory of prison systems.

Chapter 2

Punishment and prison design

Using a critical realist perspective, this chapter reviews the main approaches used to justify punishment and the ethical considerations that should be contemplated in the design of prisons. A typology theory of different models of prison systems is then proposed, which will inform the rest of this book.

Ethical considerations in prison design

The deliberate infliction of suffering requires explicit ethical justification; otherwise, the various actors of the criminal justice system are ethically culpable [59]. Practitioners and staff, therefore, have an ethical obligation to seek to end the infliction of any unjustified harms on offenders. Prison designers also have the ethical obligation to react against unjustified infliction of physical or psychological pain on inmates and work within the framework of international covenants such as the Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, monitoring the minimum standards of treatment of human beings [3].

As Ward and Salmon state: "if it turns out that some correctional policies and practices rest on unsustainable theories of punishment, it is incumbent on practitioners to ensure that they avoid engaging in professional actions determined by such policies" [59(p241)]. In this book, the unjustified infliction of pain is understood as any action or omission that can negatively affect the physical and/or psychological health and well-being of people in prison.

In this regard, prisons used as a tool to inflict punishment operate within a criminal context specific to each country [60]. However, the boundaries between punishment and rehabilitation can be blurred [59]. Some elements of programmes fall within the definition of punishment or may be understood as punishment because they are part of the prison regime rules (e.g., restriction of movements, type and quantity of furnishing inside the cell, or daily timetable to follow). Others can respond to rehabilitation efforts (e.g. specific layouts, sensorial design considerations, or the overall programme).

Therefore, designers have to understand the difference, the ethical jus-tification of each programme element, and the physical and psychological effects on the person who is suffering from incarceration. "Failure to be aware of the ultimate aim of intervention could result in vindictively oriented therapy, a lack of an apposite ethical response to offenders, or to a confused mixture of both rehabilitation and punishment" [59(p241)]. Recognising different approaches to punishment, this book proposes that for the exist-ence of prisons to be justified as a legitimate tool for the restitution of the equilibrium in society, their design and operation must be based on three principles:

- First: prisons should promote each of the five components of PERMA well-being theory (positive emotions, engagement or flow, positive relationships, meaning or purpose, and accomplishment) so that prison design has a useful purpose for society and the person imprisoned.
- Second: prisons should promote rehabilitation, taking care of the phys-ical and mental health of people in prison.
- Third: to use the previous two principles as a matter of public policy.

These principles will guide the analysis of the six main approaches to punishment in the next section, and the future analysis of different prison realities.

The justifications for punishment

The historical reaction of ruling classes and legislators to criminal acts has been to punish the perpetrator. Until the eighteenth century the options were either publicly administered corporal punishment (e.g. through flogging or mutilation), or financial punishment (paying a fine), or both. However, the Enlightenment witnessed the transformation of this process from public spectacle to private enforcement, and from corporal punish-ment to what Foucault described as the punishment of the souls [61]. There seems to be a high degree of consensus on the need for punishing offenders for their transgression of the law. There are different and usually contra-dictory explanations for the need to punish, and the theoretical justification that supports and inform the "how" and the "to what extent". The different approaches are usually combined in an attempt to satisfy these conflicting demands. Therefore, to understand which factors of design are considered important by decision-makers in the process of design of prisons, a proper analysis of the six more conventional approaches to justifying punishment is essential. These approaches are Deterrence, Incapacitation, Retribution, Rehabilitation, Communication, and Restorative Justice [62].

Deterrence

Deterrence, based on a hedonic philosophy, proposes that punishing criminals will prevent future criminal behaviour because the punishment, seen as the price to pay, exceeds the benefit of committing the crime [63]. The deterrent value of punishment is directly associated with the different levels of pain produced. Deterrence aims to reduce future crimes, and, as such, prison sentences need to be adequately long to deter other potential criminal acts. Prisons designed under a deterrent approach follow the principle that life inside prison must be worse than outside. It must be unpleasant, and deliberately employ design elements to discourage misconduct [64]. In other words, purposely damages prisoners' well-being as a means to reach the objective. The aim of the incarcerating building, alongside the institution of imprisonment, is to induce fear to incentivise others to comply with the demands of the law.

Incapacitation

Incapacitation is a primarily utilitarian punishment. It focuses on eliminating the individual's opportunity for committing a crime by constraining the physical capacity of a person to commit a crime. This approach aims to protect the public from future offending [65(p238)]. The State can decide to incapacitate a citizen when it presents a potential risk to society. Therefore, using imprisonment to incapacitate involves removing a person from the community to prevent future misconduct in the original setting, or punishing people for their future crimes, even if those crimes never occur.

There have been critics regarding the harmful effect of this approach [66] who argued that predicting future risk for low-level routine offending is relatively straightforward, as in the case of burglary, but incarcerating people based on their probable future conduct constitutes aggression towards the mental and social well-being of the incapacitated subject. Incapacitation approaches, thus, are likely to result in detaining people without justification and inefficient distribution of resources when it is focused on people who do not present the level of risk assumed. Moreover, incapacitation per se does not create any drive to rehabilitate offenders whatsoever [67(p132)].

Retribution

Retribution, Incapacitation, and Deterrence have been the most dominant theories of punishment. There have been retributive principles of punishment in the philosophical and criminal Western justice literature since the 1970s, following the loss of hope after a collective feeling of failure in the efforts for rehabilitating inmates [59]. Retribution aims to inflict burdens and harm in proportion to those inflicted on their victims. This approach

somewhat contradicts health and well-being approaches, defending the idea that punishment is justified just because it is deserved.

Despite the historical opposition to retributive approaches from prison reformers, retribution remains as the dominant justification for punishment in most Western cultures [63(p17)]. For Foucault [61], the second overarching goal of prisons after citizens' safety is retribution and the idea of retribution seems to be always present. Others highlight that the purpose of Norfolk Island prison was to be "a place of real suffering, painful to the memory, terrible to the imagination" [68(p162)], and that "we are justified in punishing because and only because offenders deserve it" [69(p188)].

Rehabilitation

Rehabilitation aims to reform and control offending behaviour. Unlike deterrence, rehabilitation theory holds that most of the crime problem is the product of the failure of society to solve inadequate social conditions such as poverty and inequality, and, therefore, the State must recognise its part in the generation of crimes and its role in crime prevention, providing rehabilitation programmes to help the offender not to re-offend [62].

The process of restoration of the convicted offender's behaviour usually combines psycho-sociological treatment, education, and working training. Although it had its peak in the 1960s in the US, the rehabilitation approach lost support during the 1970s and 1980s when many types of research suggested that "nothing works" [70]. The loss of confidence in the re-socialisation of inmates resulted in a backward step in the penal system towards incapacitation, retribution, and deterrence ideologies.

Since the late 1980s, rehabilitation theories have been revisited following new evidence of effective interventions. However, this new perspective is more focused on offending behaviour and preventing reoffending to increase community security rather than to rehabilitating an individual as an end in itself [67]. Current practices focus on a wide range of strategies, including rehabilitative programmes, such as substance abuse treatment, vocational training, and education, increasing social bonds through visitation, and efforts to deinstitutionalise the prison environment [64(p4)].

Because the state assumes the right to punish, there is also a state obligation to ensure that the harm inflicted is no less but no more than what was intended when the sentence was pronounced. The purely punitive approach of sentencing criminals to spend time in prison does little to decrease crime and serves only to increase the prison population [71(p329)]. Therefore, the modification of criminal behaviour through rehabilitative practices seems to be the logical step towards a safer and flourishing society. However, none of the above conventional approaches addresses the need for restoration of the

harm caused by the offence to the victims and the society. The recognition of the need for filling this gap has supported the development of promising new approaches. Among them, the most important are Communication theory and Restorative justice which are revised next.

Communication theory of punishment

This theory, developed by Antony Duff [72], claims that punishment communicates a message to the criminal as an appropriate response to the crime committed and should appeal to a person's rational understanding. The person to whom the communication is directed must be an active participant in the process and must receive and respond to the communication. According to Duff, the concept of punishment as communicative is communitarian, in the sense that it appeals to a linguistic and moral community whose members, which share language, values, and form of life, can claim, and have the moral standing to criticise each other's conduct. It is thus essential to pay attention to the rights of all stakeholders in the criminal justice system, including offenders because of their equal moral status; thus, communicative theories of punishment have a relationship focus [59]. There are three aims integral to the punishment: secular repentance, reform, and reconciliation through the imposition of sanctions [72]. Offenders are viewed as "one of us", or members of the community, and therefore are bound and protected by the community's public values: autonomy, freedom, privacy, and pluralism. The claim is that all human beings have equal moral standing, and while individuals who have committed public wrongs should be held to account, they ought to be approached as beings of value and dignity [59].

For Duff, imprisonment appropriately expresses social disapproval, drawing offenders' attention to the seriousness of the wrongs they committed. Therefore, a reasonably understood punishment should have the effect of restoring the offender to the community in the same way that penance restores a penitent to the communion of the church [73(p79)]. Offenders are viewed here as valued members of the community rather than as merely individuals who are held responsible. The aim of punishment here is to repair or restore offenders' relationships with victims (if possible), and the broader community. Therefore, punishment is not intended to mark offenders as intrinsically deviant or irredeemable but, instead, it aims to indicate the offenders' status as fellow community members [59].

Restorative justice

The restorative theories state the need for supporting both victims and offenders, emphasising how essential it is for offenders to repair the harm

they have done to the victims and the community, and working to repair the broken relationships between offender-community, victim-community, and victim-offender [74].

The process brings together the victim and the offender to develop a programme that not only helps the victim in the recovery process but also makes offenders recognise they are responsible for what they did. This approach reduces the risk of reoffending and places the focus on the deviant act rather than the offender and its impact on the victim and society [75].

Restorative justice is underpinned by three core principles:

1. The healing of victims, offenders, and communities injured by a crime.
2. Victims, offenders, and communities should be permitted to actively involve themselves in the justice process as soon as possible and substantially.
3. To promote justice, the government should be responsible for preserving a just order and the community should be responsible for establishing peace [76].

Critics of restorative justice have argued that by punishing criminals, a line is drawn showing what is acceptable and what is not, whereas restorative justice processes tend to suggest that this line can be moved depending on each case [62(p151)]. For others, the available theory cannot explain how restorative justice would produce a change in the offender [77], and applying restorative justice avoids the necessary rituals of criminal law, ignoring the desired effects attributed to the punishment of relieving the emotions and feelings of victims and the society [62]. However, these critiques do not recognise the systemic process of restorative justice, which involves all the actors to restore the equilibrium.

To understand how the different prison services around the world address the health and well-being of people in prison and how this translates into architecture, it is crucial to have a clear understanding of these six approaches, which constitute the most prevalent related to punishment. However, this analysis cannot rely solely on what approach to punishment prison services are aligned to. In all countries, criminal systems usually combine two or three of these approaches, according to the particular characteristics of its social and cultural reality. Moreover, within a single prison service, we can find several different architectural styles, supportive theories, and design approaches that reflect the social, cultural, and financial reality of the time they were built. However, we can find similarities between prison services regarding the emphasis of the overall approach that allows us to analyse them as clusters. Prison facilities and prison regimes either make the offender feel the consequences of their acts through punishment (Punitive emphasis), or

provide secure facilities and strict regimes to put offenders inside and keep society safe and free from criminals (Security emphasis), or recognise the social nature of criminal offences and provide mechanisms of rehabilitation and re-socialisation of people in prison to ensure they are no longer a threat to society when released (Rehabilitative emphasis).

The last section of this chapter recognises these similarities and uses them to propose a comprehensive typological theory of prison systems, which identifies four ideal types and provides the necessary conditions for a more precise analysis of different approaches to health and well-being of people in prison.

Building a typological theory of prison systems

Typically, the study of prison architecture has been addressed as a history of buildings used for punishment [66,78–81], or as the proposition of architectural plans and design solutions of multiple or specific architectural types of buildings [82,83]. Others have analysed the psychological effects of architectural factors of design [84], and the sociological link between architecture and punishment [85]. For example, Johnston [79] proposed a classification of nineteenth-century prisons into three main groups: the simple non-radial plan; the circular and polygonal plan; and the radial plan; and included later as examples of new architectural propositions the high-rise prison. In the US, Atlas and Dunham [86] proposed a different classification of prison architecture based on philosophical and managerial approaches, separating them into three distinct generations. The first generation corresponds to intentionally harsh prisons, where health and well-being are not foregrounded in design. The second generation corresponds to a Podular design, with triangular communal living units or pods [87] to maximise visibility and control, with minimal interaction between prisoners and guards [88]. The third generation aims to improve rehabilitation outcomes [67] where health, as the absence of illness and, to some extent, well-being are part of the design considerations. However, none of those studies has addressed the typological study of prison services as organisational systems.

The study of how prison design is addressed by key decision-makers from different prison services as a global phenomenon is a complex endeavour, and as Johnston stated, such a study has yet to be written [79(p1)]. This is in part because there is not yet an appropriate analytical framework that allows us to conceptualise, explore, and construct their different dimensions. Indeed, prison services are unique organisational entities because they are organised around a specific set of variables such as local legal bodies, distinctive legal codes, norms, and administrative structures. In most countries, there is only one prison service as part of the governmental structure. However,

in countries politically organised around multiple states such as the US, the United Kingdom, or Australia, there is typically one prison service in each constituent state, which is organised around its particular state laws and norms. Although different prison services in different countries show many common features they work as semi-closed systems, with their particular procedures, policies, and operational cultures, usually within the governmental macro system, interacting with several other systems such as the healthcare, the educational, or the public order and law enforcing systems. Therefore, in this book, the terms prison service and prison system are used interchangeably.

Most prison services have a pool of prison buildings built in different historical contexts and designed according to a variety of architectural approaches, penal philosophies, using different mechanisms to achieve the goals of Security, retribution, and cost-efficiency [64], which make it difficult to identify current aims and purposes. However, despite this architectural diversity, each prison service works as a homogeneous organisation, following the same managerial styles in each of their constituent prisons, with minimum cultural differences. Therefore, the study of prison architecture as a global phenomenon cannot be isolated from the prison system of which those prisons are part. In this regard, typologies make a valuable and direct contribution to achieving this goal [89]. However, we have to carefully differentiate the concept of typology from concepts of classification and taxonomy.

Although concepts of classification, taxonomy, and typology have been used interchangeably for many scholars [90], the semantic confusion among these terms [91] conceals important differences that are worth clarifying to avoid misinterpretations. The first two terms, classification and taxonomy, refer to classification systems that categorise phenomena by using a series of discrete decision rules [90] to separate them according to their mutually exclusive characteristics. Examples of taxonomies are the classification of prisons by security levels (high, medium, or low), the inmates' gender, or concern certain characteristics of inmates or the offences (adults, juvenile, sex offenders). These classifications are useful for operational purposes because they help prison services distribute their resources more effectively. However, they do not give us any information regarding the organisational aims and objectives, or the overall approach to imprisonment.

In turn, the term typologies [90] refers to interrelated sets of ideal types. Instead of providing a set of decision rules as classification and taxonomy do for classifying subjects, typologies identify multiple ideal types, analysing the subjects concerning their proximity to those types. Then, typologies are complex theories that are built to explain and predict variance in dependent variables because each ideal type represents a unique combination of attributes that can determine the relevant outcomes [90(p232)].

Scholars had previously used typological theories to understand prison organisations and predict their outcomes. However, those typologies have been focused on local realities. One example is the typological study of correctional managerial models in the US, published in the late 1980s by DiIulio [92]. This study offered a typology based on three models with distinctive managerial characteristics: the California consensual model, the Texas control model, and the Michigan responsibility model. Although DiIulio analyses three prison services from different states in the US, his study does not take into consideration the characteristics and effects of the built environment, or the variations in penitentiary regime approaches existing in other countries. Therefore, its "typology" is not easily transferable to other countries or even to a national federal level due to differences in judicial systems and administrative dependencies.

A better attempt to build a typological account of prison organisations is the prison architecture classification system, proposed by Moldan [60], which aims to classify prison buildings concerning their symbolic role, taking into consideration not only visible architectural features, but also the function of a prison and its place in the society. Although Moldan's proposition refers to, and analyses prisons only as individual facilities rather than prison systems, it represents a good attempt to provide a global typological theory. Moldan organises prison facilities around four models: the Rehabilitation model, the Security model, the Repressive model, and the Hybrid model. Moldan individualises each model based on the general conditions in which inmates are kept; their safety; the staff working conditions; the ambience created in the prison; the consideration of human rights; and the overall experience of living and working in a prison. Despite the claim that this system is based on case studies that "analyse more than one hundred prisons all over the globe" [60(p1214)], it could be argued that Moldan' proposal has several shortcomings, such as being poorly theorised, or being an exploratory study that only refers to prison buildings, or that the categories are easily rebuffed. Nevertheless, the global nature of Moldan's proposition has great potential for being transformed into a typological proposal to identify prison systems in terms of their main goals, their severity, austerity, and the level of pain inflicted. Thus, Moldan's architecture classification system is used in this book as the basis for constructing a typological theory for analysing prison services globally, using the four steps blueprint for building theory through typologies (Domain limitation; Conceptual definitions; Relationship building; and Prediction), proposed by O'Raghallaigh and colleagues as described next [93].

Typology of prison systems

Unlike classification systems where organisations are classified according to a mutually exclusive set of rules, typologies identify multiple ideal types,

described in terms of multiple conceptual dimensions, and in which each ideal type represent "a unique combination of the dimensions used to describe the set of ideal types" [90(p233)]. Very few organisations can perfectly fit in the definition of an ideal type. However, typologies allow theorists to evaluate the proximity of an organisation to different ideal types. O'Raghallaigh and colleagues [93] proposed a four steps blueprint for creating "good" typologies, based on four basic criteria of theory building: conceptual definitions, domain limitations, relationship-building, and predictions. These guidelines are used next to build a typology of prison systems concerning their systemic purpose.

Step 1 – Limit the domain of the typology

The purpose of this first step is to clarify and limit the intended purpose of a typology of prison systems concerning their systemic purpose.

In any given country or state, prison services work as semi-closed systems. In critical realist terms, prison systems are entities composed of multiple sub-entities or sub-systems that, in turn, can be comprised of their own sub-entities. Each sub-entity has its particular view regarding the justification of punishment and the use of imprisonment. However, the interactions of these sub-systems are ruled and constrained by different laws, policies, beliefs, and cultural approaches that shape the outcomes of the system as a whole. In this regard, identifying the systemic purpose of a prison service as an entity is critical to understanding what kind of outcomes the system will produce. The systemic purpose will depend on how much emphasis is placed by the whole system on each of these different approaches.

Step 2 – Identify and define concepts

The purpose of this second theoretical step is to identify and define a discrete set of types of prison services – also referred to as prison systems – in terms of all the constructs included in the typology.

Step 2a – Identify and define constructs

As explained in Step 1, identifying the systemic purpose is critical to understanding what kind of outcomes a given prison service will produce. Based on the different approaches used to justify punishment and imprisonment, the purpose of imprisonment could be defined in terms of three dimensions: punitive (which combines deterrence and retribution), security (which focuses on incapacitation and communication theories), or rehabilitation (which combines rehabilitation, and restorative justice). Therefore, the

purpose of a prison service can be defined in terms of the emphasis placed on each dimension. The scope of each dimension is shown in Table 2.1.

Step 2b – Identify and define ideal types

Most prison services have an official purpose, which is stated as an organisational goal, or as organisational mission and/or vision, or even as a set of legal obligations defined in the prison Acts, or service organic law. Some of them, for example, state that their purpose is to contribute to the social reintegration of people who are deprived of their liberty [94], or ensure the execution of remand and prison sentences [95], or to protect society by confining offenders in the controlled environments [96]. Nevertheless, when talking of the definition of the purpose of any system, the British theorist Stafford Beer

Table 2.1 Dimensions of imprisonment purposes and descriptions

Dimension	Description
Punitive dimension	The punitive dimension focuses on making the offenders feel the consequences of their acts. The main components of this dimension are the retributive approach and the Just deserve approach, with an important influence of deterrence. Here, punishment is seen as a tool to make offenders understand that criminal actions have severe reactions, based on the notion of "to spare the rod is to spoil the child", and to prevent the occurrence of future new offences by public and visible deterrent measures.
Security dimension	This dimension focused on protecting society through the provision of effective physical incapacitation of offenders. The security dimension is characterised by a high level of invulnerability of the security systems that prevent escape; a high level of staff's safety, as the protection of prison staff against aggressive inmate's behaviour; and low levels of autonomy of inmates within the prison. Strict and comprehensive daily routines are implemented to maintain inmates distracted from thoughts of escape or emotional overload that could trigger violent reactions. The main components of this dimension are incapacitation and deterrence approaches.
Rehabilitative dimension	This dimension is based on the offender's value as a human being and as an active member of society. It aligns the efforts for rehabilitation of offenders, desistance from crime, and restorative justice. The rehabilitative dimension measures the level of organisational compromise with policies and practices that aim to repair the broken social relationships and recover the offender as a useful and valuable member of society. Key components of this dimension are the high level of respect for human rights and a profound understanding and prioritisation of fulfilling the social and psychological needs of people in prison.

(1926–2002) coined the system thinking heuristic known by the acronym POSIWID: "the purpose of a system is what it does". For Beer, this is a bald fact and is always a better starting point for understanding a system than a focus on intention or expectations. Indeed, the assessment of expectations against reality should focus on what the system actually does rather than the well-intentioned official statements, or ideal purpose, because they often do not match.

Based on the multiple justifications of punishment described above, prison services can be identified in terms of their proximity to each of the above-mentioned dimensions: punitive, security, and rehabilitative. However, each dimension can also be used to identify three ideal types or models of prison services. They are the Repressive prison model, the Security prison model, and the Rehabilitation prison model.

In typological theory hybrid types also exist as "combinations of the initial ideal types that are also posited to result in the relevant organizational outcome" [90(p241)]. The inclusion of hybrid types is seen as an effective measure when organisations must respond simultaneously to conflicting contingencies [97]. Moreover, in many prison services the ideal of rehabilitation coexists with ideas of inflicting pain on inmates as a way of social revenge and the belief that society needs to be protected through effective security measures and incapacitation of offenders. Therefore, a fourth ideal type is needed and identified as the Hybrid prison model.

Figure 2.1 shows the ideal types (Repressive model, Security model, and Rehabilitation model) as representing pure expressions of the rehabilitative, security, and punitive dimensions, respectively. It also includes a fourth Hybrid model where the three dimensions can coexist. In this Hybrid prison model, prison services have conflictive social, cultural, and political demands that allow the coexistence of each of the three dimensions.

Step 3 – Explain relationships

The purpose of this third step is to provide the logic that explains the relationships between the different types of prison systems and organisational outcomes.

The Rehabilitation model is based on an in-depth understanding of human nature, and respect for dignity, while fulfilling human needs such as socialisation, comfort, or understanding, as key elements of rehabilitation of people in prison. The Rehabilitation prison model is typical for countries with a strong welfare State approach and more liberal regimes, such as those in Central and Northern European countries, where prison services show a profound interest in positively changing the lives of those who are in prison [98,99]. Architecture and regimes in this model aim to reduce violence

REHABILITATION
MODEL

Rehabilitative
Dimension

HYBRID
MODEL

Punitive
Dimension

Security
Dimension

REPRESSIVE
MODEL

SECURITY
MODEL
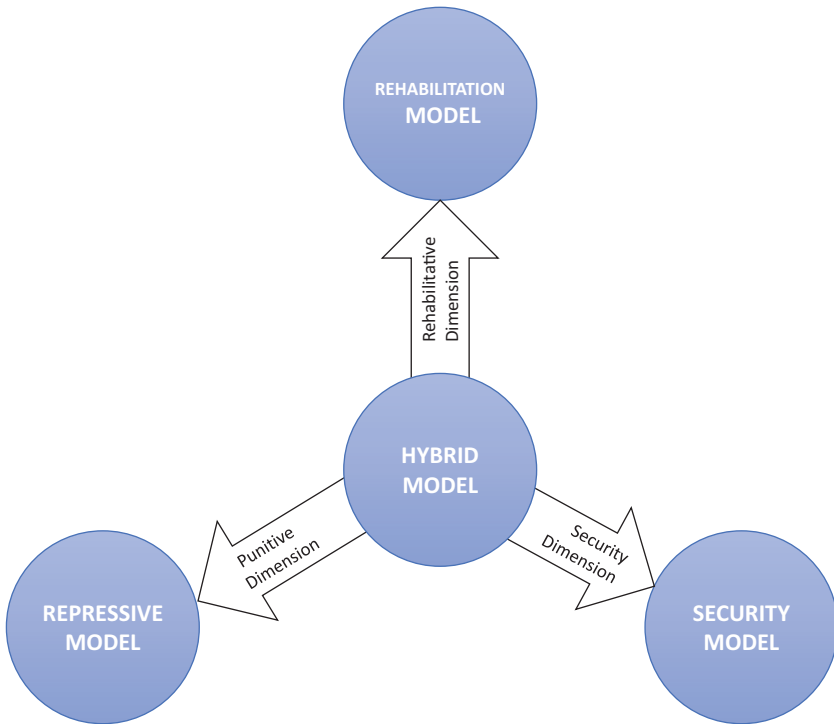
Figure 2.1 Typological theory of prison models: an explanatory diagram of the four ideal types of prison systems

through designing and building, as much as possible, normal environments and promoting respectful and meaningful relationships.

The Security model has the isolation of prisoners from society and their supervision as its main purpose. Prison services from American countries such as the US, or Canada; Western European countries such as the United Kingdom, Spain, or France; or countries from Oceania, such as Australia, can be associated with the Security model. The main objectives of this model are maximising security and minimising cost, although there are always examples in which the sanitary conditions of prisons in the Security model have been subordinated to the need for saving economic resources. Efficiency is measured in terms of the capacity to prevent escape, reduce violence among inmates and against staff, with the lowest economic cost possible.

The Repressive model refers to prisons characterised by physical and psychological abuse and secrecy of what happens inside their walls. Prison services that tend toward the Repressive prison model are typical for countries dominated by totalitarian political or military regimes, which use terror as

a form of government and expose inmates to harmful conditions as part of the regime.

The Hybrid model, in turn, combines the Rehabilitation and Security models with an influence from the Repressive prison model. The Hybrid model can be seen in Eastern European countries [60], as well as in most of Latin America [100]. Prison systems from the Hybrid model are pseudo-militarised organisations that place great importance on the prevention of escape and riots, allocating most of their budget in areas related to these matters. They show an intention, despite insufficient economic resources, to rehabilitate inmates as in the Rehabilitation model but the influence of their socio-cultural perspective on punishment prevents its actualisation, resulting in a hybrid combination of the Security, the Rehabilitation, and the Repressive prison models.

How well aligned a prison service is with each model will depend on several factors such as the country's penal thought, the level of respect for inmate's health and well-being, their appreciation for the human nature of inmates and the internalisation of human rights, the focus of the prison administration (security, rehabilitation, or punishment), and how their society justifies – in terms of their social perspectives – the use of punishment.

Step 4 – Making predictions

The purpose of this fourth theoretical step is to suggest a relevant line of enquiry and offer hypothetical predictions as to how the ideal types of prison systems might be related to organisational outcomes.

For O'Raghallaigh and colleagues, typologies "offer hypothesized relationships between the degree of similarity of an entity to the ideal types and the dependent variable(s)" [93(p374)]. Measuring the deviation between real entities and an ideal type can help to predict the dependent variable. Moreover, by using the same technique, predicted relationships can be falsified.

The generated typology above allows scholars to differentiate between those prison services that are more associated with each of the four ideal types. Prison systems that prioritise repression and retribution ideologies of punishment will tend to be identified with the repression prison model. Prison systems where the main objective is protecting society by removing and keeping criminals under control will be associated with the Security prison model. In the Security model, high levels of psychological pain and physical damage produced by the carceral conditions and regimes can easily be found. However, unlike the Repressive prison model those outcomes are not intentional but a consequence of policies, practices, and regimes that prioritise the maximisation of security measures. Prison systems where the

organisational aim is to improve social safety by identifying and addressing the individual circumstances that cause crime and placing the emphasis on regaining a useful member of the society will be associated with the Rehabilitation prison model. Finally, prison services where security, rehabilitation and repression coexist can be identified as a Hybrid prison model. In this prison system, there is a clear emphasis on perimetral security with limited control, if any, on what happens within the walls. They are usually pseudo-militarised services, where authority is imposed by the use of force. Rehabilitative intentions are always present and usually with extensive publicity, but usually without enough financial resources. However, despite the rehabilitative discourse, clear violations to human rights and organisational decisions that damage the health and well-being of people in prison can easily be found, without taking much consideration of their human nature.

In this chapter, we have explored the main approaches to punishment and have built a comprehensive typological theory of prison services. We identified four ideal typologies which we called the Rehabilitation, the Security, the Repressive, and the Hybrid prison models. This typological theory will help us to cross-examine prison services on a global scale, and to understand their different approaches to health and well-being. However, this study does not include the Repressive prison model as a case, due to the incompatible nature of this model with the promotion of health and well-being, which is the core of this book.

Based on the approaches to punishment reviewed in this chapter, and the physical conditions of imprisonment, the next chapter will show us how imprisonment has evolved throughout history concerning each prison model under study: the Security, the Rehabilitation, and the Hybrid prison models.

Chapter 3

Evolution of prison models from the birth of the prison to the nineteenth century

Although imprisonment as a penal sanction is a relatively modern phenomenon, which appears alongside the emergence of capitalism [101], the use of imprisonment as a mechanism used by the ruling classes to show power and control has a history dating back thousands of years. It has been associated mainly with Repressive approaches, with some cases aligned with rehabilitation (in the form of redemption) and driven by religious moral structures, hedonic philosophical approaches, and the cravings of power through social and economic dominance. Before the enlightenment, imprisonment and punishment were separate concepts. Imprisonment was the mechanism used by the ruler to ensure the offender does not escape the trial or the execution of the punishment. Therefore, prisons were rarely purpose-built. Punishment in organised societies around religious beliefs was focused on the redemption of the offender and the rule of the common good and the divine laws. Their prisons, as places of repentance and prayer, were more aligned with ideas of offender's rehabilitation rather than social revenge. In societies where religion was relegated to second place in the administration of power, prisons were conceived as additional instruments of repression and torture. Here, hedonic approaches take the form of deterrence, where criminals are thought to be discouraged solely by increasing the pain associated with the illegal ways of obtaining pleasure. In turn, social and economic domination was seen in the dominant classes, inflicting pain on the dominated rebel who does not follow the social rules imposed by the ruling class or the sobering.

From late antiquity to the prison reform

Although preventive custody was a well-attested legal function of the Roman prison, captivity as a way of permanent punishment was forbidden in the late period of the Roman empire. During the third century, Ulpian

(d. 228), a prominent jurist who marks the end of the classical period of Roman law, wrote about imprisonment:

> Governors are in the habit of condemning men to be kept in prison or chains, but they ought not to do this, for punishments of this type are forbidden. Prison indeed ought to be employed for confining men, not for punishing them [102(p135)].

This claim does not reflect special care for the well-being of prisoners but recalls that life-term imprisonment – which used to include permanent chaining to a place – as a punishment was forbidden by law. Imprisonment, indeed, was only reserved to serve as the waiting room of the execution of the punishment decreed by the judges. However, Ulpian words seem to have been considered positively by Constantine the Great, who was the Roman Emperor from 306 to 337 AD, because in 320, referring to the treatment of anyone held in custody awaiting the execution of the sentence, the Theodosian Code stated that:

> [He] shall not be put in manacles of iron that cleave to the bones, but in looser chains, so that there may be no torture, and yet the custody may remain secure. When incarcerated he must not suffer the darkness of an inner prison, but he must be kept in good health by the enjoyment of light, and when night doubles the necessity for his guard, he shall be taken back to the vestibules of the prison and into healthful places. When day returns, at early sunrise, he shall be forthwith let out into the common light of day so that he may not perish from the torments of prison [66(p20)].

This seems to be the first evidence of a humanist attitude toward prisoners. Although Constantine recognises the need for the application of the decreed punishment, and prisons at that time could not be likened with modern rehabilitation approaches, the apparent concern with avoiding unnecessary inessential pain caused by the excess of zeal, the call for maintaining prisoners in healthy conditions and taking care of their mental well-being by ensuring exposure to daylight, and the prevention of needless damage of prisoners' health is a remarkable historical event. The Theodosian Code also considered the separation of prisoners by sex [103], suggesting that despite the conditions in which Roman prisoners used to be kept, Constantine seemed to also have a certain level of concern about the impact of imprisonment on the mental and physical well-being of women. Despite the deterrence

and retributive purpose of the sentences in this period, the prison was not expected to play any part in it.

At the beginning of the fourth century, the balance of power distribution in the Roman political arena started to change. The legal privileges acquired by Christian society and their leaders, after the legalisation of Christianity in the Roman Empire, resulted in secular empowerment through the recognition of the authority of bishops in maintaining discipline and establishing dogma in their communities. This was a significant change to the cultural approach towards imprisonment. Religion recovered its original sacred duty first promulgated by Egyptian society but dropped by Roman society. It can be seen as a change from the Hedonic perspective of addressing the illegal seeking of pleasure by increasing the pain associated with it, to the Eudemonic approach of teaching the offender how and why to live a better life. However, the Christian church imposed its concept of sin and the religious and supernatural values of penitence as extremely suitable for restoring what Pope Paul VI called "a sense of the presence of God and His sovereignty over man and a sense of Christ and His salvation" [104(Chapter III)]. The health and well-being of the penitent started to be a currency with which the sinner had to pay in exchange for the absolution of their sins. Pope Paul VI stated that sinners

> are invited to unite their sorrows to the suffering of Christ in such a way that they not only satisfy more thoroughly the precept of penitence but also obtain for the brethren a life of grace and for themselves that beatitude which is promised in the Gospel to those who suffer.

Nevertheless, penitential confinement was mostly used as a social tool to neutralise or humiliate offenders, masked by the official emphasis on spirituality.

The disciplinary ideas of canon law were based on the bishop's responsibility for salvation. In the name of God, bishops were expected to apply the appropriate penances to the holy offences so that a sinner might be corrected and led to salvation by a combination of mercy, discipline, and correction [79]. The Catholic church was the first institution in the West to use imprisonment consistently for any purpose other than detention as a practical way of handling disciplinary problems where "salvation" as a religious concept was about more than just "correction" – it also promised a better life at the expenses of the sinners' well-being though. This change could be seen as the first attempt in the Christian era to introduce a notion of rehabilitation into the concept of imprisonment. During the Middle Ages, prisons were also widely used within monastic orders to punish inappropriate behaviour among monks [66]. This kind of imprisonment became the

inspiration for one of the most important prison systems in prison reform times, the Pennsylvania model of total solitary confinement, discussed later.

Most ecclesiastical sites were partially fortified, and they were massive constructions, with towers and cellars. They usually established prison quarters within these fortifications. Viollet-Ie-Duc describes the accommodation for prisoners in the thirteenth-century archepiscopal palace at Sens as

> various detention rooms were grouped next to the room where judgments were made. There were three rooms of varying sizes, each with a toilet and a window as well as anchors for fastening the prisoners' chains to the wall. The windows were located so that prisoners could not look outside. A trapdoor in the door of an anteroom to these small prisons gave access to a lower chamber next to the palace cesspool. This lower room contained a toilet and a diagonal shaft that allowed air and light to enter the dungeon [79(p25)].

Although, probably, the presence of a toilet in the cells – a rare privilege at that time – as well as windows were more related to the need to maintain hygienic conditions and fresh air in the adjacent room of judges, it is remarkable the consideration of such a benefit for prisoners.

Fortresses and castles in the Middle Ages did not have special places for imprisonment and criminals were instead placed into wooden or iron cages without much attention to their health or well-being. Purpose-built prison chambers in fortresses and castles only start to appear in the twelfth century. There was, however, a clear distinction or class bias among the harsh conditions of the accommodation designated for dangerous prisoners and the well-being considerations placed on the prison accommodation for important people [79]. In England, King William I (1066–87) started the construction of a new fortress as the first royal prison in England. This was the Tower of London and it was designed to hold the King's enemies [66]. The Tower's first recorded prisoner, in 1101, was the bishop of Durham, who was allowed to keep his servants with him. His imprisonment demonstrates the differentiated treatment of prisoners according to their social or economic status. Among other royal prisons built at this time are the Fleet in London and the "baulk house" at Winchester [66].

The beginning of the prison reform movement

In 1773, John Howard was appointed High Sheriff of Bedfordshire, in England. He is recognised as one of the most important prison reformists in western history. Howard conducted a three-year tour of British prisons. He was appalled by the conditions he found in nearly all the prisons. His

published accounts led to awareness and increased public concern, which later resulted in a Penitentiary Act [79]. The buildings he visited were rarely purpose-built and usually in a deplorable condition. Howard later exposed those conditions in 1777 in his *The State of the Prisons in England and Wales* [105], which ignited the penal reform movement in England, and rapidly spread to Europe and the US.

Jeremy Bentham was an English philosopher and another prominent actor in prison reform in England. He developed the idea and the design of a circular prison which he called a Panopticon. In the original design of 1787, the building configured a ring made of cells with barred openings to both the exterior and the interior. Bentham placed a head keeper's house in the centre of the building, with the light coming from the external cell windows, allowing unseen surveillance of those cells from the dark interior of the centre house. In 1790 he submitted his ideal prison to the British Parliament, but it was rejected for being too radical with an extreme utilitarian philosophical perspective, in opposition to the humanitarian movement that fuelled Howards' work. Although Bentham failed to convince the British parliament, ultimately the implantation of his utilitarian idea of transforming the prison building into a productivity-enhancer machine, to treat the highest number of deviant elements possible, with the minimum of resources, was adopted widely.

The positive school

During the late nineteenth century, a new movement, known as the Positive School of Criminology, proposed that criminal behaviour was the result of external and uncontrolled factors rather than rational decisions. Two of their main exponents were Cesare Lombroso and Enrico Ferri. For Lombroso, criminality was an inherited feature, therefore each offender could be recognised by indicative physical and physiological characteristics. Ferri, instead, focused on recognising criminals by identifying a set of non-physical characteristics such as handwriting, vocabulary, and moral insensibility. He stated that there was no free will involved in committing a crime because a criminal was conditioned in his actions by three types of factors: anthropological, physical, and social [106]. The Positive School rejected the doctrine of no punishment without law, emphasising the need for individualised scientific treatment as a way of protecting society against the criminal. It focused the attention on the act of crime as a psychological entity, depicting crime as a deterministic phenomenon [107]. This thinking dominated the penal arena in Europe and America (North and South) during a significant part of the twentieth century and was the main driver for rehabilitation prison policies [108].

The birth of the Security prison model: nineteenth-century prison reform in the US

The modern era of prisons in the US starts with the consolidation of the Pennsylvania separation system. During the early days of the American penal system, the terms jail and prison were used interchangeable, with no differences in the conditions from the prisoners' perspective. It was the United States of America, despite an intensive humanitarian movement in European prison reform, and because of the parliamentarian rejection to Bentham's panopticon, which saw the first two systems of imprisonment that combined a specific regime of prisoners' treatment, a particular archi-tecture built within a clear philosophy of behavioural change. They are known as the Pennsylvania model, or separation system and the Auburn, or congregate system.

As a response to the overcrowding experienced at Walnut Street Jail, the construction of the Eastern State Penitentiary in 1829 represented the first full expression of the Pennsylvania model of total solitary confinement. It housed just one prisoner per cell, and prisoners served time rather like the monks in the monastic prisons in the Middle Ages, denying the basic social needs of communication and socialisation. The prison was not designed to cause pain. The design aimed to ensure adequate living conditions to pro-mote a prisoner's health and well-being. This was the world's first peni-tentiary to serve a broad region being also the first prison of this scale to have centralised heat and indoor plumbing [79(p67)]. It demonstrated a logical rationale for the organisation of space based on security, restriction of movement, and avoiding escape [109]. Its distinctively radial geometric form and the regime of isolation became a symbol of progressive, modern prison principles, copied by many countries.

The Quaker religious movement, heavily influenced by monastic ideas, saw isolation as a necessary part of reformation and moral change. There was a desire to change the essential nature of the criminal towards becoming a better member of society [84,110]. However, it also promoted ostracism (triggering mental disorders) rather than teaching inmates how to cultivate positive relationships to live in society. Despite the intentions of reformation through meditation and repentance, the criticism concerning the number of suicide attempts and the psychiatric condition as a result of the solitary regime led to the Pennsylvania system being abandoned in 1913.

After the failure of the Pennsylvania separation system, a new penitentiary system appeared – the Auburn or the congregate system. In New York, in less than a year of subsequent total isolation in Auburn prison's tiny cells under the Pennsylvania system, five of the 83 prisoners had died, and many of the rest were diagnosed to be ill or insane. The high financial cost associated

with the system was due to a design that required large exterior cells accompanied by an outdoor space. This made it difficult to stack cellblocks to create huge multi-story facilities [84].

The warden thus established a new system at the prison, helped by his architect-builder John Cray and the architect John Haviland [111]. Prisoners now slept in solitary cells but congregated in large groups for work and meals. However, no communication among inmates was allowed at any time [109]. The possibility for prisoners to see, as well as work surrounded by, other people was a considerable improvement on the total isolation imposed by the Pennsylvania system. However, this new system neglected the needs of communication among human beings which was not seen as working against human relationships, positive emotions, and the need for engagement, three of the essential elements of well-being.

This more economical system could use smaller cells because the inmates only occupied them at night for sleeping and there was no need to include access to sunlight and air because inmates were not permanently restricted to their cells. This utilitarian perspective dominated American prison design for many years, and even today, it is presented as a natural and acceptable rationale. While the argument of non-restricted cell time is helpful, these economy-based arguments do not consider the detrimental effect on the prisoner's well-being by placing a human being in an abnormal environment.

Scandinavian Repressive system before the Rehabilitation prison model

During the eighteenth century and in the early decades of the nineteenth century, many prison reformers visited Scandinavia for inspiration. Their impression, however, was not positive. John Howard, for example, visited Denmark and Sweden found them "dirty and offensive" [105(p71)] and described the treatment of inmates as "shocking to humanity". Similarly, the Quakers Stephen Grellet and William Allen visited Oslo in 1818 and were very critical of the bad conditions in the Norwegian institutions. Smith and Ugelvik, in their account of Scandinavian prison development [112], suggest that the willingness among Scandinavian royalty to listen to the critique from the travelling philanthropists was crucial to the development of the Scandinavian reform. In 1840, an anonymous publication in Sweden of the book on prisons, known as "the yellow book", advocated for extensive prison reform based on the Pennsylvania model which won great interest among Scandinavian countries. Pratt and Eriksson [113] reported that in Sweden, 45 cellular prisons were built in this style between 1846 and 1880. In Norway, a cellular prison was opened in Oslo in 1851. Although it was the only cellular prison built then in Norway, many other prisons were modified, and in 1857, the cellular

system was prescribed for district prisons [79,103]. In Finland, four Pennsylvania system prisons were built in the 1880s drawing on the influence of the Lutheran Church, which places more importance on the individual's relationship with God than on the church itself. Lutherans thought of crime as only one of many earthly sins. Therefore, criminals were not considered, per se, dangerous outsiders [113].

The unique socio-geographical characteristics of the Scandinavian countries are also presented as another important factor in the Scandinavian understanding of crime and punishment where "the old Norse traditions of blood vengeance merely reflected the harsh climate they had to withstand" [112(p15)]. The geography of these countries had also led to them being sparsely populated and often inhabiting unproductive lands with economic life developed in small units in the absence of an influential conservative upper class or anything resembling a feudal society [114]. Communities tended to have similar social conditions and a good deal of autonomy, leading to a strong tradition of local democratic self-government without a powerful land-owning aristocracy, and considering everyone as an insider and a valuable member of the community.

These socio-cultural characteristics are in clear opposition to the deterrent hedonistic punitive perspective that dominated the history of imprisonment at that time, preparing the historical basis for the development of Scandinavian penal exceptionalism. The vast majority of prisoners in Scandinavian countries were subjected to intense solitary confinement throughout much of the latter half of the nineteenth century and way into the twentieth century. However, a progressive system was introduced during the 1860s, which allowed prisoners to read more books, write more letters, and even get more out-of-cell time if they behaved well. The solitary confinement system was not abandoned, despite serious health problems and cases of insanity, until the 1930s in Denmark, 1945 in Sweden, and 1958 in Norway.

Latin American prison development and the Repressive roots of its Hybrid model

The replication of the new Spanish social structure in nascent Latin American countries in the eighteenth century resulted in a small, powerful land-owning aristocracy in each country, with strong links with both military power and religion. This resulted in highly militarised societies due to the recent independent campaigns and the need for controlling slaves and lower-class, illiterate citizens to benefit the small Creole aristocracy [115]. The permanence of slavery and other forms of labour, racial and social control contradicted the system of equality before the law and universal citizenship

that most republican constitutions in Latin America promised [116]. Cities were developed in a military layout around the main plazas, called Plaza de Armas (Plaza of weapons), where weapons were stored [117,118]. Brazil, which was controlled by Portugal, was characterised by the importation of slaves from Africa. Except for the aristocrats, the people in these countries were almost entirely illiterate and showed a high level of economic concentration [115]. While in some cities such as Mexico City, Lima, Buenos Aires or Rio de Janeiro the level of logistics organisation in the jails was somewhat more advanced, incarceration, in general, was a social practice designed simply to store detainees [116]. Some political leaders criticised the colonial carceral conditions, but Republican rhetoric was almost always neutralised by discourses and practices that emphasised the need to control the undisciplined and immoral masses through severe punishment mechanisms. A relatively small group of state authorities in Latin America were anxious to imitate the social models of the metropolis as a way of embracing modernity and applying successful control mechanisms over the undisciplined masses. Two prison models thus arrived in Latin America. The houses of corrections model came from England and arrived in Buenos Aires (1825) and on the coasts of Brazil (1834). The Philadelphia model arrived in Mexico (1840), Chile (1843), and Peru (1855), from North America [119]. However, the modernity publicised by these States did not deceive anyone, and people knew that, indoors, the prison was still a place of suffering, abuse, and violence.

The emergence of prisons in this region was the response of the States to the pressures exerted by civil society (the educated elite of each country), which demanded more civilised and modern sanctions. However, the Latin American elites also felt a deep mistrust towards the illiterate and dark-skinned rural masses as ignorant, incapable of civilisation, and needing a necessary form of incarceration at times [116].

In Chile, until these new models arrived, there were only local jails occupying rented houses or public buildings. The use of wheeled cages to expose inmates to the public in urban areas was a common practice. These "mobile jails" moved to places that required minimum-cost labour. "Each car contained up to 14 inmates, with separate chains, among which they used to be paired with two linked by the same iron" [120(p31)]. These practices not only targeted the self-esteem of inmates by exposing them to mistreatment by the public but also created enormous psychological damage. The public exposure affected their future capacity to establish normal relationships or to be able to return to normal social life.

Chile started building prisons between 1836 and 1847. The Santiago Penitentiary was the first (and only) purpose-built Fan-shaped prison in the country. At the end of the eighteenth century in Chile, there were two more prisons in the cities of Curicó and Talca. However, they were

rectangular buildings surrounding the inner courtyards. Before the end of the century, Pennsylvanian-inspired designs were built in Argentina (Buenos Aires 1877; Sierra Chica 1882; Cordova 1890), and Auburnian designs were adopted by Colombia (Bogota 1876) and Uruguay (Montevideo 1885). Similarly, Aurbunian-inspired prisons were also built in Peru (Lima 1862 and Bolivia 1883). Although the separate Pennsylvania system was abandoned in the US due to its harmful effects, it was widespread in Europe during the nineteenth century. However, in Latin America, Hybrid designs mixed Pennsylvanian fan-shaped layout and back-to-back Auburnian cells, with local modifications and little understanding of the underlying philosophies. As in most of the Latin American countries, the implantation of this Hybrid design in the Chilean capital city, in addition to the maintenance of old punitive practices and no additional investments, resulted in the perpetuation of the cruel, severe, and disproportionate punishment on prisoners.

This chapter has reviewed the historical roots of the prison system in some of the most representative countries of each prison model under review – the Security, the Rehabilitation, and the Hybrid prison models – considering their approaches to punishment and their physical conditions of incarceration. The next chapter will expand this historical review, presenting the evolution of these prison models from the twentieth century to the present.

Chapter 4

Prison models

Recent history, and development from the twentieth century to the present

Prisons designed for behavioural change

The rapid development of scientific knowledge during the eighteenth and nineteenth centuries – in addition to the rationale postulating that architectural design could improve outcomes on health management [121], and change people's behaviour [122] – led designers and reformers to start creating buildings supposedly capable of producing desirable effects. Hospitals, for example, introduced mechanical and spatial ventilation in the fight against airborne diseases, and architecture was understood as a unique tool in healing the ill [123]. Prison design was in turn seen as a building tool to produce moral changes in prisoners. However, the balance of societal power resulted in different outcomes. In hospitals, the subject "patient" was backed by the pressure of society in favour of a quick and effective recovery from illness, which pushed for a constant improvement of the effectiveness of the system in recovering patients [124]. In prison, however, the subject "prisoner" had had no such support or power and therefore no resistance to the configuration of the new building machine as an instrument of economic rationalisation, intrusive observation, and normalisation to mould their behaviour into what was considered socially normal [61].

The prison machine

One event occurred in the US, which is rarely mentioned in historical prison texts. Its effects lasted, however, for the whole first half of the twentieth century. In 1882 an original invention patent (No. 244,358) was registered for a mechanical two-storey rotative prison. The patent said:

> The object of our invention is to produce a local detention facility (Jail), in which prisoners can be controlled without the necessity of personal contact between them and the jailer or guard. [The system] consists first, of a circular cell structure of considerable size (inside the

usual prison building) divided into several cells capable of being rotated, surrounded by a grating proximity thereto, which has only such number of openings (usually one) as is necessary for the convenient handling of prisoners [125(p153)].

While in operation, its 32-ton carousel of 16 cells (eight on each of two levels) could be guarded by just two men. The reduction in labour allowed it to be fully functional in many counties in the US until 1938. The last one closed in 1973. Once again, the design of the living conditions of the users (inmates) was subordinated to the need for saving economic resources. Each time the carousel was rotated to access one cell, all the prisoners could feel the movement, which aroused anxiety. The constant operation caused health problems associated with fracturing inmates' legs or arms trapped in the mechanism and was the leading cause for stopping the use of the rotary prisons. This example shows the importance attached to saving money in the operation of prisons and the lack of importance placed on prisoners' conditions during the first half of the twentieth century.

Security prison model development

Maximum-security prisons developed throughout the first half of the twentieth century in the US and were colloquially known as Big Houses with no grand scheme or purpose; neither penance nor profits were sought. Routines were purposely meaningless, generating a permanent sense of lack of meaning for prisoners [109]. Activities served no purpose other than to maintain order and their object was disciplined forced labour. Such prison work produced little interest or engagement but the Big House was an improvement in American prison history: "a step forward, however modest and faltering, in the evolution of prisons. Humanitarian reforms helped to shape its inner world, though these had to do with reducing deprivations and discomforts rather than establishing a larger agenda or purpose" [109(p31)]. Cells were deliberately small. Possessions were limited to the essentials. Sexual abuse was disturbingly common in custodial prisons run by men. However, prisons for women were no safer. "Probably lonelier and certainly more vulnerable to sexual exploitation, easier to ignore because so few in number, and viewed with distaste by prison officials, women in custodial units were treated as the dregs of the state prisoner population" [109(p21)]. These institutions were very poorly designed with buildings composed of a vast number of cells that on average, held at least 2,500 men per building. Some of the best-known institutions include California's San Quentin prison and New York's Sing-Sing prison. While in Europe, and later South America and Asia, radial-plan prisons were being built with cellular isolation, to be used for at least

in the initial phase of a sentence, the US did not follow their example. With few exceptions, the US prison development from this time onwards followed non-radial layouts. The plans were to support an internal regime intended to reduce inmate contacts but not to provide 24-hour separation, as attempted elsewhere [79]. This cannot be seen, however, as an improvement on inmates' well-being conditions since the strict, harsh, and tedious prison regime did not provide them with any positive motivation.

The correctional institution typology emerged in the US gradually from the Big House typology in the 1940s and 1950s. However, these correctional institutions did not correct, nor did they abolish the pains of imprisonment. They were fundamentally more tolerable human warehouses than the Big Houses they supplanted. Correctional institutions were marked by a less intrusive discipline. They offered more outdoor time and implemented more amenities, including a movie or an occasional concert and more educational, vocational, and therapeutic programmes, as well as more liberal mail policies and visits. Although these changes represented an essential improvement in terms of providing some elements to the promotion of the well-being of prisoners, making life in prison less oppressive, prisoners still spent most of their time in their cells or participated in some sort of low-level work. Moreover, they often met in the courtyard with nothing constructive to do.

Between World War I and the 1960s, several new architectural typologies of the prison were developed in the US, such as the telephone-pole plan which first appeared in prison at Stillwater, Minnesota; the rectangular layout; Courtyard or Self-Enclosed prisons; or the High-Rise prisons [64]. However, all those typologies had a similar flaw: the low level of importance placed on the psychological and physical effect that the system produces on the health and well-being of inmates.

Differentiation between jails and prisons in the US

In the eighteenth century, the concept of jail and prison was interchangeably used, but by the twentieth century, there was a clear differentiation. The most fundamental differences lie in the length of stay. As a general rule, jails are used for short-term stays and prison for the long-term. Jails are run by law enforcement in the local governments (counties), for holding people who are awaiting trial, meaning that they are not yet found guilty, or who have been serving short sentences. The expected length of stay in jails is 25 days [126]. Prisons are run by the state governments, or the Federal Bureau of Prisons (BOP). Prisons are classified according to the level of custody (i.e., minimum, medium, or maximum security, solitary confinement). Although there are many differences between the design of jail in respect to prison, this book will refer to prison design interchangeably for jails and prisons,

given that many of the design criteria that have changed the shape of jails in the last 50 years in the US have also been adopted by prisons. The following sections will present the evolution of these criteria for prison design.

Podular prison

The first real alternative to the first-generation old-fashioned prison typologies of the twentieth century was the Podular system. It consists of a modified campus plan with a series of pods, or small housing units, and other facilities connected by secure passageways or open walkways. In this design, the perimeter security is provided by either the configuration of buildings and corridors or, where the structures are freestanding, an enclosure of single or double fencing [79]. There have been two versions of this model, named Second-generation prison and Third-generation prison respectively, which are explained below.

Second-generation facilities

During the early 1970s in the US, the National Clearinghouse for Criminal Justice Planning and Architecture was responsible for creating new guidelines that incorporated Podular housing unit design with remote surveillance in a secure control room. The design principle was based on providing centralised services to inmates. There were some improvements, in terms of the health and well-being of inmates in eliminating some of the more aggressive visual elements of traditional prison design, by using security glazing rather than steel bar barriers to openings. Living areas were designed for 12 to 24 people, usually in a triangular layout with cells aligned along two of the three sides. Programme services were brought to dayroom areas. However, the physical message that staff were treating "deviants" and "outsiders" was maintained. The staff used the improved technology to watch the inmates in the housing pods but were able to remain safe from assaults. Facilities were austere and designed to resist expected abusive behaviour with fixtures, finishes, and furnishings all designed for maximum security. The underlying operational assumption of second-generation facilities was that inmates would exhibit negative behaviour simply because they were inmates. So, barriers should be placed between inmates and correctional staff. Daily activities, such as visitation, counselling, attorney consultation, dining, exercise, and recreation occurred in locations far from the inmates' living areas [86]. Although it was a small improvement from the inmate's well-being perspective, it was an essential step toward the understanding that a normal-like environment promotes normal-like behaviour [84], opening the gates to the development of the third-generation facilities.

Third-generation facilities

The third generation of architectural management style, known as Podular design with direct supervision, evolved just a few years later. They were designed with more manageable sized units of 36 to 60 inmates. The primary operational assumption here was that a normalised environment would evoke normal behaviour. This was a pivotal change in terms of how American prisons were understood and how their design should create a less aggressive environment rather than highly reinforced, anti-vandal ones. A concentration of services close to the inmates reduced movement between areas and needed less staff supervision. In a third-generation facility, a correctional officer works within the living module in a supervisory role. Discipline is maintained through the principle of staff direct interaction among small groups of inmates in a normal-like environment. This crucially changed the message sent by the prison system to the inmates. The direct contact with prison officers without physical barriers emphasises the concept of trust, and although the different roles of being a prisoner and being a guard are maintained, there is the intention to send an implicit message that we are all humans. The new working conditions also positively affected the sense of professionalism and mental well-being of the prison officers. "Officers in the first DS jails, including some who had been sceptical about working in such close proximity to inmates, commented that in these new jails, officers felt less like guards and more like professionals" [127(p401)]. Room furnishings in living areas consist of noninstitutional, commercial-grade beds, wood desks, and porcelain sinks and toilets instead of traditional high-security stainless steel fixtures. The psychological aggression associated with the anti-vandal furniture and fixtures was modified by implementing normal-like elements. In this new approach, the misbehaviour of inmates is confronted with two behavioural options: either conform to stated expectations of management or be moved from the general population to the segregation/isolation unit which is designed using second-generation facility principles. Because vandalism is not the norm, fixtures in third-generation prisons are not usually broken and are considerably cheaper to purchase and replace [86]. This less destructive behaviour outcome could be understood as being due to relief from the physical and social oppression of inmates and therefore, an improvement in their well-being. The Podular design/direct supervision model relies on the staff ability to supervise and interact, rather than using structural or technological barriers. However, the change in the officer's role was "neither universal nor has it been universally accepted" [127(p54)]. The title change from guard to the officer has not been accompanied by a substantive alteration in the duties of enforcement and custody of the traditional prison guard in many institutions.

Although the third-generation facilities are a clear step forward for both improving the health and well-being of inmates, and creating favourable conditions for rehabilitation treatment, the reality shows that they are still far from being the optimum system in terms of well-being promotion. The American conception of normal environments in prisons does not allow inmates to be in an external environment. Inmates only can stay in natural ventilated enclosed areas, with some exceptions such as the Chicago Metropolitan Correctional Center, where inmates can be in an open area on the rooftop of the building. The economic and logistic constraints of the system keep inmates in their assigned pod, without being able to have a normal daily routine, including outdoor activities.

The third-generation prison facilities have been promoted as the most significant breakthrough in American and British prison design, with significant benefits in terms of normalising the environment: improved staff working atmosphere and safety conditions and decreased level of stress, tensions, vandalism, and suicide among inmates. However, there is a notable lack of research to evidence the actual effect of this prison design approach on the general health and well-being of inmates. Despite good intentions, the historically unbalanced relationship of powers between prison authorities and prisoners still favours the economic and administrative interests of the former, while not seriously considering the overall quality of life, health, well-being, and rehabilitation possibilities of the latter. The lack of prisoner consultation in the process is evident in the absence of their perspective and perceptions during the design process.

Supermax prisons

During the 1970s and 1980s, the combination of the meaningless existence within the Big Houses in the US and the efforts of imposing discipline resulted in an uncontrollable increase in prison violence. The mismanagement resulted in dozens of prison guards being murdered, triggering a rapid and robust response from the authorities. Unfortunately, the response was not to relieve pressure through the use of a direct-supervision prison system but rather to simply strengthen the previous harsher typology through the development of Supermax prisons [103,128,129]. Supermax prisons have been promoted as the way to control the "worst of the worst" and make prisons safer places to live and work. However, studies have not found any evidence that supports the hypothesis that supermax prisons reduce levels of inmate-on-inmate violence, and there is mixed support that they increase staff safety [130]. Conversely, empirical research suggests that this typology has the potential to damage inmates' mental health while failing to meet the organisational

goals [131]. The purposeless life and lack of meaning in the long hours and days staying in such facilities, with no possibility to establish any relationship with other human beings, or being involved in any activity that produces engagement or fosters positive emotions, subverts any human-centred process of socialisation and desistance. The regime of solitary confinement – also called Administrative Segregation (AS) – has been studied by several scholars and the most recent results conclude that the use of AS in long periods (>30days to several years) "will produce iatrogenic consequences that will violate reasonable standards of humane care" [132(p357)].

The Rehabilitation prison model's consolidation

The Scandinavian model

Northern European countries take a very different approach, compared to other countries, recognising prisoners as citizens with rights and considering the restriction of liberty as sufficient punishment in itself [133]. They have been broadly recognised by the media at a global scale for their successful outcomes in terms of having the lowest rates of recidivism in the world, although academic studies have consistently shown that international comparison of recidivism rates between countries remains problematic [134], due to the multiple definitions of recidivism that each country uses, different criminal justice policies, and the variation in methodologies used in each country. Nevertheless, Nordic countries remain as having the lowest imprisonment rates, and profoundly humane carceral conditions [114,135–137]. John Pratt has referred to this approach as Scandinavian Exceptionalism whose foundations lie in the highly egalitarian cultural values and social structures of these societies [114].

The Scandinavian societal approach to punishment is based on the eudemonic philosophy of restoring communal values with respect for the prisoner as a fellow human being. The concept of the Scandinavian open prison began in Finland in the 1930s, where inmates were allowed to work on farms. Later in 1946, a new type of labour colony prison was introduced where "no limit was to be placed on the freedom of those sentenced to labour colonies except were called for by maintenance of order and work discipline, and inmates [were to] be paid according to the normal wage" [cited in 114]. Inmates in these open prisons pay taxes and "rent". They travel to the local food market to buy food. They save and send money to their family and their victims [112,114].

In Norway and Sweden today, however, these prisoners simply receive an allowance, as in closed prisons [114]. Inmates' living conditions are similar to ordinary social housing in the local area, minimising the differences in living

a healthy life. Mental and social well-being is also promoted by providing the same basic facilities that could be found anywhere in the outside community. During the 1970s, Nordic countries started to develop the concept of Normality within their penal practices, but in most cases, it was established in the law itself.

Finland, Greenland, Denmark, Sweden, the Faroe Islands, and Iceland state within their enforcement Acts the right of inmates to a normal environment [138]. They have a different focus on the law but, in one way or another, these countries' laws established that inmates should enjoy the same quality of services as the general population, and a day lived inside prison must not be different from a day lived in freedom [112,114,135,136]. Maybe the most precise definition of normality is seen in Finnish law, which indicates that, to the extent possible, prison conditions must be arranged to reflect living conditions in society.

This concept of Normality must be here clearly differentiated from the Foucauldian concept of Normalisation which refers to the construction of an idealised norm of conduct, in which individuals are moulded to behave in a "normal" or standard way. The Nordic concept of Normality respects and recognises the character of the offender as a valuable member of the community, and an insider of society, even though they are temporarily separated from it. This principle has important implications for the rehabilitation process and prisoners' mental, physical, and social well-being. Norway seems to be the only Nordic country that does not include Normality as a written concept within its legislation. However, the Norwegian Execution Sentence Act states that the correctional service Kriminalomsorgen must collaborate with other public authorities to make sure that inmates receive the public benefits to which they are entitled according to law [138].

Nevertheless, the current prison reality in Scandinavia is the result of social evolution with various entities in continuous opposition to the forces of authority [139]. In 1966, groups of non-governmental political associations for penal reform were formed by criminologists, lawyers, and social workers as pressure groups in this arena. This started in Sweden with a significant national meeting in 1966, called "The Parliament of Thieves" in which "prisoners and ex-prisoners for the first time in Scandinavian (and perhaps international) history in large numbers and openly told the audience and the press what prison was like" [140(p1)].

The movement expanded throughout the region. It was called KRIM[1] in Denmark (established in 1967) and KROM[2] in Norway (established in 1968), and there were also similar developments in Finland (ibid.). These organisations created constant pressure on prison services and governments. In Norway, KROM started organising annual conferences in the mountains with mainly consisting of ex-convicts, because prison authorities denied

inmates the chance to participate and did not attend themselves until the early 1970s. "The very existence of a prisoners' organisation was understood as a provocation" [139(p16)]. Between the 1970s and 1990s, in Scandinavia, several prisoners' strikes supported from the outside by these organisations demanded better prison conditions, better payment, better visiting conditions, and more liberal censorship of mail. "Invariably, the reaction of the prison administration was totally negative" [140(p5)]. Between the 1980s and 1990s, the level of violence and conflicts between prison staff and inmates was high, resulting in the death of two prison officers.

However, the attitudes of the prison authorities and people in the criminal justice system started to change partly due to the growth of the welfare state and the prisoners' organisations [139]. The mountain conference chaired by KROM has a regular audience of between 100 and 200 participants [114]. Unlike in other countries, Norwegian and Danish prisons are not allowed to be overcrowded [103,141], creating the concept of "prison queues" outside of the prison. A person can be convicted and sentenced but, if there is no room in prison, that person has to wait in freedom till they receive a notification that there is enough space to serve their sentence unless it is a serious-crime offender, or the person represents a threat to the community, in which case they will be immediately incarcerated [142].

The Scandinavian highly educated society has also been highlighted as an essential factor that must be included in the equation to explain the different levels of evolution of the Scandinavian perspective. The long and high level of training of prison staff and the tradition of decision-making processes based on evidence, guided towards a clear purpose, seems to support this thesis.

In the 1960s and 1970s, the Swedish prison system was seen as the more humane system and attracted considerable interest in reform-oriented circles in the US [143]. This could explain the appearance of the Podular third-generation system and the spread of normalisation ideas in American designs of the time. Sweden was said to be "friendly, providing homelike conditions and a good measure of privacy for the prisoners" [144(p409)]. Nevertheless, there is a fundamental difference between the Scandinavian and American approaches. The current American concept of Normality lies within a hedonic perspective on punishment where prisoners are expected to change their behaviour in an attempt to avoid pain. Therefore, the infliction of pain is seen by the Americans as necessary, but not by the Scandinavians.

New developments in Scandinavia

In Norway, the design and construction of the Halden Prison were identified as the most innovative example in the field of prison architecture in

Scandinavia and possibly in the world [142,145–147]. Halden Prison is a campus-like, high-security prison placed in the forest nearby the city of Halden. It is the first prison in Norway designed and built with a total observance of the principle of Normality. However, Halden Prison has not been free of problems and criticism. With this prison costing 230 million dollars to build [148], the Norwegian prison service started to look for a more cost-efficient design, developing the "Model 2015". Some scholars have seen this as a step backwards in design for rehabilitation and reintegration into society, arguing that in the Model 2015, "it is difficult to find deeper reflections about how a prison should be constructed to satisfy legal requirements regarding rehabilitation and satisfactory conditions for the inmates". Although the layout of the housing units is similar to the ones found in Halden Prison – 12 individual rooms sharing a living room, kitchen, and washing room – there is no indication in the documentation available concerning external areas and the concept of normality outside the housing units (see Figure 4.1).

Hybrid prison model in Chilean and Latin American prisons in the twentieth century to date

The development of the prison system in Latin American countries during the first half of the twentieth century was strongly influenced by the Positivist School of Criminology which tuned into the dominant paradigm. Chile also embraces this paradigm. The *Chilean Journal of Criminal Sciences* (published since 1933) promoted the ideas of "dangerousness" of the offenders and "social defence" as the basis of the Chilean penal system. In 1949, it created the law of "anti-social states" reaffirming the idea that the Chilean State could apply both preventive and pre-criminal measures to defend society better. The positivist criminologist approach focuses attention on the poor, illiterate, and alcoholic members of the proletarian class, labelling them as naturally dangerous who, when caught, should be placed in prison to change their behaviour.

Like almost all Latin American countries, Chile has always been a highly punitive society [149]. During the first half of the twentieth century, most of the prisons were built based on the rectangular typology, similar to the San Michele juvenile prison in Rome. Despite the construction of new buildings as well as extensions of existing ones, the process of closing old buildings as well as the demolition of others after earthquakes the total number of prisons at the end of the twentieth century did not show much change. Most were built based on the primary objective of storage people using a traditional rectangular typology consistent in a long corridor with cells on one or both sides. In some cases, cells were designed as collective dormitories for up to 30 inmates who shared two open toilets, such as in Concepcion

Figure 4.1 Typical blueprint of the Norwegian model 2015 for prison design. Outlining made by the Chilean architect Andrés Rodriguez-Ravanal, with guidance from the author based on the information collected in interviews and prison visits during the fieldwork

Prison. During the late 1990s, an explosive increase in the prison population resulted in excessive levels of overcrowding. This resulted in dormitories such as the Concepcion prison occupying up to 100 inmates, which could be considered as inhumane and degrading treatment. In 2013, in an attempt to regulate how to calculate the capacity of cells and dormitories in prisons, the National Director of Gendarmería de Chile sent the instruction to quantify the capacity of any dormitory or cell in Chilean prisons by counting the number of double bunks it would be possible to fit, leaving a minimum distance of 80 cm between them [150]. However, the instruction did not mention a minimum volume of air, levels of air renovation, daylight, or sanitary installations needed in addition to this, leading to potentially

degrading conditions for inmates' privacy, as well as their mental and psychological health. The Chilean prison population soared from 32,000 people in 2000 to 45,000 in 2016. However, the prison occupancy level – based on official capacity – was reduced during the first decade of the current century to the present 110.9% [151] thanks to a combination of two factors. The first was the development of a public-private partnership (PPP) programme of construction in which eight new prisons were designed and built between 2000 and 2010 with a total capacity of 12,435 inmates. Although the eight new prisons implied a big step forward in prisoners' conditions, the fact that they were designed in a typical rectangular layout of indirect supervision (a corridor with cells on the sides) perpetuates the punitive hedonic prison philosophy and the lack of interest for inmates' well-being. The second factor was the relaxation of the requirements for measuring official capacity, resulting in densification of the existing buildings without further expansion.

This chapter closes the first part of this book by exploring in Chapter 3 how the ideas of punishment and imprisonment have evolved through history, under three different prison models. We have seen how attitudes towards health and well-being have changed and how this is manifested in the evolution of prison design. The modern idea of prisons was developed in Europe and the US based on religious morality and economic restrictions. However, there has also always been the goal of incapacitation of the prisoner through the coercive action of the state – with retribution as the price that inmates have to pay – and the use of deterrence in the belief that fear will prevent further wrongdoing. The next part of this book will critically evaluate the discourse on prison design concerning health and well-being. It will start in Chapter 5 by showing how inconsistencies between the physical environment, the organisational objectives, and the role played by staff – their intentions, belief, and actions – affect inmates' personal development, and, as a result, reduce the odds that offenders can desist from crime. The second part finishes with Chapter 6 which reviews the evidence on how the environment can affect the health and well-being of people.

Notes

1   Danish NGO. KRIM takes an interest in human rights-issues related to the activities of the police, the prison-service, and the judicial system in particular.
2   The Norwegian Association for Penal Reform, KROM, a non-governmental political organization and pressure group in the area of penal policy.

Human factors and the importance of the health and well-being of prison users

Chapter 5

Why should prison design promote health and well-being?

The role of health and well-being in prisons and prison design

A strong, common characteristic of good prisons is that they promote human well-being [152], and enable positive change through identity reconstruction [153]. These prisons promote flourishing through enhancing positive emotions, allowing engagement in daily tasks, promoting positive relationships, finding meaning, and promoting the accomplishment of personal goals. Indeed, as mentioned by Liebling, when talking about the process of being prepared for release, prisoners chose the term "personal development" in preference to terms like "rehabilitation" because the former reflects a less limited emphasis on growth and "becoming". The Prison Research Centre of the University of Cambridge has also developed a measurement of the quality of prison life (MQPL) which measures the moral, relational, and organisational quality of prison life as experienced by prisoners. The MQPL survey contains a domain related to personal development, which captures the idea that prisons can either facilitate or damage "emergent personhood" [154]. Few prisons scored well in the domain of personal development, but there was a statistically significant positive correlation between personal development and factors such as:

- Support and encouragement.
- Humanity (an environment characterised by kind regard and concern for the person).
- Staff confidence and competence in the use of authority.
- Transparency and responsivity of the prison system and its moral recognition of the individual.
- Organisation and consistency [152].

Moreover, recent studies conducted by Auty and Liebling [154] suggest that inmates feel able to move themselves on a positive path according to their

own understanding of their condition when they are treated fairly, feel safe, and when inmate/staff relationships are both competent and supportive.

These findings support the thesis that to promote rehabilitation and desistance, the promotion of inmates' well-being is vital. Indeed, there must be a coherent message between three core elements. First, the right staff approach to the goal, through aligned intentions, beliefs, and actions (a social environment that promotes well-being as human flourishing). Indeed, the prison regime, as the norms and manners that rule the daily routine, vary from one prison system to another, communicating to inmates their position in the social fabric of the prison [16]. Second, the right context, as the adequate physical environment in which the process takes place (a physical environment that promotes the health and well-being of users). Here, the built environment has an essential role in promoting the health and well-being of inmates and providing them with the essential skills for flourishing, being rehabilitated and therefore desisting from crime. And third, the right objective pursued (providing the appropriate programmes that help offenders to develop positive emotions, engagement, and accomplishment).

The concern that the authorities place on the maintenance of the originally planned living conditions, through the provision of the adequate number and qualification of staff and the economic resources for maintenance of the physical environment, plays a crucial role. The occupants internalise these messages. The hard architecture that has characterised prison environments for centuries – with heavily barred windows, hard-surface floors and walls, and dark colours, can destroy a prisoner's self-esteem, "and influences the ways in which staff think of and behave towards the people in their custody and care but may also determine certain types of identity and behaviour" [16(p3)].

In turn, the overcrowding, and the lack of resources to maintain the buildings in the Hybrid and Repressive prison model, send a clear message of apathy and lack of interest for inmates' health and well-being by the relevant authority, and contempt from society.

In all three prison models considered in this book, we could find organisational efforts to positively change the lives of those in prison, either providing them with rehabilitation programmes or facilitating their social reintegration through transferring knowledge and tools to be active and valuable members of society. However, there is also an evident problem of coherence between what is said (the aims), what is decided in terms of how those aims must be implemented (including the prison design projects), and what is done. As seen above, achieving rehabilitation requires a strong coherence between three elements: the context in which the programmes are implemented; the programmes themselves; and the intentions, beliefs, and

actions of the supervisors. When each of these elements is sending different messages, this coherence is broken, and the goal is not reached [155].

The terms rehabilitation, social reintegration, and re-adaptation have been used interchangeably referring to either a process or an aim. Rehabilitation, as organisational processes, considers the provision of programmes, treatments, or interventions necessary to "enable individuals to overcome previous difficulties linked to their offending so that they can become law-abiding and useful members of the wider community" [67(p243)]. However, when rehabilitation is mentioned as an aim, it refers to desistance. An offender who desists from crime is defined as a person who, after being punished with a legal sanction, and as a result of successful programmes and interventions, can be considered free of the possibility of reoffending, and finally return to his/her place in the community without being considered a risk for the society [156].

Theorists today have addressed desistance from five different perspectives. First: as the result of successfully patching up the broken connection between the self and the society [157]. Second: by developing a coherent, pro-social identity [158]. Third: producing cognitive changes in outlooks and thinking of the offender [159]. Fourth: the result of an internal conversation during which offenders weigh up the pros and cons of desisting, and how they see themselves and how this fits into their values [160]. And fifth: the process in which offenders choose to try to become something/someone else that is different to how they currently are [161].

Studies have shown that promoting personal development plays a significant role in successful desistance [162]. In this regard, prisons have to provide an environment that helps prisoners to stop offending behaviour, preparing them for release and developing their potential [163(p7)].

Additionally, recent research suggests that positive physiological changes triggered by favourable environmental conditions are crucial to reach the minimum levels of self-efficacy and capability, needed for success in rehabilitation [154,164,165].

Most prison systems today aim for rehabilitation and/or desistance, but none of them mention prisoners' well-being as a necessary element in reaching these aims. For example, the official statements published on their websites indicate that the rehabilitation of prisoners is the primary objective of modern European penal policy through the European Prison Rules and the European Court of Human Rights [166]. The Chilean prison service publicly states that its mission is to take care of, monitor, and contribute to the social reintegration of people who are deprived of their liberty. Similarly, the Mexican prison service aims to re-adapt those sentenced to imprisonment and provide treatment to juvenile offenders. The Peruvian prison service aims to positively reintegrate inmates into society. The Norwegian correctional service states that their task is to ensure proper execution of remand and

prison sentences, with due regard to the security of all citizens and attempts to prevent recidivism by enabling the offenders, through their initiatives, to change their criminal behaviour. The goal of the Finnish prison service is defined as contributing to security in society by maintaining a lawful and safe system of enforcement of sanctions, reducing recidivism, and endeavouring to break away from the social exclusion that also reproduces crime. The UK prison service statement of purposes is to "carry out sentences given by the courts, in custody and the community, and rehabilitate people in their care through education and employment" [167]. In the US, the Federal mission is

> to protect society by confining offenders in the controlled environ-
> ments of prisons and community-based facilities that are safe, humane,
> cost-efficient, and appropriately secure, and that provide work and other
> self-improvement opportunities to assist offenders in becoming law-
> abiding citizens [96].

Despite these official statements, in most cases there is a significant difference between the declared purposes of care and rehabilitation, and what happens in reality through practice. None of these policies tackles the well-being issue directly, as if the very concept of promoting prisoners' well-being were inconceivable.

The apparent denial of inmates' health and well-being by prison services contrasts strongly with the efforts of the international community to promote them and implement them as policies as discussed in the next section.

International concerns related to health and well-being in prison

The first-ever international conference on Healthy Prisons in 1966 ignited the discussion of health into the prison settings [168]:

> In the World Health Organisation (WHO) we have for too long now
> overlooked the problem of health in prisons. The "Healthy Cities"
> Project has now been running for over ten years, and there was no
> way, ten years ago, we could have predicted the potential of that pro-
> ject. Healthy Cities has become a movement, a global movement. And
> I would like to think of an occasion like this that it is possible to start a
> similar movement as we did for Health Cities but now for prisons [169(p20)].

In 2003, a Declaration on Prison Health as Part of Public Health was adopted by WHO [170]. This recognised the right to physical and mental health and well-being, and that

> In all countries of the world, it is people from the poorest and most marginalised sections of the population who make up the bulk of those serving prison sentences, and many of them, therefore, have diseases such as tuberculosis, sexually transmitted infections, HIV/AIDS and mental disorders [170(p2)].

Members agreed to develop close working links between their ministries responsible for the penitentiary system and the Ministry of Health in their countries to meet minimum health requirements for light, air, space, water, and nutrition. However, there is no reference to health promotion, well-being, or settings-based approaches.

In 2007 the WHO Regional Office for Europe edited a volume of guidelines for health promotion in prison settings [171] which was the first to mention well-being. The guidelines state that prison administrations have a responsibility not simply to provide healthcare, but also to establish conditions that promote the well-being of both prisoners and prison staff. They also state, as a principle for prison administration, that prisoners should not leave prison in a worse condition than when they entered.

Another publication on prison health setting in 2014 [172] aimed to improve the health of those in prison and to reduce both the health risks of imprisonment and risks to society. However, moving prison health management from the beginning of the 2007 guide to the end of the 2014 publication is a step backwards in the WHO efforts to consolidate the movement [169].

The initial euphoria and commitment in launching the Health Promoting Prison (HPP) movement on the back of these publications seems to have lost strength over time, focusing more on practical lifestyle interventions and a worrying decrease of support for health-promoting prisons [169]. This is even clearer in a global United Nations (UN) sustainable agenda plan of action which contains 17 Sustainable Development Goals (SDGs) to stimulate action until 2030. SDG 3 is to: "Ensure healthy lives and promote well-being for all at all ages" [173] and includes targets to eliminate such epidemics as AIDS, tuberculosis, malaria, and neglected tropical diseases, among others. Despite conclusive evidence that prisoners face disproportionate levels of chronic ill health, disease, and disability [172], nothing is said in the SDGs about prisons and prisoners.

Prison design has also received remarkably little academic attention over the years [3] despite international policy efforts. The next section will present some of the latest research development in prison design, to further demonstrate the gap between the aims of prison design and the aims of improving health and well-being as a necessary element for rehabilitation and desistance.

Latest developments in prison architecture research

Academic interest in prison architecture specialisation [1] and research is now increasing, including areas such as security, fear, and violence and how the built environment affects inmates' life, their well-being, and their rehabilitation and desistance from crime. In 2016, Gleeds – a UK-based independent property and construction consultancy company – released a report called "Rehabilitation by design" [174], with the help of leading academics and experts in the field. In five chapters the book suggests ways to integrate rehabilitation and prison design, by building a culture of hope and aspiration, revising the needs for bringing the outside world inside the prison, the various purposes of UK prisons [2], and how to reduce operational and construction costs while supporting rehabilitation. Although this report is one of the first attempts to look to the Scandinavian experience and learn from it, there are few references to direct scientific evidence that could support their recommendations.

Karthaus and colleagues [175] published a report called "Well-being in prison design. A guide". The report provides some useful guidance but contains only a limited literature review on architectural factors that could improve well-being in prison design. Although it attempts to identify how to improve the well-being of inmates and staff, the design guidance shows little improvement on the exemplars shown. This research also considers only the UK context, which corresponds to just one of the four mentioned prison models.

The work of Jewkes, in particular, has focused on the need to re-think carceral design in England and abroad [16,146,176–179]. In her publication "Just design: Healthy prisons and the architecture of hope", Jewkes interviews 14 prison architects [16] who have designed prisons in England and Wales, Scotland, Ireland, Norway, Denmark, Australia, and New Zealand. Her study shows that current prison design is heavily driven by social perception about punishment, instead of promoting health and well-being. Jewkes states that architects show a lack of empathetic engagement with the users, and the strong influence of previous development in prison design is ensuring that lessons are never learned, and mistakes are perpetuated. Her findings suggest that politicians and policymakers believe that the heavily guarded prison model is the most effective way of maintaining order and the most profitable in terms of obtaining votes for future elections [16]. However, there is no mention in the publication of policymakers being interviewed. It is also argued that prisons across the world are being designed to be hard, restrictive, and ugly, with a view of the "prisoner" as the dangerous "other" [16(p16)]. Although the Norwegian prison "Halden" is presented as

an example to be followed in the promotion of inmates' well-being and desistance, the research does not explore other approaches that policymakers, prison designers, and prison administrators take concerning well-being. Neither does it consider wider prison models operating in the US and other parts of the world beyond Europe, Australia, and New Zealand. Moreover, her study aims to specifically critique carceral design in the UK, rather than to consider prison regimes and built environments more generally. Moran co-leads the development of "Carceral geography" [179,180] as a new sub-discipline of human geography which researches into prisons, and analyses the prison process of "what happens – in England and Wales – between a decision being taken that a new building is required, and the ground is broken to create it" [178(p1)]. One British study found that the position of architects, as meaning-maker and guarantors of the promotion of health and well-being through design, becomes relegated and blurred by underlying forces in the dynamic of procurement, commissioning, tendering, project management, and bureaucratisation that characterise the current relationship between the State and the desire to win the bidding by the participants of the tender. This research highlights the marginalisation of the architect within increasingly technological, Lego-like architectural solutions. It argues that the architect should have a more prominent role in balancing a humanistic and meaning-based view of design in equilibrium with the tight regulations and security perspectives [178]. This study constitutes a big step forward in the understanding of the underlying forces in the decision-making process of prison design in England and Wales. However, it is limited to the Security model and more specifically the British context, without any discussion about the health and well-being factors that should be present in the design.

Nadel and Mears [64] show that the architectural designs in the US prison systems are primarily focused on improving safety, as well as on creating some level of retribution, in a cost-efficient manner. The study, however, found relatively little theoretical or empirical evidence that these designs actually achieve their goals. Moreover, the study makes no mention of rehabilitation (or desistance) as a model or the promotion of health and well-being within prisons.

Turner and Moran [15], as part of wider research in prison architecture and the lived experience of carceral spaces, explored the many meanings and effects of water in carceral life. In their paper, they explore how water can have beneficial outcomes when is used to induce calm – such as in blue landscapes views —— or psychologically harmful consequences when is used as a punishment tool or in the presence of even the smallest malfunctions. Although the paper explores a narrow area of the carceral environment, it is an important one in terms of how the inadequate management of prison facilities result in additional and unnecessary pain on inmates.

There is also increasing interest among scholars in promoting a meaningful, articulated, and theoretically driven rationale for the carceral design, with a humanistic perspective that effectively addresses the goals of rehabilitation and desistance. However, most of this research addresses health and well-being in prison design as the aim to be followed [165,175]. These studies, however, do not pay attention to the different powers involved in the interplay of forces during the process of carceral design, how the different entities involved interact, what priorities are interacting and why this interplay of forces produces a different outcome in each prison model. Moreover, although some research attempt to make an international comparison in prison design approaches to transfer design practices [16], the existing research is heavily focused on a handful of developed countries, without recognising the different nature in terms of the prison model to which they belong, and neglecting the reality of developing countries. There is a research gap in understanding international perspectives and priorities in each of the prison models, particularly among the High-level Staff in prison services and prison designers, as the two main entities that interact during the decision-making process of prison design. No studies are investigating the commonalities and differences in the approaches between designers, from each of the three relevant prison models, towards health and well-being in prison. There is also a gap in understanding the differences in the approach of prison authorities in each of these three prison models towards the promotion of health and well-being in prison design. Moreover, there also is still a gap in understanding what considerations have to be taken into account to reposition critical prison design factors to improve health and well-being in prison projects internationally.

In summary, there seems to be no single study on prison architecture that takes into account the multiple prison model contexts and addresses the causes and circumstances of when, how, and why health and well-being factors are considered or disregarded by the entities involved in the associated design processes. These research gaps lead to the three research questions that will be addressed in the following chapters of this book, concerning the philosophical standpoint set out in Chapter 1 and theoretical typology set out in Chapter 2:

- Which design factors should be considered in the promotion of optimal health and well-being in prison design, and why?
- Which factors of design are considered important by decision-makers in the promotion of health and well-being in prison services of the Rehabilitation, the Security, and the Hybrid models, and why?
- What are the key elements necessary to add or modify in the dynamic of each of the mentioned prison models as part of a wider framework

to improve and/or prevent the decrease in the consideration of health and well-being in the design of the prison?

This chapter has explored and evaluated concepts of health and well-being as crucial elements in the goal of rehabilitation and desistance of inmates. Internationally, the efforts by WHO have been recently backed by research studies interested in developing the notion of promoting health and well-being through prison design. However, there is still little knowledge of how the carceral environment affects the health and well-being of inmates. Thus, the next chapter will identify the critical health and well-being factors that must be considered in prison design.

Notes

1   Initiatives such as the eight-month specialisation course in judicial and prison architecture, recently launched in Argentina by the Universidad Abierta Interamericana (Inter-American Open University) constitute an excellent example of possible academic involvement in the improvement of prison design. The Argentinian programme is the first of its kind in Latin America and possibly in the world. Initiatives in this line would improve the possibilities of prioritisation of health and well-being.
2   As detox, mental heath, and elderly facilities, as well as emergency department, worship and faith, and staff training places.

Chapter 6

Environmental stressors to health

Many research areas can help us to inform the design of prison architecture to promote health and well-being, such as environmental psychology, healthcare design, housing, and psychiatric hospital design research [16]. This chapter specifically draws on the psychological PERMA theory, mentioned in Chapter 1, which stands that well-being is a construct that consists of five key components: Positive emotions, Engagement, Relationships, Meaning, and Accomplishment. This chapter aims to understand how the built environment can promote the health and well-being of people in general, and which are the architectural factors that must be considered in the design of the prison to specifically promote prisoners' health and foster their positive emotions, engagement, positive relationships, meaning or purpose in life, and accomplishment.

As humans have a limited capacity for processing information, sensory or information overload results in selective attention, ignoring low-priority inputs [181]. Both total elimination or overexposure to normal environmental conditions such as noise, light, air quality, temperature, or some features of the physical environment, transform them into stressors over certain levels of acceptance, harming biological and psychological human performance [182,183]. Observance of acceptable levels have a particular impact on prison design and must be carefully considered, especially when designing habitable areas.

Some physical environmental stressors to health that are already normally present in our daily lives can be augmented as a result of the conjunction of non-natural factors in prisons, such as the involuntary stay in a place, and the reduced areas within those places [184]. The loss of identity and autonomy for prisoners over their daily routines makes that those small variations in prison environmental conditions can result either in considerable improvements or unacceptable detriments in prisoners' physical, psychological, or social well-being [16,61,185].

In the following sections, we will review each of the aforementioned environmental conditions, separating them into physical and psychological

environmental stressors, to understand under what conditions they become environmental stressors.

Physical environmental stressors

Environmental stimuli affect both moods [186] and behaviour [187]. For example, good daylight levels, good ventilation, or the provision of open space have a positive impact on mental well-being, physical health, and positive emotions [48]. However, these design features are often not well considered in prisons, where inmates are continuously exposed to sensorial physical stressors, potentially harmful for their health and well-being as well as that of staff [188] as discussed next.

Noise

The excess of noise has been strongly linked with the decrease in well-being and health [189] and can lead to psychological alterations in prisoners. This is important because prisons are 24-hour institutions where noise is an omni-present element. Its effect can be dramatically augmented due to the echoing produced by the overuse of iron bars, metallic surfaces, and the absence of noise dampening materials. Noise is one of the most critical contributors to tension or stress within prison staff. One warden in one study said:

> Noise levels can be used to mask aggressive inmate behaviour in the housing unit. When a flushing toilet drowns out calls for help, the safety of my staff is in danger, background noise forces staff and inmates to raise their voices just to be heard. Raised voices increase tension, and the ability to maintain a safe environment is undermined [190(p2)].

He also said that:

> Noise can jeopardise the delivery of programming and treatment … To get results, we need to get through to inmates, and we cannot if we must compete with amplified noise levels in normal unit operations [190(p2)].

Noise can also cause confusion and anxiety, resulting in a reduction of wayfinding ability among people with mental issues [191]. Although violence can be significantly lower in prisons with less noise [192], there is relatively little research measuring noise conditions in prisons and their psycho-logical effect on staff and inmates. Positive emotions can be affected by noise through a decrease in life satisfaction [193]. This factor is essential when designing inmates' accommodation areas because hope and optimism are

two kinds of positive emotions that have been linked to how people perceive their lives. Optimism is linked to higher life satisfaction, whereas pessimism is related to symptoms of depression [194]. Noise interference with daily activities, feelings, thoughts, sleep, or rest, can result in negative responses, such as annoyance, anger, displeasure, exhaustion, and stress–related symptoms [195]. Chronic noise exposure can increase difficulty in communicating, and disrupt cognition [196]. Moreover, excessive noise levels and the tendency to annoyance may be risk factors for psychiatric morbidity [197]. For example, approximately 9.1% of all dementias could result from untreated hearing loss [196], and hearing loss increases the risk of cognitive decline in older adults [198–201].

However, scientific recommendations about noise seem to be greatly undervalued by prison design guidance. In the US, for example, the American Jail Association (AJA) sets the maximum noise level for day rooms during daytime at 65 dbA [83], despite the US Environmental Protection Agency (USEPA) suggesting since 1974 a maximum sound pressure level in public buildings such as hospitals of 45 dbA during the day, and 35 dB at night [202]. Similarly, the American Correctional Association (ACA) sets the maximum level at 70 dbA during the day and 45 dbA at night [203]. Moreover, even recent global UN technical guidance on prison planning does not mention any dbA level of acceptance [204].

The most important non–auditory effect of noise is related to sleep quality [195] where pressure levels as low as LAmax 33 dB can induce physiological reactions [205], and a significant acute increase of cortisol, which develops into chronic increase if the noise exposure is repeated consistently [206]. Noise is especially irritating at night and particularly so when there is evidence that the perpetrator of the noise is unconcerned and cannot be controlled [207] (e.g. another prisoner or guards). Nocturnal noise exposure might be more relevant to the creation of long-term health outcomes such as cardiovascular disease than daytime noise exposure [208].

Light

Non-visual effect of light

People can live without daylight for long periods without realising the effects of lack of natural light [209]. Insufficient exposure to sunlight is associated with low positive emotions [210] but it was not until 2002 that a real biological connection between light and body functioning was found [211]. Today, we know that light signals are processed and passed from the eye retina to the pineal gland, which is responsible for secreting both the hormones melatonin

and cortisol. Melatonin, which is mainly produced during the dark hours of the 24-hour cycle, is commonly known as the sleep hormone because it regulates the sleep/awake body system, synchronising several psychobiological functions [212]. Similarly, cortisol hormones, produced mainly during the early morning, increase blood sugar levels and improve the immune system, thus preparing the body for activity and avoiding being affected by negative stress. Because of this, cortisol is called a stress hormone. Both melatonin and cortisol secretion can be easily imbalanced or even disrupted due to exposure to inadequate lighting conditions at the wrong time, which often occurs in prisons.

Artificial light: much more than just illuminance

Exposure to inadequate artificial lighting sources can also negatively affect staff and inmates' moods, levels of depression, and productivity. Research has found a relationship between behavioural responses and illuminance [213], correlated colour temperature [214], intensity, and time of exposure [215,216] and attention needs to be paid to all of these mentioned light features, not just illuminance levels. For example, lack of exposure to light results in alteration of the biological clock while exposure to blue light – usually present in LED lamps – in as little as 40 lux during night hours, can vitally imbalance melatonin and cortisol levels [217,218]. This can have a major negative impact on night shift prison staff, and on inmates when they are exposed to artificial "night light" in cells that do not allow the cell user to turn the light off [203(p160)].

However, artificial lighting can also be used to promote positive emotions. Lighting that mimics the daylight spectrum has treated Seasonal Affective Disorders (SAD) [219]. For example, bright-light treatments have led to a decrease of more than 50% in the Hamilton Rating Scale for Depression (HRSD) [220], and an increase in subjective mood and alertness [221]. Today, technological advances provide an extraordinarily wide range of light emission sources to suit the needs of different areas of prisons, but the selection has to consider the type of use of each room and area to be illuminated. For example, fluorescent lighting, which is widely used in public buildings such as schools and prisons, shown increased fatigue ratings relative to LED lamps, and with slower response times on tasks requiring spatial and verbal memory [222]. However, the overly narrow wavelength spectrum of several types of LED lights is harmful to human health. The designer's goal in terms of health and well-being must be to produce a balanced exposure to both the blueish (LED) and the reddish wavelengths (fluorescent). Blueish wavelength light must be avoided in all sleeping areas. Similarly,

reddish wavelength light should be avoided in areas that require alertness and concentration.

Light in prison design standards

Appropriate lighting is a crucial aspect of healthy prison environments. Whether it is artificial light, daylight (also called natural light), or direct sunlight (direct exposure to solar rays on the skin), it also has a direct effect on physical and mental well-being. However, prison design standards rarely consider setting accurate lighting conditions. For example, national standards in the US state that for inmate cells, the artificial light must be at least 215 lux at desk level [203] and that artificial light levels should preferably reach 238 to 753 lux at 30 inches above the floor surface [223]. In turn, European prison standards only state that "artificial light shall satisfy recognised technical standards" [224(p9)] with no specific reference to prison conditions.

Sunlight as a nutrient

In the Security model prisons, inmates spend most of the time indoors, with a usually insufficient exposure to sunlight resulting in vitamin D deficiency [225]. In the UK and the US prisons, for example, inmates show poor intake of vitamin D [226]. A more recent study in the US found deficient levels of vitamin D in 33% of the prison population, while 34% of the prison population had insufficient levels of vitamin D in their bodies. Inadequate levels of vitamin D in the human body not only affects positive emotions but can also precipitate and exacerbate osteoporosis and fractures in adults associated with increased risk of depression, autoimmune diseases, hypertension, and infectious diseases [227]. Vitamin D levels have also been found to be dependent on people's race. A higher proportion of black inmates, regardless of their incarceration level, had a lower vitamin D level compared to the non-black inmates ($p = 0.015$) [228]. These findings show that prison standards to ensure adequate access to sunlight are not being met.

Daylight and human responses

Natural light has a range of positive influences on prisoners' positive emotions and meaning with appropriate exposure being critical for inmates' health and well-being [229]. Studies on human circadian rhythm have found that the human body clock actually has a day cycle of 25 hours. This cycle is reset every time humans are exposed to the bluish part of the spectrum of light, especially sunrise [230] or sources of artificial light which also trigger this process, potentially at the wrong time, leading to a disrupted rhythm.

ACA Standards only state that "All inmate rooms/cells [must] provide access to natural light" with no minimum required size of the window. To compensate, shared dayrooms have to provide "a minimum of 12 square feet of transparent glazing with a view to the outside, plus two additional square feet of glazing per inmate whose room/cell does not contain an opening or window with a view to the outside" [203(pp41–42)]. However, inmates confined in cells for more than ten hours a day have to have access to natural light via a window or opening of at least three square feet with a view to the outside [27]. The NIC's jail design guide similarly only vaguely states "the need or desire for natural light in housing areas should be balanced against security concerns" [223(p256)], warning that providing natural light can create potential security problems such as escape; the passage of contraband; vandalism; view conflicts with persons outside the facility; or view conflicts between housing units [223(p158)]. In the European Prison Rules, natural light is only vaguely mentioned in one rule (18.2) where "the windows shall be large enough to enable the prisoners to read or work by natural light in normal conditions and shall allow the entrance of fresh air except where there is an adequate air conditioning system" [224(p9)] with no minimum standards provided. Neither ACA nor European Prison Rules mention the word sunlight specifically for individual prison cells, and the NIC's jail design guide only mentions it in association with exercise areas, although it recognises that direct exposure to sunlight is especially beneficial to both emotional and physical well-being [223]. The preferred level of exposure to light for circadian rhythm entrainment is 4,000 lux for 8 hours/day [231], but, as can be seen from above, institutional settings such as prisons may offer far less lighting than the minimum required.

Quality of air and thermal comfort

Tuberculosis (TB) in prisons is a primary concern among many European countries and the WHO [171]. The quality of indoor air is an influential variable of health and well-being through communicable diseases, and prisons that house a large number of people are high-risk places of contagion [232]. Prisoners typically have a high prevalence of TB related to the normal population, and the difference is even higher in many low-income countries [233]. For this reason, designers need to be more careful than in normal buildings when considering the physical conditions and air circulation.

Thermal comfort for well-being [234] and health [235] is particularly important in prisons, given the long time that prisoners may spend in their cells. In a controlled environment, increased temperatures can have a slight but significantly adverse effect on general Sick Building Syndrome (SBS) symptoms, such as the intensity of a headache, well-feeling, or fatigue [236]. A lack of

temperature and humidity control will contribute to the day-to-day variation in complaints of illness and discomfort [235]. Additionally, there is strong evidence that an increase in temperature correlates with suicide rates [237]. The management of temperatures in prison could also be an essential tool to improve violence control. However, there is not enough research evidencing the real thermal conditions in prison settings or suggesting the optimal temperatures for their operation [238].

Psychological environmental stressors

Psychological stressors in prisons are the result of the interaction of people with the built environment and the presence (or absence) of the natural environment. To design better prisons, psychological stressors need to be understood in terms of how they can affect the well-being and health of inmates, and why. In this section, we will review architectural factors that, under certain conditions, can become psychological stressors, such as space, privacy, quality of views, colours, quality of materials, sleep disturbance, and sense of coherence in design.

Space and well-being

Overcrowding affects many prisons in several countries [170]. Even short-term exposure to overcrowded prison environments has revealed significant negative impacts on positive emotion and psychological distress [182]. Crowding can directly affect the ability to develop positive relationships, leading to social withdrawal, reduced pro-social or cooperative behaviours, and stress-related impacts on physical and mental health [84].

Moreover, overcrowded prisons increase the risk of aggression and affect feelings of safety. To prevent this situation, inmates have to be able to maintain distance from other inmates if they want. Increasing available space in prison units has been associated with a decrease in aggressive incidents [239]. Conversely, lack of space and privacy has been linked with increased aggression, especially in men [240]. The harmful effects of overcrowded prison exposure are not eliminated immediately after changing the environment. In non-crowded prison areas, higher rates of sick calls were found among prisoners exposed previously to high-density conditions than among prisoners who had resided in lower density conditions [241].

There is no agreement on what an adequate size of a prison cell should be. It depends on the number of occupants, the level of risk, the layout of the living area, and the cultural nuances in each country. The UN recommends a minimum space of 5.4 m² for individual cells and 3.4 m²/

person in multiple cells with single beds or 2.6 m²/person when using double bunks and 2.3 m²/person with triple bunks [204]. The ACA standards in the US, however, state that single cells must have 3.25 m² (35 square feet) of "unencumbered space" defined as usable space that is not encumbered by furnishing or fixtures [203].

The European Prison Rules do not define a space standard, suggesting only that 9 to 10 m² is a desirable size for a cell for one prisoner [224]. However, the Committee of Prevention of Torture (CPT) states the minimum standard for personal living space in prison is only 4 m² in shared accommodation and 6 m² for an individual prison cell with at least 2 m of space between walls and 2.5 m between floor and ceiling of the cell [242]. This can be seen as a big step backwards in the definition of adequate humane space in prison.

Brazil is the only South American country that has prison design space standards: a minimum area of 6 m² per individual cells with a minimum radius of 2 metres [243]. For Casale and Plotnikoff [244], the minimum time an inmate must be allowed to spend out of their cell will depend on whether they are in a shared cell and if this meets the minimum per capita space requirement. However, in terms of well-being, it is argued that it is the number of people in the cell that triggers the unhappiness rather than space per person [245].

Privacy

Privacy in prisons

Privacy has been defined as a balance between the level of interpersonal contact wanted and the contact available, allowed, and achieved [246]. Lack of privacy not only negatively affects positive emotions through exposure to degrading situations and loss of dignity, it can also negatively affect human relationships and promote loss of meaning in life through dehumanisation [245]. The absence of privacy can also make concentration difficult. It creates insecurity and stress [245]. Inmates, in particular, need to feel they have control over the environment (or situation), to achieve a state of privacy. Privacy is not merely being alone, but when loneliness is desired [84]. Many prison systems exacerbate invigilance to levels that undermine the privacy and dignity of prisoners. The lack of privacy in prison during normally private acts such as using the toilet prevents inmates from having the sensation of a normal life through such dehumanisation [245]. Overcrowding is shockingly common in many prisons around the world where privacy is scarce, and the lack of space affects well-being, increasing the probabilities of poor physical health [182].

Key shared areas

The experience of being in prison for the first time is full of fear [247], and the feeling of being unsafe is even higher for those with mental disorders and recent prison-based victimisation [248]. Fear of crime, theft victimisation, and physical assault negatively influence inmates' and staff well-being [249]. Feelings of vulnerability and fear of crime have a major impact on positive emotions and indirectly on life satisfaction by decreasing people's sense of control over their lives [250].Victims of crime systematically report lower levels of well-being, and, to some extent, higher levels of fear than non-victims [251].

   Several examples show how this fear factor affects prison design. One relates to the common practice of designing open/shared toilets, which has been heavily criticised for producing a dehumanising effect [245]. Another study found that the area considered most dangerous were showers and segregation units, followed by travel to and from prison wings, with 23% of the prison population perceiving danger in these places [252].

Quality of views and contact with nature as well-being factors

Prison authorities argue that contact with natural surroundings can be used for hiding weapons or drugs. Generally, the higher the security level, the lower the contact with nature, despite considerable evidence showing how the positive effects of having contact with and enjoying views of nature may improve well-being [14]. Being surrounded by vegetation can significantly lower feelings of aggression ($p \leq 0.05$) [253,254], and the incidences of both violent behaviour and violent crimes committed by residents of relatively "greener" buildings were significantly reduced compared to the incidences in buildings with less vegetation in surrounding areas. Prisons with more green areas also show lower levels of staff sick leave [255], even in presence of high levels of violence and high levels of assaults on staff.

   Even exposure to pictures of nature has benefits on mood. Brooks et al. [256] contrasted three studies of contact with nature vs built environment in fall and winter seasons using either actual contact or pictures of nature, measuring mood (positive and negative affect), and a standardised measure of stress, anxiety, and depression. The pattern of mood scores across the three studies suggests that both actual and pictorial nature contact benefits moods, but actual nature is more effective. These findings are relevant for the improvement of existing prison buildings with little access to outside views and in places where inmates (and staff) have no access to actual views of nature.

   In another study about the effect of views of nature, conducted in prison, half the prisoners had views of the prison courtyard and the other half

could see the natural green landscape and forests surrounding the prison. The number of visits to the infirmary for legitimate health reasons was significantly less for patients with an "outward" natural view (p≤0.05) [257]. Similarly, short-term recovery from stress or mental fatigue, faster physical recovery from illness and long-term overall improvement on people's health and well-being was identified as effects of exposure to natural landscapes [258]. Gardening as contact with nature has also been used in prisons in the US [259] and the UK [260], providing food and effective and rehabilitative therapy and positively affecting all the PERMA components of well-being.

Colours and patterns

Colour is clearly important in our lives and is often taken for granted. However, contrary to what is commonly thought, the evidence supporting the influence of colour on mood is limited. One review, however, of 200 studies to determine the relative contributions of hue, saturation, and brightness [261] concludes that there are demonstrable perceptual impressions of particular colour applications that, in turn, can affect the experiences and performances of people in different settings. These may involve cognitive processing which produces positive emotions and meaning by creating a readable, understandable, and predictable physical environment. "The key lies in not looking for the magic link between colour and emotions, but in exploiting the ways that colour affects one's appreciation of objects and people involved in the setting" [261(p51)]. When looking to improve positive emotions and engagement, the combination and patterns used are more important than what colour is to be selected [262], and visual discomfort is associated with colour combinations and patterns, which are rare in nature but quite normal in an artificial environment such as in prisons [262].

Stress

Both inmates and prison staff are exposed to high levels of stress. While senior inmates are exposed to permanent psychological pressure and chronic stress [263], first-time inmates and pre-trial detainees struggle to understand prison rules and fellow inmates' codes [264], showing higher rates of suicide attempts during the early days of imprisonment [265,266]. In turn, prison workers are constantly facing chronic stress, risking a phenomenon referred to as "burnout". This is a term used to describe emotional exhaustion, detachment, and withdrawal. This burnout is a condition that is produced when stress is not mediated, or the individual cannot reduce it [267]. Burnout includes psychological symptoms as well as physiological symptoms by some [267]. If not carefully managed from the design, the built environment in prison is one

of the elements responsible for causing stress. Research suggests that some diseases are psychosomatic and that exposure to the external surroundings, as a positive distraction, has a significant impact on human health [268]. Thus, the effect of well-being on health is not solely due to illness having a detrimental impact on health, but also to well-being having a salutary impact on health [269].

Quality of materials

Prisons in developing countries, such as in Latin America, face a continuous lack of budgets, which results in poor building maintenance, poor sanitary conditions, and inhuman living conditions [270]. The permanent exposure to such a depressive environment can damage inmates' health and well-being through the perception of the poor quality and design of the living area and their surrounding built environment [48].

A malfunctioning prison infrastructure and the quality of the built environment can also negatively affect prisoners' well-being and personal relationships, for example a malfunctioning water supply system has been linked with feelings of dissatisfaction and strong reactions from the prison population [15]. Moreover, in a large-scale study in a prison setting, including 1,715 prisoners in 32 Dutch remand centres, prisoners housed in older units and units with more double cells were less positive about the officer–prisoner interactions [271]. Another study of US prison staff found that poor physical conditions in their prisons were detrimental to their well-being, resulting in more sick leave and increased levels of drinking and smoking [188].

Sleep disorders

Sleep deprivation in prison inmates can be related to aggressive behaviour, violence, and anger [272]. Disorders like insomnia, depression, and anxiety as a consequence of inadequate schemes of light exposure have been studied by several researchers [216]. Sleep problems have also been associated with a decrease in both positive emotion and a sense of purpose in life [273], as well as lower life satisfaction [274], and deterioration of physical and mental health [275]. Studies suggest that treatment of sleep disturbances reduces aggressiveness and problematic behaviour while sleep deprivation increases angriness and the outward expression of aggressive impulses in humans [276]. This is important in a prison environment because treatment of sleep disturbances can be particularly helpful where anger management is a vital issue [272]. Indeed, overall aggression was found to be predictive of sleep quantity and quality in a sample of incarcerated adolescent males [277], highlighting, in particular, a role

for hostility. For Kamphuis et al. [276], the relation between sleep problems and aggression remains unclear, most likely contributing to a loss of control over emotions, including loss of the regulation of aggressive impulses to context-appropriate behaviour. Conversely, "optimal sleepers" (those reporting an average of 6 to 8.5 hours of sleep per night) have reported higher levels of environmental mastery, personal growth, positive relations with others, and self-acceptance [278].

The sense of coherence: Normality, and universal design

Antonovsky [279] argued that there is no "health" or "illness" state in a strict sense, but rather an "ease-disease continuum" on which we all move back and forth during our lifecycle. He developed the concept of "sense of coherence" to explain why some people become ill under stress, and others stay healthy. The sense of coherence is composed of three components: first, the ability of people to understand what happens around them; second, to what extent they were able to manage the situation on their own in their social network; and third, the ability to find meaning in the situation. These three elements – comprehensibility, manageability "sense of control", and meaningfulness – have been independently or collectively related to well-being [280,281]. The concept of sense of coherence is completely aligned with PERMA as discussed next.

When inmates can understand the spatial configuration of prison layout (comprehensibility), they are more likely to increase social well-being because they feel safe. This state will improve positive relationships through social integration, social engagement, participation, and social support [282]. Feeling in control of situations (manageability) is an essential factor affecting stress levels and health conditions [279]. For example, blind spots in common areas in prisons or the inability of inmates to manage to switch on and off their lights create an unnecessary and harmful psychological effect. Finding refuge in the housing area of the prison contributes to the sense of manage-ability and, therefore, to the general well-being because it offers protection not only from the elements but also from negative social conditions [182].

A coherent design of common areas, as well as housing areas in prison, must provide the possibilities to find meaning in the daily prison situations, which is essential for improving both inmates and staff well-being. Among individuals with disabilities, control over social aspects of the housing areas was more important than control over physical aspects in predicting satis-faction [283]. Moreover, the high prevalence of mental disorders among the prison population [284] makes it even more important to consider ageing and dementia as a factor of design in prisons. A sense of coherence is a cru-cial aspect when designing for dementia. Wayfinding cues, efficient lighting,

and colour schemes are key aspects that can improve the way people with dementia use the physical environment [285].

Summary of findings

This chapter has explained which physical and psychological factors should be considered in the promotion of optimal health and well-being in prison design, and why. The architectural factors which can create healthy environments and promote well-being in prison design have been identified by reviewing a comprehensive set of evidence which includes identifying 28 environmental stressors derived from 14 environmental conditions. Tables in Appendices 1 and 2 show a condensed summary of these physical and psychological stressors respectively, identifying the findings or possible effects and the relevant PERMA components affected.

Part III

Case studies from the Hybrid, the Security, and the Rehabilitation models

Introduction to Part III

Part I of this book introduced the theoretical bases of well-being and pun-ishment, and the historical development of prison models. Part II explored the state of the art in health and well-being in prison design, evidencing the critical design factors that must be considered. Drawing on this knowledge and understanding, Part III presents the findings of a case study research that investigated how health and well-being are addressed by decision-makers in the design of prisons in the Hybrid, the Security, and the Rehabilitation prison models, and the perception of International Advisors from inde-pendent international bodies regarding this matter.

The case study covers four countries: Norway and Finland as representatives of the Rehabilitation model, Chile as representative of the Hybrid model, and the US as representative of the Security model. Two professional groups were considered representing two different offices from the United Nations and covering all four prison models: prison Policy Advisors from the United Nations Office on Drugs and Crime (UNODC), and Prison Health Advisors, as professionals working for, or as external advisors of, the WHO, representing experts working at the highest level internationally.

Twenty-eight people were interviewed using semi-structured interviews which lasted 45 minutes on average (see Figure III.1). The list of participants consisted of prison designers from governmental organisations and inde-pendent architectural offices; High-level Staff, as key technical, political, and/or economic decision-makers from prison services or governmental institutions directly related to prison project decisions; and International Advisors from different offices of the UN and the WHO.

Interviews aimed to reveal what are the factors regarding health and well-being that are considered more important by decision-makers. Based on the literature review and a sample of interview transcriptions, a list of 60 factors was identified and counted in terms of their frequency of appearance in the texts. Additionally, using a tool designed by the author, each code was weighted, in terms of the level of importance attached by the interviewee.

	DESIGNERS		PRISON AUTHORITIES	INTERNATIONAL ADVISORS	
	Governmental (GD)	Independent (ID)	High-level Staff (HLS)	Prison Policy Advisors (PPA)	Prison Health Advisors (PHA)
Rehabilitation Model	3GD from Norway	4 ID from Norway	3 HLS from Norway and Finland		
Security Model		3 ID from USA (various locations)	3 HLS from USA (KY)		
Hybrid Model	3 GD from Chile		3 HLS from Chile		
International Advisors				2 PP from UN (various offices)	4 PHA from WHO

Figure III.1 Research sample by prison model and professional group

However, the outcomes obtained do not offer a sufficient explanation to inform the decision-making process of prison design. The second round of analysis reveals causal properties, by examining the relationships between identified themes and interpreting the underlying meaning of the text. Nevertheless, the second layer of analysis was not performed on International Advisors because, despite their influential position, they are generally not part of the decision-making process of prison design.

Using this analysis, the following four chapters reveal how prison designers and prison authorities address health and well-being factors in the design of prisons in three out of four prison models: the Security (US), the Rehabilitation (Norway and Finland), and the Hybrid (Chile), as different paradigms, while leaving aside the Repressive prison model due to its incompatible nature with the aims of this book. The international cross-prison-model group of experts in prison policies from the UN is different from the rest of the cases. This is because although International Advisors from the UN have no direct intervention during the design of new prisons, they play a vital role in monitoring international covenants which in theory control prison design.

Chapter 7

International Advisors

This chapter examines the views of two international professional groups, Prison Policy Advisors and Prison Health Advisors, to provide an independent view about both health and well-being in prison design, and the reality in the field. The analysis will be drawn on in the following three chapters to understand how and why these factors are or are not considered by key decision-makers in the Hybrid, Security, and Rehabilitation models. The views from both Prison Policy Advisors and Prison Health Advisors are compared to identify which variables are perceived to be most important in this group concerning the health and well-being of inmates during the process of prison design. The level of importance of the variables is also presented. Emerging themes are identified to synthesise the concerns of all the International Advisors.

Prison Policy Advisors

The UN globally monitors the compliance of international agreements on human rights, the minimum rules of treatment of prisoners, (men, women or juvenile), and the prevention of torture. In this regard, the UN Prison Policy Advisors has a global mandate to assist countries in building and reforming their prison systems, in compliance with human rights principles [286]. This task is more urgent for Repressive and Hybrid prisons affected by numerous shortcomings, jeopardising inmates' safety and security. The Pareto analysis showing which variables the UN Policy Advisors consider more important is shown in Figure 7.1.

One primary case – *non-financial obstacles* – is the most important variable with a level more than double that of the second-highest variable. Additionally, the next five variables account for 32% of the accumulated importance: *decision-making process* (7.5%), *financial obstacles* (6.4%), *cultural and social context* (6.4%), *indoor air quality* (6.1%), and *space* (5.6%). Each of these important variables is now defined and considered in more detail.

Importance of design considerations variables among
Prison Policy Advisors - International Level
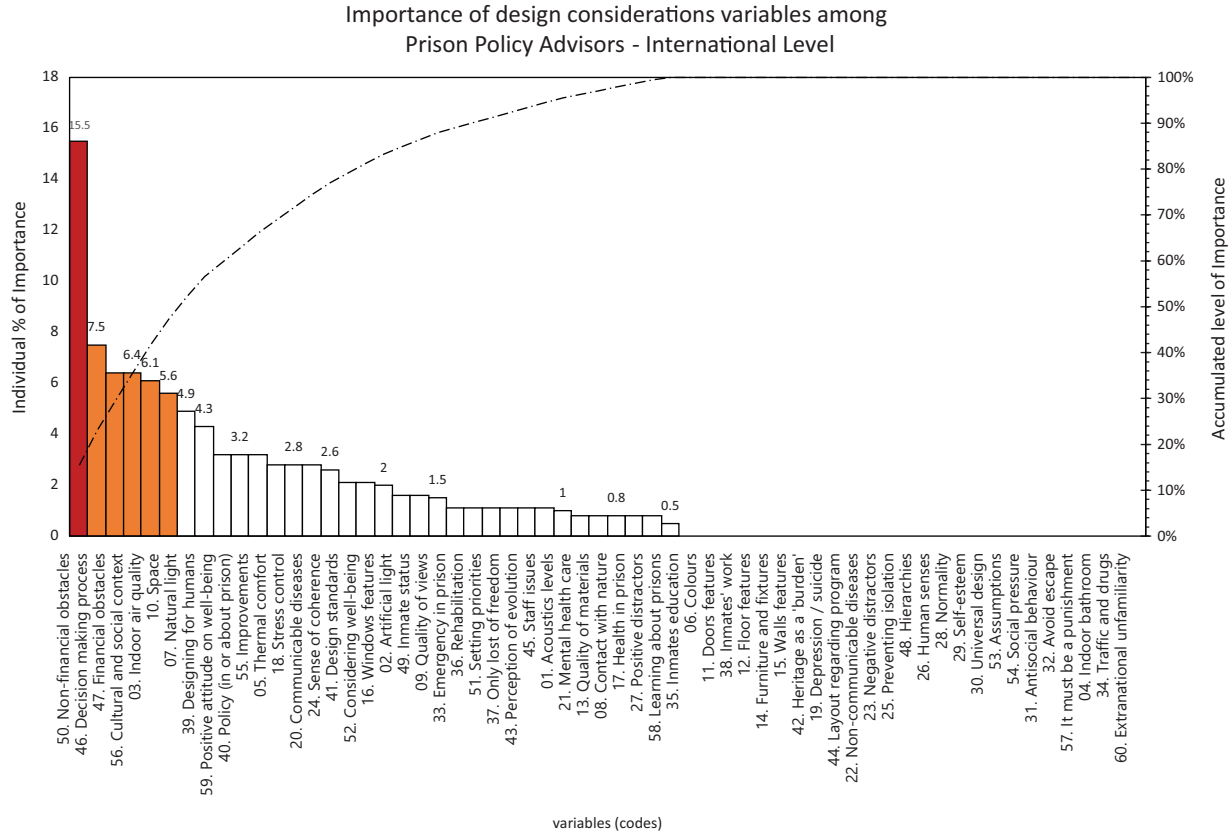
Figure 7.1 Level of importance that UN prison policy advisers attach to each variable

Non-financial obstacles are referred to as any barrier (other than financial) that is, or could be, preventing the consideration of health and/or well-being in prison design. A main concern of the advisors is the eagerness of authorities to punish and reduce crime by deterrence with justice by retribution. In these cases, the built environment is used as a tool to inflict pain and to punish prison inmates:

> In many countries it is the sense that [the objective of] the prison is not [about] the privation of liberty, it is [about] the punishment. The punishment there is the privation of liberty under the worst possible conditions.
>
> (PPA–01)

There is a worrying contradiction perceived in many prison services between the declared purposes of rehabilitation or social reintegration and how they actually treat inmates:

> Despite the factors, maybe the legislation or the regulations and the constitution says that the prison- the privation of liberty- has the purpose of social integration, the reality on the ground is that there is no social reintegration. They are here kept, secure, and they actually have to pay for their mistakes. I think it requires a change in mentality.
>
> (PPA–01)

These incongruences, which advisors consider to be present in many Latin American countries, must be understood as events that occur as the result of non-visible processes that produce and reproduce the ordering of events and social institutions [58]. The prison services' perceived contradiction between purposes and actions also shows that rule number one of the United Nations Standard Minimum Rules for the Treatment of Prisoners – "All prisoners shall be treated with the respect due to their inherent dignity and value as human beings" [1(p8)] – is in many cases not happening and requires explanation.

One advisor explains the apathy of prison authorities and politicians concerning the prisoners' physical and mental conditions in terms of their disregard for well-being:

> So, there is no sympathy for what happens with the prisoners. And that happens to me, like a couple of months ago. I made a presentation of the Nelson Mandela Rules, and one of the participants said: "*I don't know why we are wasting our time worrying about the well-being of prisoners*"
>
> (PPA–01)

There is also a concern about the overuse of imprisonment where it is seen as the only option, even for minor offences, disregarding the criminogenic effects that such imprisonment can have on people:

> Maybe they will send you for two years, maybe you corrupt your studies, you ruined your life, you contract some nasty disease in prison, you may be influenced by extremely dangerous prisoners and you come up with a social gap. But they think: "we don't care. You have to pay". This is so self-defeating, and I still haven't found the correct arguments that can convince people that this has no sense.
>
> (PPA-01)

Overuse of imprisonment places additional pressure on the prison services when they have no resources to respond to an increase in the prison population.

Another critical obstacle is the perceived lack of self-reflection by the authorities and designers on what is the best solution in terms of how their design decisions affect people that live and work inside those prisons. Designing and building prisons is seen as a mechanical process where old solutions are thoughtless and uncritically repeated:

> In many countries I think they have a kind of standard designs, and they are there, and people don't ask themselves very much [about the validity of the standards], but in many questions, they probably think it is just a matter of calculating how much concrete you need and how much steel or bars, and so that is how prisons are built.
>
> (PPA-01)

Prison advisors interviewed felt powerless to enforce norms on countries. The UN has sometimes provided design and supervision for the construction of prisons for countries in crisis. However, this also depends on the perspective of these countries towards punishment. The UN perspectives on punishment and respect for inmates' human rights may be considered during the design and construction, but their consideration during the prison operation is not guaranteed, which presents another obstacle:

> in some situations, we've actually been told [by the prison authorities] to do certain things with parts of [the architectural] solutions that we've put forward. We've objected adversely on the basis that we're UN, and we cannot be seen to be condoning certain types of solutions. And pretty much they're backed off each time because they don't want to be seen … to not comply with what the UN wants. But probably now

those facilities, that we built, are probably being operated in entirely a different way to the way we had conceived them. But that's not within our control.

(PPA–02)

Where prison designers are hired by the State, the problem is that the selected designer is often the cheapest one – due to limited economic resources available, or the underestimation of the complexities of prison design. This results in inadequate designs because these designers have little experience in prison settings and a poor understanding of prison issues:

> economic resources are so limited that if they have to … build the prison; they just take the first guy engineer or architect that is available. Because they have such a small pool of professionals in the country. Maybe designers are not even interested in designing a prison rather than a five-star hotel. So, that's also the issue of attracting. Prison services hire people that are not really the top of the band. They hire just those who are available to put together a prison project. I've seen young architects who were put in one of his first jobs "ok, let's build the prison". I think it is unfair because you also need professional maturity. I don't mean that young people cannot do it, but you also need a lot of professional maturities to understand all the various aspects and issues. Again, it's not purely technical.
>
> (PPA–01)

The lack of economic resources represents a key *financial obstacle* to the development of adequate prison designs capable of promoting health and well-being. However, the lack of experienced professionals in prison design also represents a huge non–financial obstacle.

In other cases, when local authorities look for experienced designers abroad or receive donated projects from developed countries, the designers do not consider the economic and cultural reality of the country in which the prison will be placed. The view from one advisor is that this can be dangerous and can create new problems:

> Sometimes there is over-relying on modern models or the donors and … where they say "I will try, I will give you a project for your prison", and the project is done thousands and thousands of kilometres away [by] people who don't have a clue …. I'm very, very careful with these sort of "presents" from the outside, from other countries, from other donors, because they can be a bit dangerous from the sense they don't solve the problems they add new problems.
>
> (PPA–01)

The great importance placed on *financial obstacles* also illustrates the difficulties regarding economic and cultural differences. The cultural expectations of how many people a cell can contain, and the elements and features that have to be present, can vary widely. The advisors recognise the existence of inhumane practices, in many Latin American prisons, for example, where hundreds of people are confined in just one cell, in clear disregard for prisoners' health and well-being:

the difficulty is understanding what a cell is. You know, and if you are dealing in a situation in some places in Latin America where you might have 300 people in effectively one room, just on quadruple level bunk beds, is that an acceptable cell? I would say not. Is that a level of risk there that's significant? Yes, enormous risk. Does it lead to riots? Loss of control? Most probably.

(PPA-02)

On the other hand, the advisors acknowledge that some countries see the individual cell as a form of torture, arguing that their citizens need to socialise and the isolation can negatively affect their well-being:

But for instance in Kosovo where the rooms were intended to be single-person occupant rooms, they insisted that the Kosovo people are sociable to such an extent that that would be considered a form of torture not to have someone to talk to.

(PPA-02)

Although the need for socialising in the cell during the lock-in hours can be argued as a cultural matter, the author's experience in developing countries where the economic resources are insufficient to hire mental healthcare professionals suggests that socialising can also be used by prison authorities as an effective measure to cope with inmates' *depression* and suicide attempts, while indirectly (but not as a desired objective), improving their well-being.

The last two variables among the most important ones (*indoor air quality* and *space*) highlight the detrimental conditions of the physical environment in those prisons. Advisors warn that the poor *indoor air quality*, the lack of *space* and *natural light* in cells can be overwhelming:

Indoor air quality:

Terrible. A terrible sense of smell. And I don't know; probably people get used to that, I hope for them, because when you visit a prison, sometimes is really overpowering the smell that you can feel into a cell or even walking into it.

(PPA-01)

Space:

> And then always concerning the mental health and the conditions, also
> how people have to sleep … it's horrible. People overcrowding is per
> se a form of torture. You see people sleeping on the floor. In 50 square
> meters, you have 60/70 people one on top of the other; I found it abso-
> lutely unacceptable. As a human being, I'm shocked every time.
>
> (PPA–01)

These findings underline the urgent need for designing prisons following
the international minimum rules for the treatment of prisoners, to fulfil basic
human needs, which states:

> All accommodation provided for the use of prisoners and in particular
> all sleeping accommodation shall meet all requirements of health, due
> regard being paid to climatic conditions and particularly to cubic con-
> tent of air, minimum floor space, lighting, heating and ventilation [1(p10)].

There is a clear level of frustration among advisors when talking about the
Repressive and Hybrid prison models. They want prison authorities to
understand that they are treating human beings, and should try to make
them into better citizens and that nobody wants to live in these conditions
of overcrowding:

> I don't know how you can expect to make these people better citi-
> zens by treating them like that. And I'm also not going to say: "ah, the
> conditions outside are also not better" because I think nobody would
> live in a house in those conditions. You would add-on a little piece of
> something and expand. You will not stay there like 70 people one on top
> of the other. They are not even your family. These are people you don't
> even know. So, is really, I find it unbelievable, to be honest.
>
> (PPA–01)

The data from the Advisors group (Gini coefficient of 0.70) shows a high
level of concentration in the distribution of importance among the 60
variables, and the degree of urgency that advisors place on the first few
discussed above.

At the opposite end, 26 variables are rated at zero with no interviewee
mentioning them. This highlights the difficult operational theatres in which
advisors have to operate, with an overwhelming number of urgent problems
to deal with daily, demanding that they set out clear priorities and concen-
trate their understanding and efforts on these above the other variables.

Prison Health Advisors

Again for the group of International Prison Health Advisors, just six variables are the most important ones, with a clear graphic separation from the rest of the variables (see Figure 7.2).

Non-financial obstacles again lead the group with 8.0% of importance, followed by *communicable diseases* (6.0%), *indoor air quality* (5.8%), *policy in or about prison* (5.3%), *natural light* (4.5%), and *space* (4.4%). A Gini coefficient of 0.50 shows a moderate level of inequality of the distribution of import‐ance among the 60 variables. Prison Health Advisors are professionals with a physical and mental health background, who work for, or are related to, the WHO in the promotion of health in prisons internationally. Therefore, the six most important variables mentioned above show their professional concerns for promoting healthy environments as a preventive measure to reduce as much as possible *communicable diseases* such as HIV, TB, or hepatitis.

Under *non-financial obstacles*, the concern is mainly about the physical conditions of many older prison buildings, which represent the majority of the prison facilities in the countries that these advisors work in, and also about the competing forces and counter-forces in the assignation of prior‐ities between staff needs, inmates' needs, rules, and health and human rights:

> I believe that many people are not putting health in prison as a priority. And let's not forget that the managers, stakeholders, and the leaders in this specific area are not coming from a medical background. This is true. So, I'm covering health, I talk about health, and I put health very high, but you might not have the same interest in putting health at the same level. I put it first, for example. You might put it second or third. So, this is what I mean by competing challenges and priorities.
>
> (PHA-04)

For Health Advisors, prisons are usually old and badly maintained buildings, full of health risks. They are neglected by the community and also, many times, by authorities who justify themselves by saying that inmates must not have better conditions than the general population. However, Health Advisors emphatically dismiss this by saying:

> Politicians should be brave enough to argue that prison should have good conditions. They are trying to make good places to live for their constituencies, but they should not [be allowed to] make the prison conditions worst because they don't have been able to create a good society outside.
>
> (PHA-02)
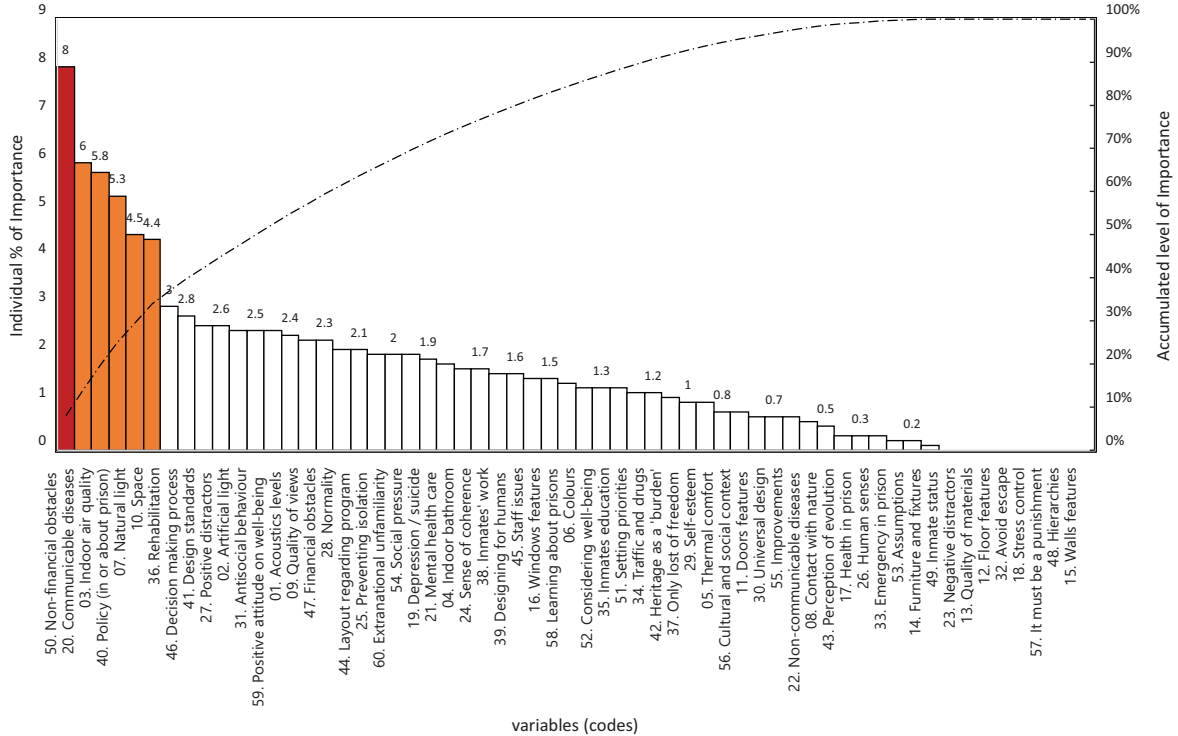
Figure 7.2 Level of importance that Prison Health Advisors from the WHO and related entities attach to each variable

The lack of ventilation, as well as the low amount of *space* and the insufficient *natural light* usually found in Hybrid prisons, violates rule number 13 of the international rules for the treatment of prisoners: "All accommodation provided for the use of prisoners and in particular all sleeping accommodation shall meet all requirements of health, due regard being paid to climatic conditions and particularly to cubic content of air, minimum floor space, lighting, heating and ventilation" [Rule 13, 1(p10)].

Indoor air quality, *space* and *natural light* are also considered the main factors in promoting the spread of *communicable diseases* in prisons. The international efforts of the WHO in controlling *communicable diseases* in prison settings is a response to the disproportionate levels of TB, HIV, and hepatitis presented in prison settings in comparison to the normal population in all the prison models [232,287,288]. Hence, Health Advisors acknowledge the importance of making prisons abide by the same strict norms on environmental conditions for infection control as any other healthcare facility:

> Infection control is very important, which also apply to the health facilities in the community. We talked about infection control. We have to make sure that all the health intervention that is happening in prisons is following the standard rules for infection control that is happening outside the prisons. It doesn't mean that if it's a prison, it should be different. It should be exactly strictly the same.
>
> (PHA-04)

The importance of *policy* as a variable shows that Health Advisors want governments – and their prison services – to comply with the international agreements about providing inmates with the same quality of healthcare and opportunities for access to health as the normal population:

> The issue is that healthcare has to be provided in the prison because you might not have the choice. That is an important thing. Do you understand my point? Is it clear? Because if you are in prison, you don't have the choice … So, the responsibility of health lies with the State.
>
> (PHA-04)

However, there is also a recognition of insufficient regulation for the design of prisons to promote health and well-being. Health Advisors mentioned that it is only possible to find general guidelines such as the United Nations Standard Minimum Rules for the Treatment of Prisoners (Nelson Mandela Rules), but there is no specific document on health standards in prison design:

If you look into the European prisons' rules and so on, it's not a major role it plays … and the UNODC now, you know, the Mandela Rules and so on, it's very little. You can also, of course, find it between the lines but not as a separate thing so.

(PHA–02)

Nine variables were not mentioned by any of the interviewees in this group. This is considerably less than the previous group, suggesting that Health Advisors consider a broader range of variables due to their medical back-ground and their training in looking for the underlying causes of diseases comprehensively. Additionally, three out of four of the Health Advisors interviewed worked in a European context, and only one of them had to face the reality of countries with Hybrid or Repressive prison models. This difference in the operational theatres for Health Advisors compared with Policy Advisors explains the low level of importance placed in *financial obstacles* (2.3%) and the broader spread of importance among the variables (Gini coefficient = 0.50) for advisors in Europe. Indeed, the higher GDP per capita and the lower inequality of income distribution of European countries in comparison to countries from Asia, the Middle East, Africa, or Latin America, puts European prisons in a better position for policy imple-mentation and budget allocation, tempering and broadening their Health Advisors perspective when considering how to improve inmates' health and well-being.

The high level of importance attached to *natural light* (4.5%) and *space* (4.4%), in addition to the moderately high scores for variables such as *posi-tive distractors* (2.6%), *acoustic levels* (2.4%), or *quality of views* (2.3%), contrasts with the silence of Health Advisors on variables related with mental well-being such as *stress-control* and *negative distractors*. This apparent contradiction suggests that the Health Advisors' views on carceral conditions are more in line with Positive Psychology and the promotion of favourable conditions for health rather than focusing only on eliminating illness. Again, this can be understood as a result of the medical interviewees' background. The long health research tradition of focusing on the interaction between both the physical and social environment with health outcomes, in addition to the recent emphasis placed on Evidence-Based Design in healthcare, could explain why Health Advisors' views align with Positive Psychology, and, therefore, the PERMA theory of well-being.

Comparative analysis between both groups

The scatter plot (see Figure 7.3) compares each variable from these two profes-sional groups and identifies three variables with a high level of importance for
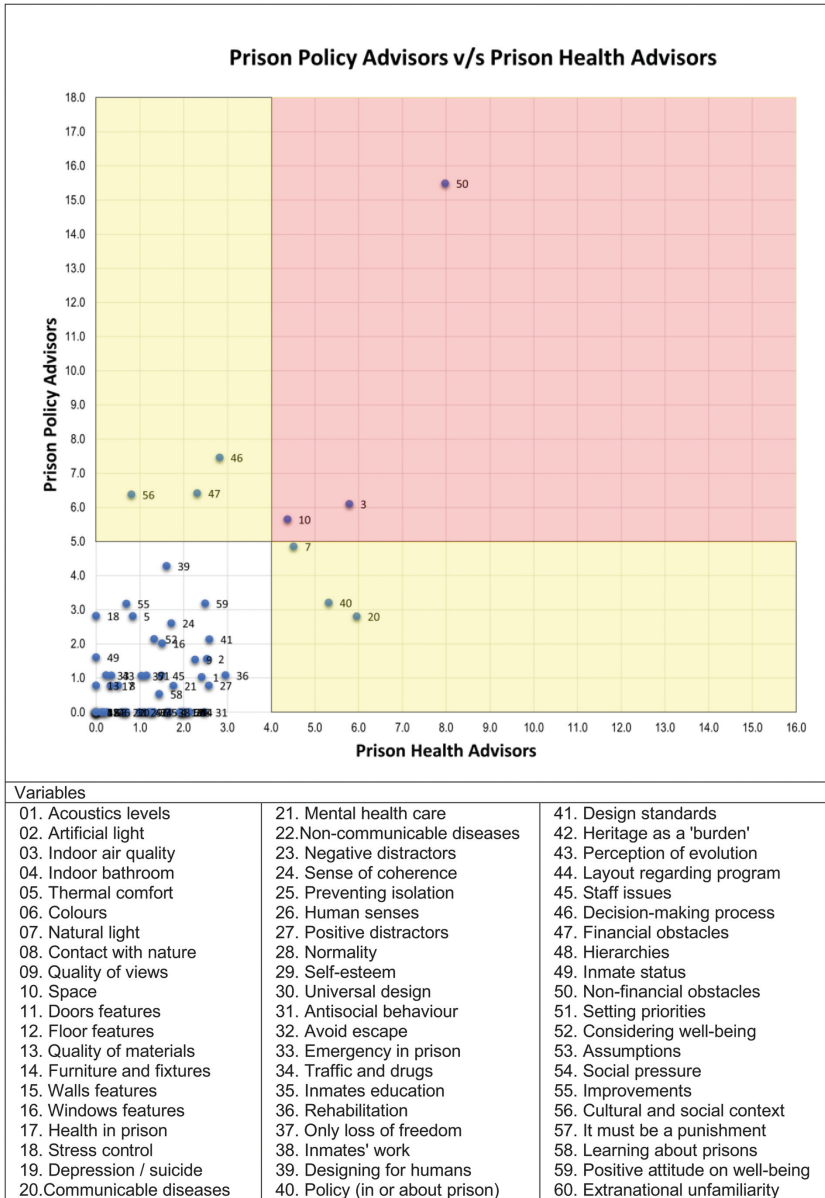
Figure 7.3 Scatter plot comparing the importance attached to variables by each group of International Advisors

The scatter plot is titled "Prison Policy Advisors v/s Prison Health Advisors" with the y-axis labelled "Prison Policy Advisors" and the x-axis labelled "Prison Health Advisors".

Variables

01. Acoustics levels	21. Mental health care	41. Design standards
02. Artificial light	22.Non-communicable diseases	42. Heritage as a 'burden'
03. Indoor air quality	23. Negative distractors	43. Perception of evolution
04. Indoor bathroom	24. Sense of coherence	44. Layout regarding program
05. Thermal comfort	25. Preventing isolation	45. Staff issues
06. Colours	26. Human senses	46. Decision-making process
07. Natural light	27. Positive distractors	47. Financial obstacles
08. Contact with nature	28. Normality	48. Hierarchies
09. Quality of views	29. Self-esteem	49. Inmate status
10. Space	30. Universal design	50. Non-financial obstacles
11. Doors features	31. Antisocial behaviour	51. Setting priorities
12. Floor features	32. Avoid escape	52. Considering well-being
13. Quality of materials	33. Emergency in prison	53. Assumptions
14. Furniture and fixtures	34. Traffic and drugs	54. Social pressure
15. Walls features	35. Inmates education	55. Improvements
16. Windows features	36. Rehabilitation	56. Cultural and social context
17. Health in prison	37. Only loss of freedom	57. It must be a punishment
18. Stress control	38. Inmates' work	58. Learning about prisons
19. Depression / suicide	39. Designing for humans	59. Positive attitude on well-being
20.Communicable diseases	40. Policy (in or about prison)	60. Extranational unfamiliarity

both Prison Policy Advisors and Prison Health Advisors: *non-financial obstacles* (#50), *indoor air quality* (#3), and *space* (#10), emphasising environmental factors. *Non-financial obstacles* are undoubtedly still the most critical variable for both Policy Advisors and Health Advisors. However, the Policy Advisors place a much greater emphasis on the importance of *non-financial obstacles* compared to the group of Health Advisors. This difference could do with the different operational theatres in which Policy Advisors and Health Advisors work and their different professional perspectives. The former group is focused on Repressive and Hybrid prison models, trying to influence authorities in countries where social, cultural, and political barriers have a more significant impact on prison administration, while the latter is more in touch with Security and Rehabilitation prison models within Europe.

Although both groups place high importance on *indoor air quality* and *space*, the underlying causes are different. On the one hand, the importance that Policy Advisors place on these variables highlights the scarcity of these resources and the urgency to *meet these basic needs* in the prisons in which they work, where the physical conditions and prison practices do not respect basic human needs for inmates, violating the international agreements about minimum rules for the treatment of prisoners. On the other hand, Health Advisors highlight the minimum requirements that must be present to *prevent the emergence and proliferation of diseases* affecting inmates' and staff well-being. This difference in focus on the same variables explains, at least in part, the group differences in priorities.

The considerable difference in the number of variables unmentioned by each group again evidences their different professional approach to addressing the health and well-being of inmates due to their professional background and the differences in the operational theatres in which each group works.

Many western European prisons operate in old buildings, where there seems to be a real concern about human rights and minimum conditions of hygiene and health – which does not always occur in the Hybrid prison model. Indeed, the degree of urgency attached by Policy Advisors to physical conditions of habitability in the Repressive and Hybrid prison models contrasts with the low level of urgency placed on any specific variable by Health Advisors.

There are also some contradictions when variables are compared between the two advisor groups. *Communicable diseases*, *natural light*, and *policy* are considered highly important among Health Advisors. However, these variables only show a moderate level of importance for Policy Advisors, suggesting different motivations regarding their different professional areas of health and *policy*, respectively. While Policy Advisors have to deal directly with authorities from the prison services and ministries of justice as the main responsible institutions of the administration of punishment, the work

of Health Advisors is directed to the ministries of health, having an indirect impact on the prison administrators' priorities.

Similarly, there are three variables: *decision-making process*, *financial obstacles*, and *cultural and social* context, which are highly important for Policy Advisors but show moderate to low levels of importance among Health Advisors. This shows that Policy Advisors place their efforts on producing changes directly in the field, dealing with *financial obstacles* and cultural nuances, in comparison with the Health Advisors' work, who are focused on influencing the implementation of health policies in prison settings. Indeed, the *cultural and social* context shows the greatest contradiction in terms of importance, being scored 6.4% among Policy Advisors while Health Advisors only attached 0.8% of importance on it.

For Health Advisors, it appears more important to think about the general health policies of prevention of diseases, to help make health authorities understand the economic benefit of treating prison inmates during their stay in prison:

> that is also why we try to put some more focus on it, to get the ministry of health interested in this topic because it's actually cost-effective if you do something. And they should take care of this because it's so much more expensive to have them going out around, sick, outside to prison. So, when you have them, do as much as you can.
>
> (PHA-I 02)

From these advisors, having such a select unhealthy population in one place provides a unique opportunity, as these prisoners usually have no contact with the healthcare system. Their period in prison should be used to treat them as an effective strategy for improving the health of the greater community:

> Many of them do not consult the health care system … but when they come up to the prison, we have a chance to get them in touch, to treat them, to cure them, and to try also to secure that they get out of their dependencies. So, we use this time in prison as much as you can to improve the health conditions and [they] can go into a normal life in society after release.
>
> (PHA-I 02)

However, the diminished level of importance placed by Health Advisors on the *decision-making process*, *financial obstacles*, and *cultural and social* context, reveals a certain level of resignation toward the conditions they have to work in, as well as their limited scope to influence organisational decisions:

So, you have entered a prison which is about 130 years old. You have seen this good old Prussian architecture. It's a historic building; there are small cells in. Or are you planning a new prison? So, the only way you can still use it [this old prison], is when you come to the point that the cells are too small, [you have to] take a wall out, then make one cell out of two. [In old prisons there are] several problems, which is so difficult. It is not just about standards. You can think about optimizing, but for different conditions, you don't want to get optimal from my point of view.

(PHA–I–03)

Key emerging themes and Meta-themes

Twelve key themes emerged from the International Advisors discussion concerning health, well-being, and prison design. These themes were grouped into five Meta–themes – *Need for the specialisation of designers, Inadequate built environment, Low level of external influence, Operational incoherence, and Need for the education of authorities and society* (see Table 7.1).

The first Meta–theme – *Need for specialisation of designers* – reveals the main global issue for prison design according to the International Advisors. The small market that prison design represents in comparison with other areas and the usually secretive world of procedures and security measures can turn the design of prisons into an unattractive professional niche for designers. As a result, prison design is heavily influenced by security perspectives. This could be preventing the inclusion of experienced designers and is a clear obstacle to introducing broader ideas of how to provide safety, promoting

Table 7.1 Key themes and Meta-themes emerging from International Advisors' interviews

Emerging theme	Meta-theme
• Need for professional maturity of designers • Need for a compendium of design standards • Need for understanding the concept of cell • Need for consideration of cultural differences	*Need for the specialisation of designers*
• Need for eradicating deplorable carceral conditions • Need for adequate infection control	*Inadequate built environments*
• Lack of power of the UN • Seeking equal access to health	*Low level of external influence*
• Prison services' incongruences • Overuse of imprisonment	*Operational incoherence*
• Make designers aware of the consequences • Authorities and society have to be educated	*Need for education of authorities and society*

curiosity, excitement, or calm, without jeopardising the security. There is also a need for new ideas of how to create positive emotions and adequate *spaces* that could promote engagement, allowing prison design to improve the quality of the relationships and bring meaning to inmates' life while providing skills for the accomplishment of their personal goals – in other words, using design to improve the well-being of the prison users. This lack of expertise is aggravated by the lack of clear national design norms that promote and advocate for the health and well-being of both inmates and prison staff.

The second Meta-theme – *Inadequate built environment* – exposes the harsh reality of the physical conditions in many prison services globally. These conditions are directly damaging inmates' and staff health, as well as negatively affecting their well-being. The third Meta-theme – *Level of external influence* – reveals the frustration among the UN officers in their struggle to get the State members to comply with international covenants concerning health and well-being, which is the primary objective of both Prison Policy Advisors and Prison Health Advisors [166]. The influence of International Advisors is low, and the continuity of the results is fragile because they depend on the country's cooperation with the UN's mechanisms and the country's willingness to follow their recommendations, to maintain the international reputation of the UN. The fourth Meta-theme – *Operational incoherence* – illuminates how some prison services routinely override any guidance from advisors based on an internal belief that imprisonment in itself will produce positive outcomes, and that, in many cases, words as organisational aims do not correspond to deeds. Accordingly, the last Meta-theme – *Need for education of authorities and society* – synthesises what International Advisors see as the main obstacles that are preventing the evolution to a more human-centred approach.

Chapter 8

The Hybrid prison model

This chapter examines the views of two professional groups – prison authorities (High-level Staff) and prison designers – in Chile, as a country representative of the Hybrid prison model. It reveals what is considered important regarding health and well-being by each professional group individually, and then compare and interrogate their approaches against the data, to offer a more accurate explanation of what the reality looks like in the Chilean prison system in particular and in the Hybrid prison model in general. To better understand the situation that interviewees have to face, the chapter starts with a brief review of the current prison context in which Chilean prison staff and designers work. As explained above in the introduction to this part, the following sub-sections show how much importance each professional group places on each of the 60 identified topics, discussing and comparing in detail the data from High-level Staff and Designers, respectively. The last two sections of this chapter provide an overview of the main themes identified, revealing the main concerns, opinions, and attitudes of interviewees.

Chilean prison design in the context

The total prison population in Chile is roughly 50,000 inmates. The Chilean prison service – Gendarmería de Chile – manages 105 prison centres distributed across the 4,400-km length of the country, and is divided into two main categories: Open and Closed prison centres. Twenty-one of the total 105 centres are open centres in which inmates are trained and work in enclosures without perimeter security. They are usually farms, which inmates are allowed to leave during the weekends. However, there are no more than 700 inmates in total living in these centres (1.4% of the total prison population). The vast majority of people in prison are distributed throughout 84 closed prison centres, where inmates are confined in areas generally surrounded by a double-walled perimeter security corridor, and

they are not allowed to leave their areas without custody. There are 79 male-only closed prisons and five female-only closed prisons. Despite the large number of prison facilities, there is a high level of occupancy densification with only 15 prisons containing as much as 70% of the total prison population of the country. The largest and oldest prison in Chile is "Santiago Sur", which was built in 1843 with an official capacity of 2,384 inmates, but usually working at double its capacity. Most of the Chilean prison facilities were built between 1960 and 1989, and the seven newest prisons were procured through PPP between 2000 and 2010.

Analysis

The first part of this section will analyse and discuss findings from interviews of the prison service's authorities of the Chilean prison service, identified as "High-level Staff", followed by the Designers, to finally compare the priorities and views of both professional groups.

The level of importance that High-level Staff interviewed in Chile attached to each topic is shown in Figure 8.1 below. In their responses, there is a high level of concentration in eight out of 60 variables. *Non-financial obstacles* rank highest, rated at 8.4%, followed by *financial obstacles* (5.8%), *decision-making process* (4.9%), *sense of coherence* (4.9%), *preventing isolation* (4.8%), *design standards* (4.7%), *policy* (4.7%), and *space* (4.2%).

In turn, prison designers interviewed in Chile attached more importance to only seven out of 60 topics (see Figure 8.2). *Non-financial obstacles* (13.7%) is once again the primary variable for Designers, ranked twice as high as the second-highest variable *decision-making process* (6.1%). *Natural light* (6.1%), *financial obstacles* (5.8%), *design standards* (5.8%), *indoor air quality* (5.2%), and *colours* (3.9%) constitute the following group of the most important variables, accumulating 46.5% of the total importance. Here, the concentration of importance among prison designers is even higher than for High-level Staff.

Both High-level Staff and designers show a similarly high concentration of importance in a few variables, suggesting the existence of a shared feeling of urgency in addressing critical problems. Indeed, the scatter plot in Figure 8.3 shows that there is an agreement among both groups concerning four of the most important variables: *non-financial obstacles*, *financial obstacles*, *decision-making process*, and *design standards*. There is also a shared sense of urgency to solve *non-financial obstacles* as a primary variable. This urgency, however, has a different focus in each group. For staff, it is about the unbalanced supremacy of the security perspectives over the rehabilitation of people in prison, while for designers, it is about the lack of technical and political guidelines. Although they seem to be different foci, the former issue of security is actually influencing the latter issue of guidelines.
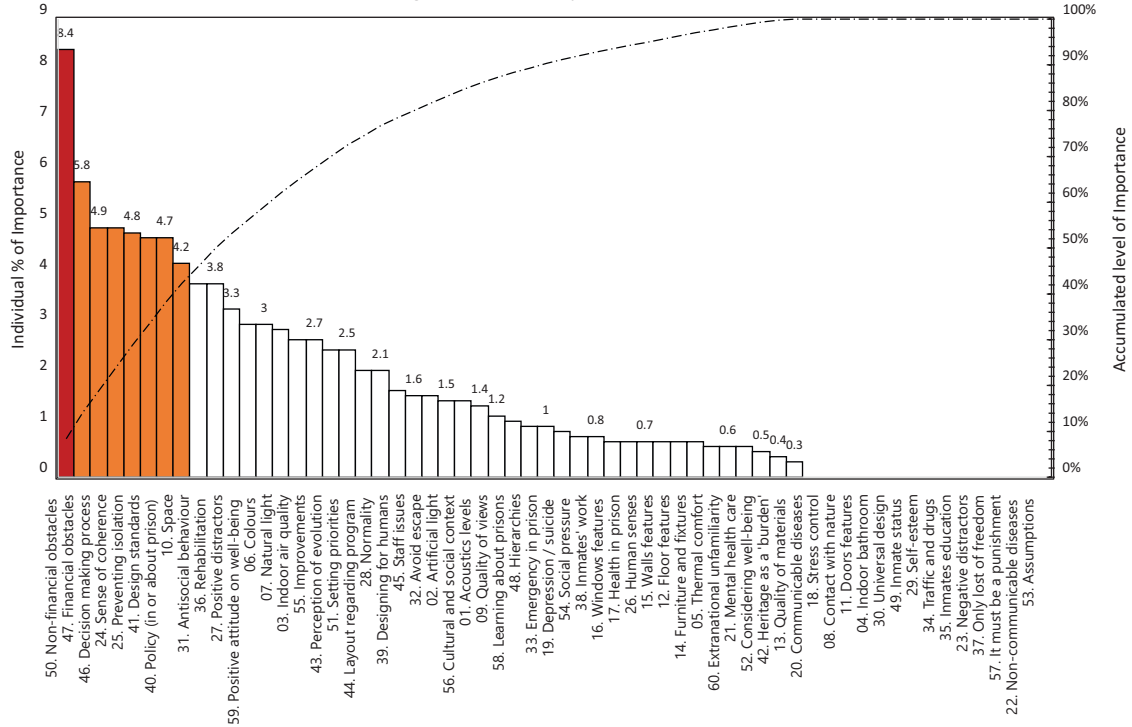
Figure 8.1 Level of importance that High-level Staff interviewed in Chile attached to each variable
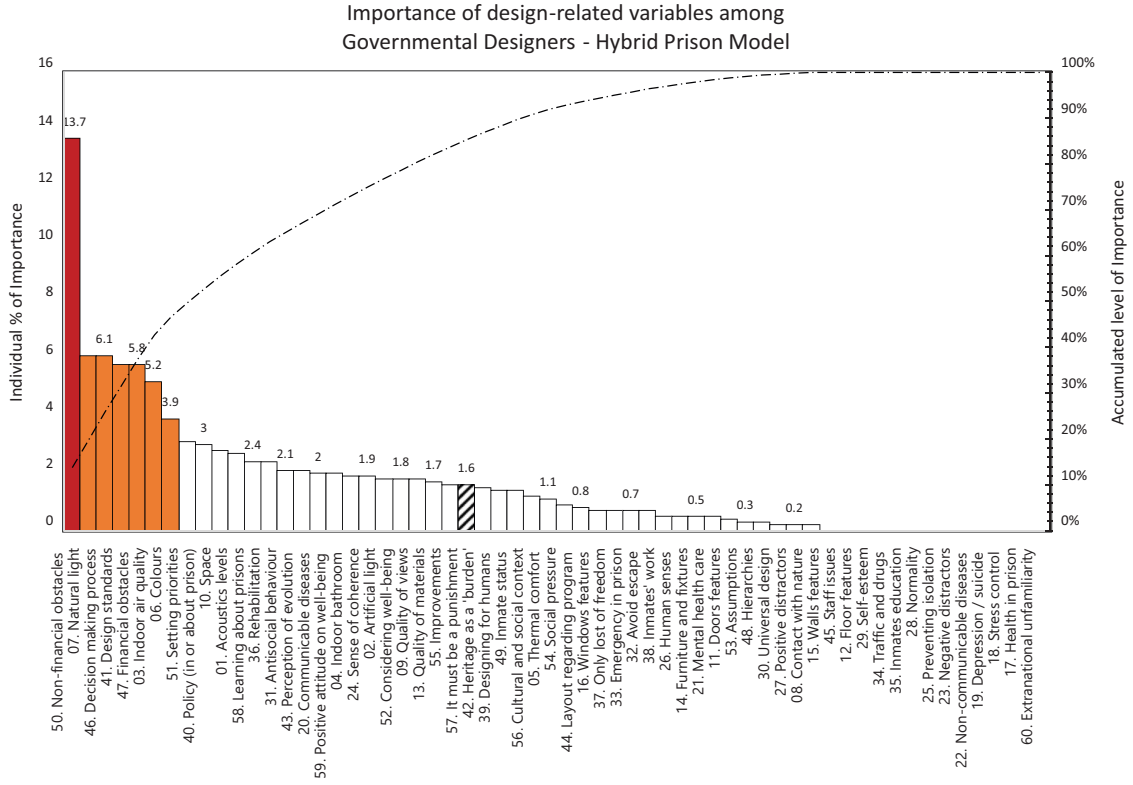
Figure 8.2 Level of importance that Governmental Prison Designers interviewed in Chile attached to each variable

High-level Staff v/s Governmental Designers
Hybrid model

Variables

01. Acoustics levels	21. Mental health care	41. Design standards
02. Artificial light	22.Non-communicable diseases	42. Heritage as a 'burden'
03. Indoor air quality	23. Negative distractors	43. Perception of evolution
04. Indoor bathroom	24. Sense of coherence	44. Layout regarding program
05. Thermal comfort	25. Preventing isolation	45. Staff issues
06. Colours	26. Human senses	46. Decision-making process
07. Natural light	27. Positive distractors	47. Financial obstacles
08. Contact with nature	28. Normality	48. Hierarchies
09. Quality of views	29. Self-esteem	49. Inmate status
10. Space	30. Universal design	50. Non-financial obstacles
11. Doors features	31. Antisocial behaviour	51. Setting priorities
12. Floor features	32. Avoid escape	52. Considering well-being
13. Quality of materials	33. Emergency in prison	53. Assumptions
14. Furniture and fixtures	34. Traffic and drugs	54. Social pressure
15. Walls features	35. Inmates education	55. Improvements
16. Windows features	36. Rehabilitation	56. Cultural and social context
17. Health in prison	37. Only loss of freedom	57. It must be a punishment
18. Stress control	38. Inmates' work	58. Learning about prisons
19. Depression / suicide	39. Designing for humans	59. Positive attitude on well-being
20.Communicable diseases	40. Policy (in or about prison)	60. Extranational unfamiliarity

Figure 8.3 Comparison of the level of importance of variables between High-level Staff and Governmental Designers in the Hybrid prison model

The data suggest that there are constant struggles in the underlying play of forces between human and non-human entities, such as:

a. *The prison population size*: 212 inmates per 100,000 inhabitants in 2021, with 39,670 inmates in total [289].
b. *The number of security staff*: the Chilean prison service has a very low rate of guards per inmate: 1 prison guard every 4.6 inmates [290].
c. *The number of rehabilitation-related professional staff*: The total number of professionals of any background in 2008 was 1,162, one professional per 40.3 inmates [290].
d. *The buildings*: The age and poor condition of the majority of the prison buildings, in addition to the high level of overcrowding that in some cases reach 200% [291].

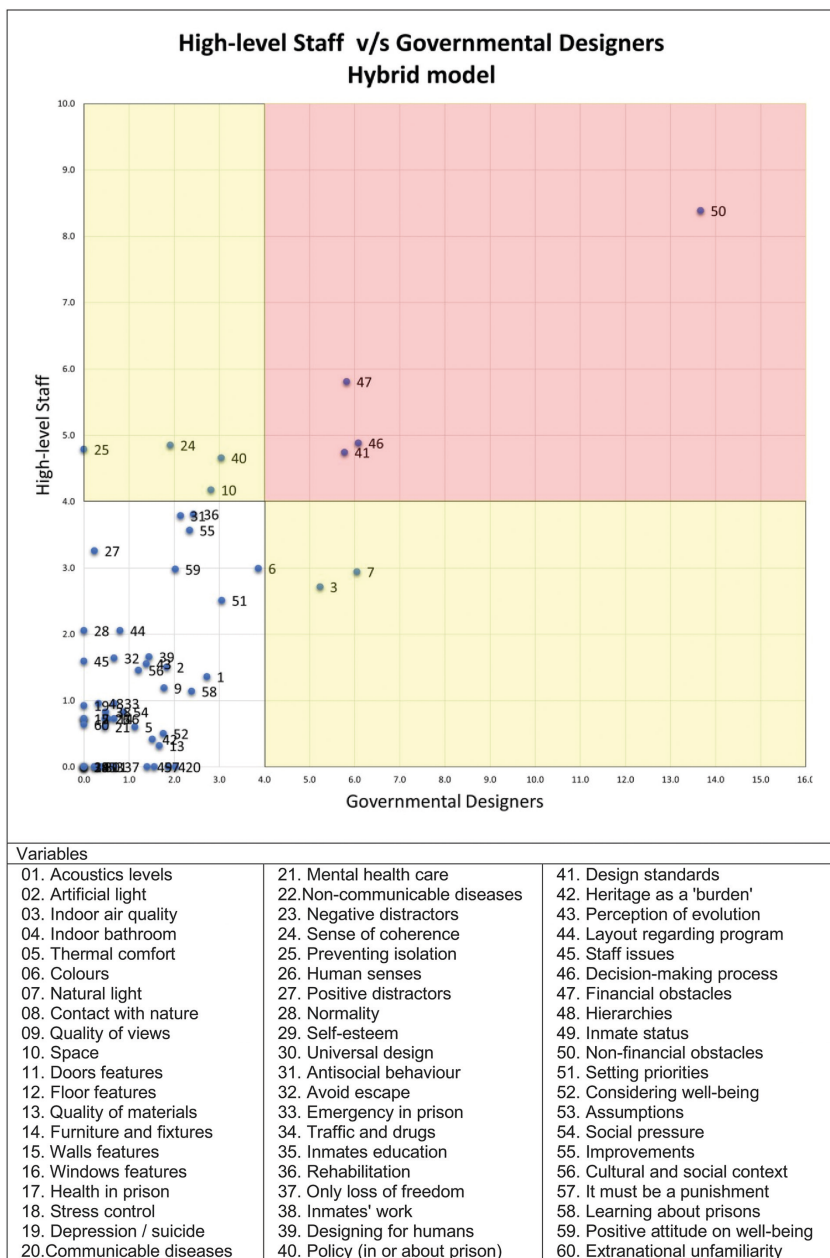In this scenario, shared by most of the Latin American prison services [292], the concern about inmates' health and well-being is seen as relevant by security-related staff, only to the extent that it can trigger security problems inside the prison:

> The problem is that [health and well-being factors in prison design] have not been considered. They have never been discussed; they have never been anything. You know, as [member of the] Operative Sub-directorate who represent the security aspect, I must put on the table that the security parameters, like some others, will have to establish what are the well-being and health requirements of the inmate. However, I think that ultimately … we cannot stop observing that, that if I do not give the inmate the minimum conditions of living, of habitability, I will have a conflict.
>
> (HLS-H-02)

The above comment also highlights the failure of rehabilitation-related staff to defend the need for inmates' health and well-being to be considered. Based on the scarce number of these professionals, it could be argued that rehabilitation is seen as an appendix to a Security model prison organisation, as observed by one interviewee when asked: What has prevented health and well-being from being considered?

> I think basically two things … One is the budget, and the other is the vision of security over of these spaces. I obviously do not share it, but it is what prevails. I do not know if … if the coldness of space will have something to do with security, but it seems that yes.
>
> (HLS-H-01)

The struggle between the rehabilitation and security perspectives is fuelled by social prejudices encouraged by the elites in a highly punitive society. This conflict allows the overuse of incapacitation and control in prison design and precludes the development of clear policies and technical guidance about health and well-being. Designers try to persuade the authority in each project to adopt a more humane perspective, which does not always occur, as exemplified by one of the Designers interviewed:

> I think that what must be done is immediately go to those basic needs of health and well-being in the prisons. Now, how to do it? It sounds funny, but sometimes you must sensitise the authority when there is no rule. So, what is normally done? You always hear that, at least in Chile, you must raise awareness. Do you want to address a problem? You must sensitise. It seems incredible to me, but it is necessary to sensitise because people seem to have forgotten the basic feelings of the human being. I think that one must raise awareness first with the technical teams that oversee the improvement of the prisons.
>
> (GD-H-03)

High-level Staff are more concerned with *policies*, *space*, *sense of coherence*, and *preventing isolation*. They mention managerial issues, such as the lack of clear policies and the need for reducing overcrowding, and how to prevent suicides. However, inmates are seen as intrinsically malicious people, and – because of the lack of money to repair or for maintenance – the design should be able to prevent their malicious acts. That is why they talked about a *sense of coherence* as something desirable but inapplicable in prisons. Designers, by contrast, place a high valuation of physical variables such as *natural light* and *air quality* because these are missing elements in the field, and *colours* because this is an easy and cheap way to mask the depressive reality of old prisons (see Figures 8.4 and 8.5) and the harsh environment of the new ones (see Figures 8.6 and 8.7).

Thematic areas emerging from High-level Staff interviews

The interviews among the Chilean High-level Staff show three underlying thematic areas of concern (see Table 8.1). The first one is *The way to improve*, showing what interviewees consider necessary in prison design, and what are the steps needed – in their view – to evolve to a more humane and rehabilitative approach. The second area was identified as *It is not our fault, and we cannot solve it*, where interviewees talk about the political nature of the decisions, the inadequate budget allocation, and their recognition that the

Figure 8.4 Outdated and poorly maintained prison building, painted with vivid colours. Prison: CDP Santiago-Sur prison, Chile

Figure 8.5 Inmate collective toilet at Concepcion prison in Chile.

Note: While this photograph was taken on 20.12.2013 and Concepcion prison was repaired and completely refurbished between 2017 and 2018, the conditions exposed here remain in many traditional prisons in the country.

Figure 8.6 Inmates' block yard at Bío-Bío prison, Chile (PPP Contract)

Figure 8.7 Block's workshop area, at Bío-Bío prison, Chile (PPP Contract)

problem is slipping from their grasp. The third area is identified as *Inmates'
well-being is not the priority*, which shows that although there is a recognition
that a problem exists, and that some health and well-being factors of
design are beginning to be considered, there are also urgent priorities which
exclude health and well-being from the *decision-making process*. Each of these
areas is discussed next.

Table 8.1 Thematic areas emerging from High-level Staff – Hybrid prison model

Latent theme	Latent sub-area	Latent thematic area
We are dealing with more urgent problems		Inmates' well-being is not the priority
Concerns for well-being have been rare	Well-being is beginning to be considered	
Desire for retribution is far stronger than rehabilitation	Decisions are political	It is not our fault, and
Minimising cost is the rule	Inadequate budget allocation	we cannot solve it
Low state priority of prison conditions		
A big obstacle is the lack of money		
Health and well-being is not seen as important		
We can easily lose control of the prison	What is necessary to be considered/Security matters are first	The way to improve
Security reasons must determine everything		
Critical events will occur	What is needed to go forward	
Security staff must be consulted		
The needs for standards in prison design		
Two to four inmates per cell	What is necessary to be considered/What a cell should consider	
Just for sleep		

Inmates' well-being is not the priority

Although for High-level Staff in the Chilean prison service "obstacles" seems to be the main issue when talking about the inmates' well-being, *financial obstacles* are seen as less urgent than the internal problems classified as *non-financial obstacles*, such as the subordination of rehabilitation to security. This conflict emerges in the comments from a non-security staff interviewee:

> I believe that [health and well-being must be considered] from the beginning. No, I can not– I do not think that this can be modified later. [However], I feel that there is a predetermined approach to privilege what is security in any of the situations.
>
> (HLS–H–01)

For the High-level Staff, *financial obstacles* relate to lack of governmental financing for new prison projects or improving the current carceral conditions to

provide the minimum *space* recommended by international bodies. This is because social retributive views affect budget allocation. Prisons are highly expensive and improving offenders' living conditions is not a political priority. As expressed by one interviewee:

> Improving cells' space will undoubtedly have an impact on public investment and will depend on whether the government is interested in these issues or not, which are not to the liking of the people. The square meter of a prison can be more expensive than that of a hospital.
>
> (HLS-H02)

For High-level Staff, an additional problem is that investment evaluation criteria do not consider the well-being of inmates and are rather based solely on economic indicators, such as the cost per square metre or the construction cost per prisoner.

It is not our fault, and we cannot solve it

The divergent views between security and rehabilitation are further exposed in some of the sub-themes in this area. The inclusion of concepts such as the normal environment, physical and mental well-being promotion, or *sense of coherence* reveal good intentions but contrast with the reality of even the newest prison designs. They also contrast with the recognition by High-level Staff that the concern for inmates' well-being in cell design is relatively rare:

> Last week, I visited a prison, where an area for intimate visits was inaugurated. When I entered, I found that what used to be the isolation cells was converted into a space of impressive warmth … It was a space with walls covered with wooden materials, very good ventilation, television, a small double bed and a very good mattress. That is the place that was given to inmates to receive their partners. I was shocked but pleasantly.
>
> (HLS-H01)

This intervention contrasts with the hard prison cells of the newest Chilean prison designs, with steel beds, a concrete closet, 12 cm wide windows, and a bathroom without a door (see Figures 8.8 and 8.9). It contrasts even more with traditional prison cells, providing housing for as many inmates as possible (see Figure 8.10).

The analysis suggests that the concern of Chilean High-level Staff is not just the "Lack of priority given by prison authorities to health and well-being",

Figure 8.8 A typical prison cell in Bío-Bío prison, Chile. There is a lack of separation of sanitation from the sleeping area (prison started operations in 2010 through PPP contract)

Figure 8.9 Narrow prison cell windows – PPP Bío-Bío prison, Chile

Figure 8.10 Overcrowding. Collective dormitory in Concepcion prison (photograph was taken on 20.12.2013) Dormitory dimensions: 6.2 m x 12 m x 3.2 m. The official capacity was 28 inmates, considering a double-bunk bed on each side and a central corridor. However, in practice, some of them had exceeded 100 inmates

Note: Concepcion prison was repaired and completely refurbished between 2017 and 2018. However, the conditions exposed here remain in many traditional prisons in the country.

but also the lack of any political interest by governmental authorities in allocating the basic financial resources needed for treating inmates with respect as human beings or investing in their rehabilitation.

Nevertheless, prison authorities must maintain a balance of forces to avoid loss of control, despite the flaws of the system such as overcrowding and sanitary conditions (see Figures 8.10 to 8.12). Although there is a recognition that the existence of prison *design standards* could help to avoid many design mistakes and arbitrary decisions, the lack of design regulations is also helping to keep the prison service working, no matter how big the economic deficit is or how bad the conditions are.

The way to improve

This group of themes reveals what the High-level Staff interviewees believe is important to improve. There is a cluster of codes grouped around the latent sub-area "Security matters are first" which show possible reasons for
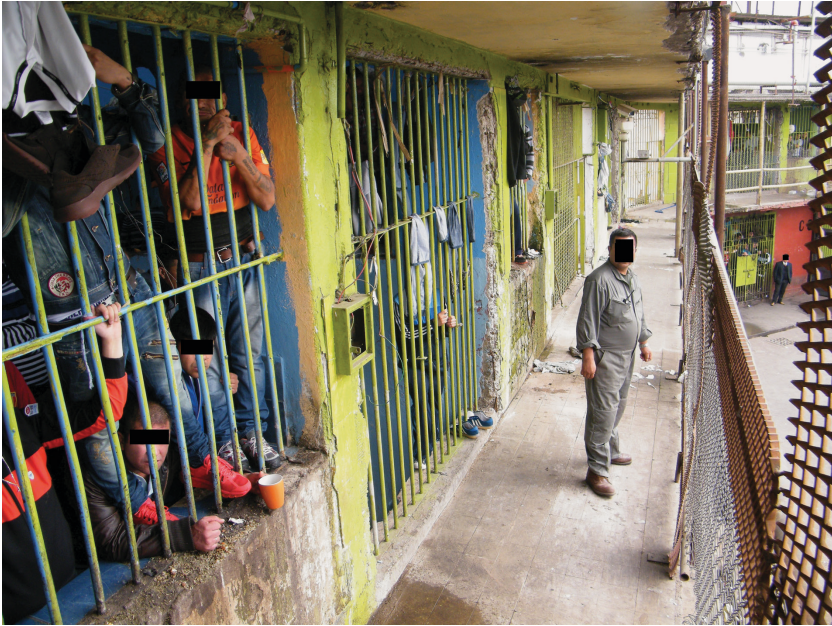
Figure 8.11 Overcrowding. Entrance to a prison block. CDP-Santiago Sur prison, Chile

Figure 8.12 Inadequate hygienic and sanitary conditions in an overcrowded traditional Chilean prison. Entrance to a prison block. CDP-Santiago Sur prison, Chile

overzealous security. Indeed, the Chilean prison service faces a combination of forces that could potentially increase the loss of control inside prisons, such as:

• The insufficient prison building footprint which results in overcrowding and increased level of stress:

> How is it possible that a 173-year old prison has a two hundred per cent of overcrowding.
>
> (HLS-H-03)

• Poor maintenance of older buildings connected with the manifest theme *deplorable prison conditions*. This is, in turn, attributable to the inadequate budget allocation, which is insufficient even for basic maintenance or in providing safe living conditions:

> If we had the level of investment that the USA, we would not have this kind of problems of having had 81 inmates burned to death in San Miguel prison, which is what we don't want to happen again, but it will probably happen again because the infrastructure [the design and the maintenance conditions of existent prisons] is bad.
>
> (HLS-H-02)

• The overpopulation in prison and the legal obligation of the prison system to receive – and take care of – every new inmate sent by any court even if there is no room available for a new inmate:

> Sadly, sometimes in a cell where there are four inmates, we need to house eight.
>
> (HLS-H-02)

• The low number of security staff (less than one officer for every four inmates); and
• The extremely low number of rehabilitation–related personnel.

All these forces interact in opposite directions, trying to maintain the stability of the system. Behind this reality, prison security staff have an obvious primary concern: do not lose control. For them, in this historically unstable scenario, inmates are capable of dangerous reactions, which must be maintained under control. In the Hybrid model, the priority is keeping the perimeter secure, due to the incapacity of the system to maintain control in the internal areas of the prison at all times. This is evident by the use of double perimeter walls (see Figures 8.13 and 8.14), typically used in the

Figure 8.13 Double-walled security area with guard tower -PPP Bío-Bío prison, Chile

Figure 8.14 Double-walled security area with guard towers in Concepcion prison, Chile

Figure 8.15 Prison block yard in PPP Bío-Bío prison, Chile (the prison started operating in 2010 through a PPP contract)

Hybrid prison model, with armed guards in guard towers, with orders – and training – to shoot at those who try to escape.

Prison guards have to deal with a crowd of inmates who are usually quiet but could lose control over any small change in the equilibrium of forces, or due to variations in the general mood of the prison population. In the newest prisons, the clauses of the PPP contracts allow them to maintain a more manageable number of inmates in each prison area. However, fights between inmates and inmate-staff assaults in PPP prisons are usual and probably worsened by the harsh and psychological oppressive environment (see Figure 8.15).

In the traditional older prisons, nevertheless, the delicate equilibrium is constantly threatened by overcrowding and poor living conditions (see Figure 8.16).

The difficulty of maintaining this fragile balance is why security personnel stress the need to be prepared for "critical events", and why any design decision requires their approval:

> Everything that happens inside the prison is my subject, from the intervention, the logistics and the security, the elements that are big. I have to see them.
>
> (HLS–03)

In this situation, it is easy to understand the emerging issue on the part of staff regarding the "Lack of control of the actions of inmates" within the

Figure 8.16 Prison block yard CDP-Santiago Sur prison, Chile. The prison was built in 1843

prison. Furthermore, it is clear that the environmental conditions faced by inmates or prison staff cannot evoke positive emotions such as feeling safe, calm, or serene. Long-term solutions will need a considerable amount of resources. However, considering that existing budgets do not cover even the basic maintenance of prison facilities, inmates' well-being is simply seen to be too costly as an additional concern for prison authorities to spend money on:

> To say that we are going to develop a cell typology, which goes beyond what we have developed today, has to do with investment. So, I can put on the table today that I need more space to develop activities inside the prison, but it is not even defined how many square meters there must be for an inmate in a cell. For me it is nefarious. What do I do? If not even the distance between towers guards is defined? Disastrous.
>
> (HLS–H03)

In this scenario of overcrowding and long, idle periods, inmates are seen as dangerous. Therefore, rehabilitation work is subordinated to security, due to the insufficient number of rehabilitation-related personnel, and the delicate balance of forces that security staff have to control.

The most urgent problem for the security staff interviewed seems to be suicide attempts. The organisational intention to prevent suicide is coherent with the ideal cell as capable of housing two to four inmates and to only using it for sleeping purposes. However, there seems to be no research digging into the real causes of the problem, or self-criticism from authorities regarding the responsibility of the prison service for the psychological effects on inmates resulting from the conditions in which they are being kept. Staff argue that the inmates' practice of staying in pairs is their way to deal with loneliness and the emotional burden of being in prison. However, it seems also evident that the need for protection is the result of the failure of the state to provide safety and security to inmates while in custody. The staff concern is based on the rise in suicides, committed in individual cells. Nevertheless, the implementation of multiple occupation cells is the only response to the problem, acting as a substitute for psychological attention, and dealing with inadequate staffing for rehabilitation purposes:

> They could not bear being alone, and their difficulties could not be shared with a couple, conversed, contained by their peers, in this case, at night they began to ramble with their thoughts. I say it by letters that they left, comments that were made. When I was talking about not letting them die, that is, at least we have to avoid an event that could put the inmate's physical integrity at risk.
>
> (HLS-H02)

The intention to prevent suicides contrasts with the deplorable physical conditions in which inmates are kept in traditional prisons; the oppressive psychological conditions that characterise public-private partnership contract prisons; and the lack of professional mental health support. The only important guiding principle seems to be, at least for the security-related interviewed, the avoidance of escape and misconduct:

> From my point of view, I think that the designs are mainly aimed at security. Avoid the inmate leaving the cell.
>
> (HLS-H02)

The protection of inmates' human rights is present in the discourse of security-related High-level Staff as a declaration of good intentions. However, the main objective for them is avoiding escape and keeping them alive to fulfil the prison sentence, as highlighted by one interviewee:

> The organisation must guarantee the individual rights of the penal population. It must provide better conditions of habitability, remembering,

obviously, the psychological and physical aspects of the person who is confined, as well as ensuring that they do not escape, that they are elements that are part of the essence of our organisation. Ensuring that they do not die, that they do not escape, are things that allow the effective fulfilment of a sentence.

(HLS–H02)

This incongruence suggests that the prevention of suicide could be both a security and an administrative concern, due to the effect that these events produce on the rest of the prison population, the concern to avoid the administrative and legal consequences for prison guards, and for High-level Staff to avoid the political aftermath.

Thematic areas emerging from prison designers' interviews

As shown in Table 8.2, the designers' interviews revealed two thematic areas of concern:

Table 8.2 Thematic areas emerging from designers – Hybrid model

Latent theme	Latent sub-area	Latent thematic area
We need planning Lack of prison policies and planning is the main obstacle to go forward We have no design standards The design must remind them where they are Lack of prison policies and planning is the main obstacle to go forward We are a reactive organisation We need committed authorities	Profound changes are needed	The responsibility of the state and of the prison service
For authorities, prison capacity is more important that habitability Disregard of inmates' needs Society wants retribution	Inmates' well-being is not a state priority	
No justification for not consider well-being variables Architects are responsible for what authorities will approve	Designers are in part responsible/we are doing what we can	The scope of the intervention of designers
We feel helpless Improving the sanitary conditions is more urgent than the well-being	There are more urgent priorities/we are doing what we can	

The responsibility of the state and the prison service: where designers talked about the profound changes that the prison service needs, to evolve towards a more consistent and efficient prison design and exposed the lack of importance placed on inmates' health and well-being by both the State and the prison service.

The scope of the intervention of designers: where designers talked about the design obstacles, professional perceptions and perspectives in the current reality, and their view of what should be a good prison design.

The responsibility of the state and the prison service

Designers see the Chilean prison service as a reactive organisation, which is not prepared to prevent the occurrence of negative events:

> Today, all these respond rather to contingency situations. We are a service that we are more reactive than preventive.
>
> (GD-H01)

The non-existence of an architectural research department that could gather reliable data and inform fit-for-purpose guidance, policies, and *design standards* is also highlighted:

> That is a recurring topic of discussion. In fact, to date, we have nothing like a manual or an instruction that tells us how much the standard should be.
>
> (GD-H01)

Designers acknowledge that the true extent of the habitability problem is also unknown. There is little systematised information and reliable data to compare with existent national housing *design standards*, revealing the real gravity of the situation. Although the prison service has a clear, vertical administrative structure, departments are seen as soulless by designers due to the non-existence of common aims or planning as revealed by one designer:

> as an architect I need at least to have the necessary supplies. So, it is necessary to have analysis and studies – the [Architecture] Department today has a project area and another one of Studies, [but] studies – it does not do that. Today, studies are dedicated to administrative tasks that must be supported, that is financed.
>
> (GD-H01)

Additionally, the facts that the prison service is exempt from submitting pre-liminary prison design projects to the national authorities, and that prison *design standards* are practically non-existent, creates favourable conditions for the proliferation of solutions that seek to satisfy security needs, neglecting its effects on the mental or physical health of prisoners. As mentioned by a designer with six years of experience in prison design:

> Because if you check the number of window solutions that we have, and which one is more creative than the other, some are better than the others, but do not offer a proper solution. When I asked here, what is the window for a cell? One told me: "Well, they are just some slots in the wall," one said. "Well, it's expanded metal mesh," another said. Others stated, "It's better to use a compact polycarbonate." "No, it's better to use perforated polycarbonate then," said another. However, in the end, I had no idea how the window should be designed. And I still don't know!
>
> (GD-H03)

The lack of long-term policies is seen by one designer as the main reason why rehabilitation is not considered in the process of prison design and one of the obstacles that prevent long-term planning:

> The problem is that today, there are no policies. There are no policies at the State level, there are no policies at the organisational level, but rather we are concentrated today on attending inmates, monitoring them and, to a very lesser extent, rehabilitating them. However, this rehabilitation seems to be in a quite reduced percentage.
>
> (GD-H01)

The only consistent element that designers perceive in the *decision-making process* is the desire to maximise the use of *space* to maintain capacity increase:

> If I have a capacity of one hundred and I want to improve the conditions of habitability in terms of eliminating collective dormitories and implementing individual cells or cells for a smaller capacity, I could lower by 60 per cent or 40 per cent the current capacity of the prison. Moreover, in public policy, the objective is not that. The objective is always to be able to have the maximum capacity of seclusion.
>
> (GD-H02)

This supports the view of designers that – to change this scenario – commitment from authorities through their policies being truly combined with rehabilitation and respect for human dignity:

however, what is needed is commitment. We need a commitment from our authorities to be able to change from top to bottom all this way of working.

(GD-H01)

Nevertheless, prison designers do not expect any change in the future because the well-being of inmates is not a priority for the authorities. The apathy of society about the living conditions of inmates in addition to the desire for retribution seems to drive national authorities to neglect the State responsibility for inmates' health and well-being. This concern is expressed by designers when talking about the insufficient budget allocation for updating and providing basic maintenance to the buildings and equipment of prison facilities throughout the country:

> To date, the budget assigned to the Chilean prison service to updating and maintenance is not enough to provide solutions. It is not possible to respond to all the needs in prison infrastructure [of the whole country] with USD 2.25 million a year.

(GD-H01)

Positive changes could be possible if some of the internal actors (prison service, prison staff unions, and government) or the external actors (judicial power, community, or international bodies) apply enough pressure in the right direction. Designers, who somehow resist the retributive design approach, feel this pressure will not come from the internal actors, and that the judicial power does not have enough legal attributions to intervene. However, designers also claim that today the interventions of international bodies such as the UN are only symbolic and lack effectiveness:

> The UN Subcommittee on Torture is asking about improvements that are being made in terms of habitability. We talked today in the morning, but the truth of these things is that today it seems that these consultations are purely symbolic rather than a concrete action designed to improve a situation.

(GD-H01)

Indeed, the intervention of international bodies is seen by designers as an additional problem because it only shows what is already known, without helping to facilitate the solutions or demanding allocation of the budget from the State:

> We are no longer able for recommendations because the needs of the inmates are now. The recommendations say: "we recommend that …"

No! The international organisation must ensure that this is done. If it is not done, if these improvements are not made, we will continue on the same track. So, I think that international organisations should support much more by monitoring … I would tell the international organisations that if goals are set, even if they are small, they must be set with demanding financial support from the authorities and monitoring their compliance. Because if not, changes are never going to happen.

(GD–H03)

The scope of the intervention of designers

The second thematic area of interest that arises from designers is *The scope of the intervention of designers*. They briefly referred to what prison design should be but focused on evidencing the obstacles and criticising the prison system, their authorities, and also themselves. Although they acknowledge partial responsibility for the situation, there is also a clear perception that they are designing places to contain dangerous, violent, and harmful people:

if you give him a key, the guy is not going to open the door. That is what is ingrained a bit in the cultural concept. He will use the key to get out one eye on another guy.

(GD–H03)

There is, moreover, a true feeling of helplessness among designers due to the lack of financial support from governmental authorities and the disregard for prison conditions. This feeling is aggravated by the acknowledgement that resources are not enough to solve the more basic needs, and, therefore, well-being is not even considered as a priority, according to one designer:

As long as no significant investment is made, and we had a system-atisation that allows year to year to be investing in pumping systems, in improvements of roofs, in reparation of walls and floors, year after year, the hole is growing, and the money is still the same. There is no way of, let us say, confronting the situation. It is just getting worse.

(GD–H01)

The scepticism about possible changes is because they believe the political authorities already know about the deplorable living conditions in prisons. Indeed, judges report twice a year on the conditions of prisons to the *Ministry of Justice and Human Rights*, exposing the most important and common problems.

Key emerging themes and Meta-themes

Sixteen key themes emerged from the analysis of both High-level Staff and Governmental Designers. The review of those themes developed into five Meta-themes – *fear of legal and political consequences*, *lack of priority of health and well-being*, *designers' sense of helplessness*, *lack of commitment*, and *lack of control* (see Table 8.3).

Based on a deeper investigation of the interviewees' responses concerning the Empirical reality and the Actual forces underlying this from a critical realist perspective, a scenario that represents the interactions between the themes and Meta-themes was created (see Figure 8.17).

The synthesised scenario shown in Figure 8.17 highlights the conflicts that key actors in the Hybrid prison model have to deal with. People who work in the rehabilitation sub-directorate are unable to resist the forces of a neglectful and dismissive political and managerial approach. The great importance attributed to the security and preventing critical events is based on the traditional organisational strategy of housing inmates whatever the *space* available or the conditions of habitability. This results in inadequate physical conditions – which is not necessarily intentional but rather the result of the insufficient economical resources, the legal obligation of receiving any

Table 8.3 Key emerging themes and Meta-themes in the Hybrid prison model

| Emerging themes	Meta-themes
• Importance of Preventing suicide • Tendency to deterrence and retribution through design • Subordination of rehabilitation to security	*Fear of legal and political consequences*
• Divergent views between security and rehabilitation staff • Social retributive views affect the budget allocation • Incongruence between political and rehabilitation goals • Lack of priority given by prison authorities to health and well-being • Social apathy toward offenders	*Lack of priority of health and well-being*
• Designers' resistance to retributive design approach • Resignation due to the size of the problem	*Designers' sense of helplessness*
• Lack of authorities' commitment	*Lack of Commitment*
• Lack of prison policy • Lack of design regulations • Lack of planning • The deplorable state of prisons • Lack of control of inmates' actions inside the prison	*Lack of control*
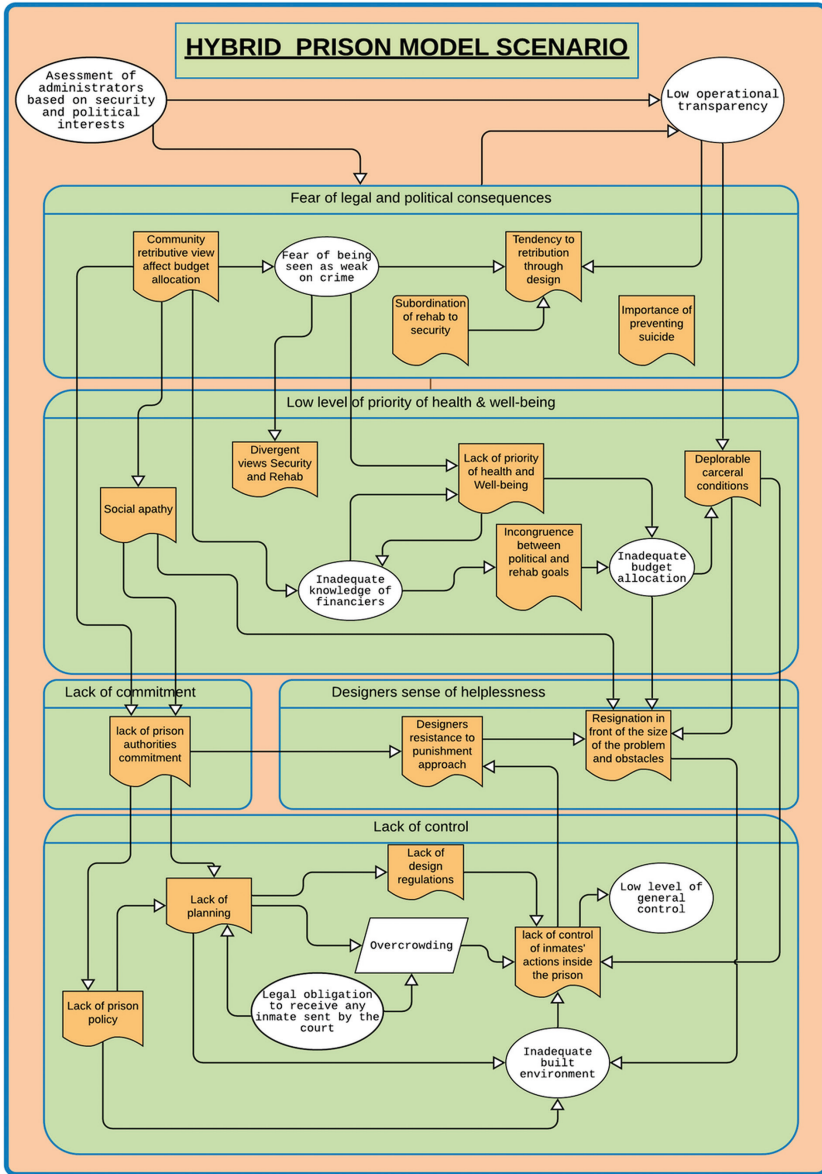
Figure 8.17 Hybrid prison model scenario

inmate sent by the court, and the apathy of prison authorities and society towards the conditions people are forced to live in.

This historical–cultural perspective reduces efforts and resources to simply ensure that nobody escapes and riots are avoided, thus making rehabilitation an appendix to the organisation. Additionally, several technical and managerial flaws, such as the lack of planning, norms, and commitment from the authorities – resulting from the previously described politico–administrative scenario, allow the customisation of the actors to the chaotic and aberrant situation. Staff and authorities seem to be trying to avoid being affected by the legal or political consequences of riots or escapes, rather than focusing on the quality of life of inmates inside the prison, or their rehabilitation. The same fear of legal consequences seems to be the driving force that explains the importance placed by the prison service on avoiding inmates' suicide.

Finally, the designers seem to be in the middle of the play of forces, using their creativity to improve inmates' living conditions but resigned to the problem and the overwhelmingly neglectful approach of the prison system which results in a lack of control.

Although the problems are many, and solutions are needed urgently, numerous underlying counterforces explain why the system, as a whole, makes limited efforts to affect inmates' life positively. Such counterforces include the lack of money available to the prison service to tackle those problems; the lack of commitment of political and organisational authorities to find and funding real long-term solutions; the supremacy of security perspectives; and the lack of interest in the effective rehabilitation of inmates.

In the Hybrid model, the lack of a comprehensive design approach, as well as the regime structure and process, works against the health and well-being of the prisoners [155] and does not provide the minimum conditions to accomplish PERMA goals [39]. Moreover, these minimal efforts are set within the poor conditions of the facilities, precluding the emergence of positive emotion and meaning [274,293]. Indeed, the inmates' personal development seems to be possible only in "prisons where the regimes are characterised by both the availability of practical help and by relationships and processes that are legitimate and consistent" [155(p615)] which seems not to be the case in the Hybrid model.

Chapter 9

The Security prison model

This chapter discusses the results and analysis of the data from the US case (Security prison model). It starts with a brief review of the prison context in which authorities and designers work. A further section discusses the findings from the interviews of High-level Staff and Designers, respectively. Subsequently, the results of a further analysis performed on the transcripts of the interviews conducted with High-level Staff and Designers will be discussed separately. A final section will summarise and discuss the key emerging themes and Meta-themes in this group.

Prison design context in the US

In the US, there are 1,719 state prisons, 102 federal prisons, 942 juvenile correctional facilities, and 3,362 County prisons, including the 79 Indian County prisons [294]. Local and County prisons are, therefore, the most common type of project in which architects are involved. Although the architects interviewed have experience in Federal prisons design, they are more aware of the design of State prisons and County prisons, which currently correspond mostly to the Direct Supervision or Third-Generation prison design described in Chapter 4. Knowledge about third-generation direct-supervision prison design within the US and abroad is gradually permeating and guiding the design of traditional State prisons. The US has the largest prison population in the world. In 2016 in the US, there were 655 people incarcerated per 100,000 population with a total of 2,121,600 inmates, which is well within the official capacity of the prison system at 2,140,321 [295]. Because of the cultural, punitive, and organisational particularities of prison systems in each State in the US, the decision was then made to look for a representative State, equidistant from north and south borders, with a recent history of state or county prison design, and with a rate of prison population per inhabitant as near as possible to the national rate. The Kentucky Correctional Department was selected, and prison authorities

were invited to participate in the study. Kentucky has a prison population of 24,003 inmates with 11,515 inmates (48%) in State prisons, 848 in private prisons, 414 inmates in an open system (halfway houses), and 11,226 inmates (47%) in county prison [296].

Analysis

The distribution of importance of variables among the High-level Staff in the Security model shows a very high level of concentration, evidencing a strong alignment in the discourse among High-level Staff and a clear organisational focus on what they consider as important variables in the design of prisons and jails: 38.3% of the total importance is explained by just five out of 60 variables – *financial obstacles*, *natural light*, *space*, *decision-making process*, and *sense of coherence* (see Figure 9.1).

Moreover, within the highest scores of importance, the first three variables – *financial obstacles* (10%), *natural light* (9%), and *space* (8%) – are more important than the last two – *decision-making process* (5.9%), and *sense of coherence* (5.4%). In this instance, *non-financial obstacles* (4.6%) is still perceived as an issue but is not among the variables considered most important.

In a similar pattern to staff, the group of prison designers shows a high level of concentration of importance in a small number of variables. There is a noticeable differentiation between the group of five more important variables and the rest of the variables (see Figure 9.2), suggesting a high level of agreement among the interviewees regarding what factors are the most important to be considered in the promotion of health and well-being in prison design.

The five most important variables for the designers interviewed in the US are *natural light* (9.8%), *non-financial obstacles* (8.7%), *sense of coherence* (6.3%), *perception of evolution* (5.7%), and *colours* (5.2%), accumulating 35.8% of the total importance. Unlike for High-level Staff in this model, the highest rates within this distinct upper group are *natural light* and *non-financial obstacles*, and the lower rates are *sense of coherence*, *improvements*, and *colours*.

Unlike the two previous cases – International Advisors and the Hybrid prison model – both professional groups in the Security prison model show a significant degree of concentration of the interviewees' concerns in just a few variables, with no single variable that could be identified as primary.

As shown in the scatter plot (see Figure 9.3), two variables are considered highly important for both professional groups: *natural light* and *sense of coherence*. Although the focus of this model is on controlling the variables that can trigger violence among inmates, there is a clear difference with the Hybrid model regarding variables that positively affect inmates' well-being. Indeed, the concern of the Security model staff and designers in the provision of
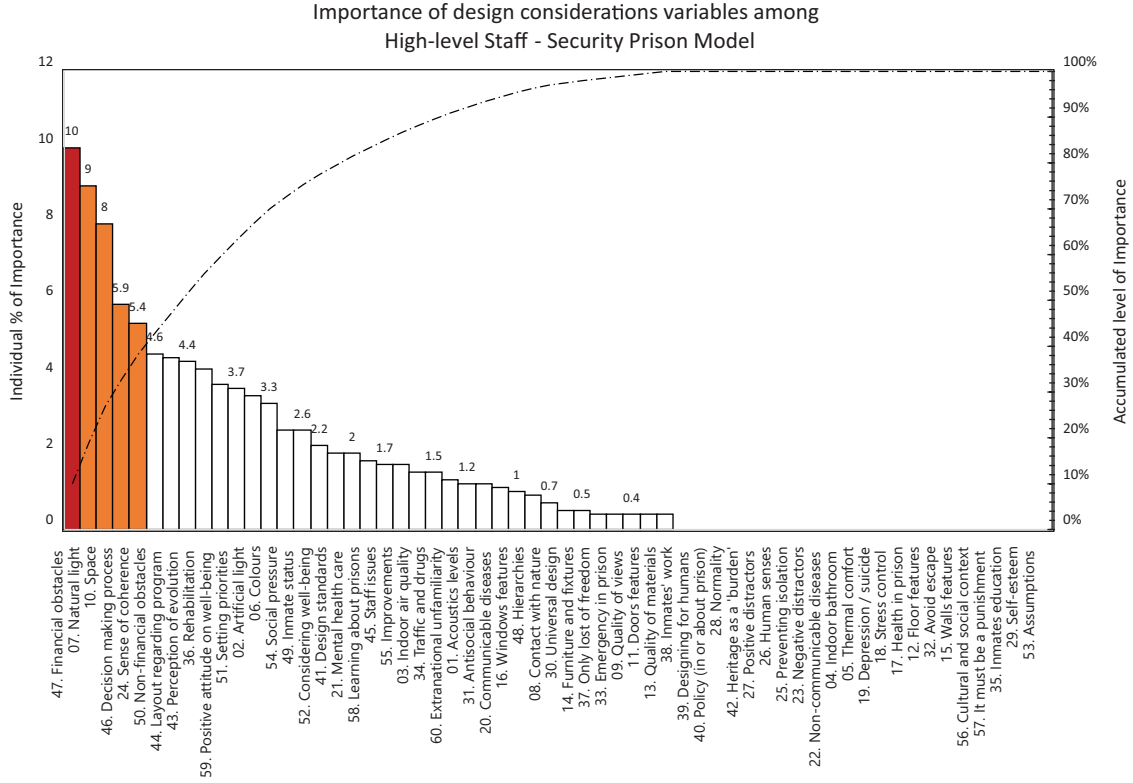
Importance of design considerations variables among
High-level Staff - Security Prison Model

Figure 9.1 Level of importance that High-level Staff interviewed in the US attach to each variable

Importance of design considerations variables among
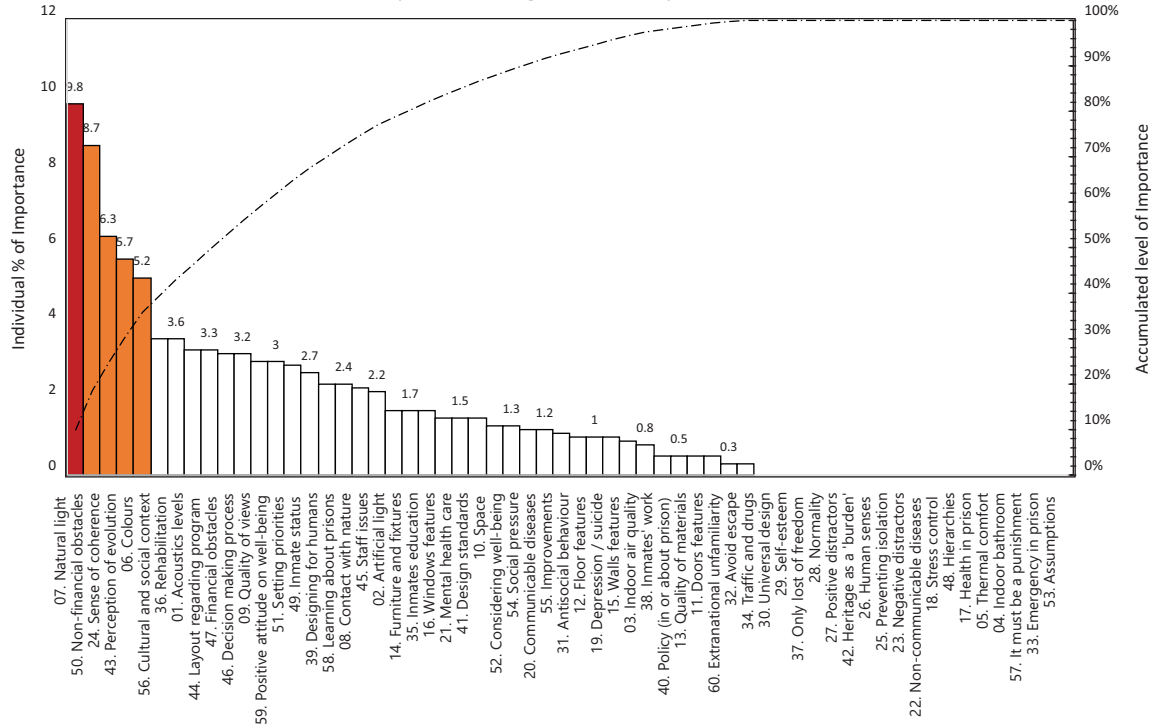Independent Designers - Security Prison Model

Figure 9.2 Level of importance that prison designers interviewed in the US attach to each variable

Figure 9.3 shows the scatter plot titled "High-level Staff v/s Independent Designers — Security model", with axes "High-level Staff" (y, 0.0–11.0) and "Independent Designers" (x, 0.0–11.0), containing numbered data points.

Variables

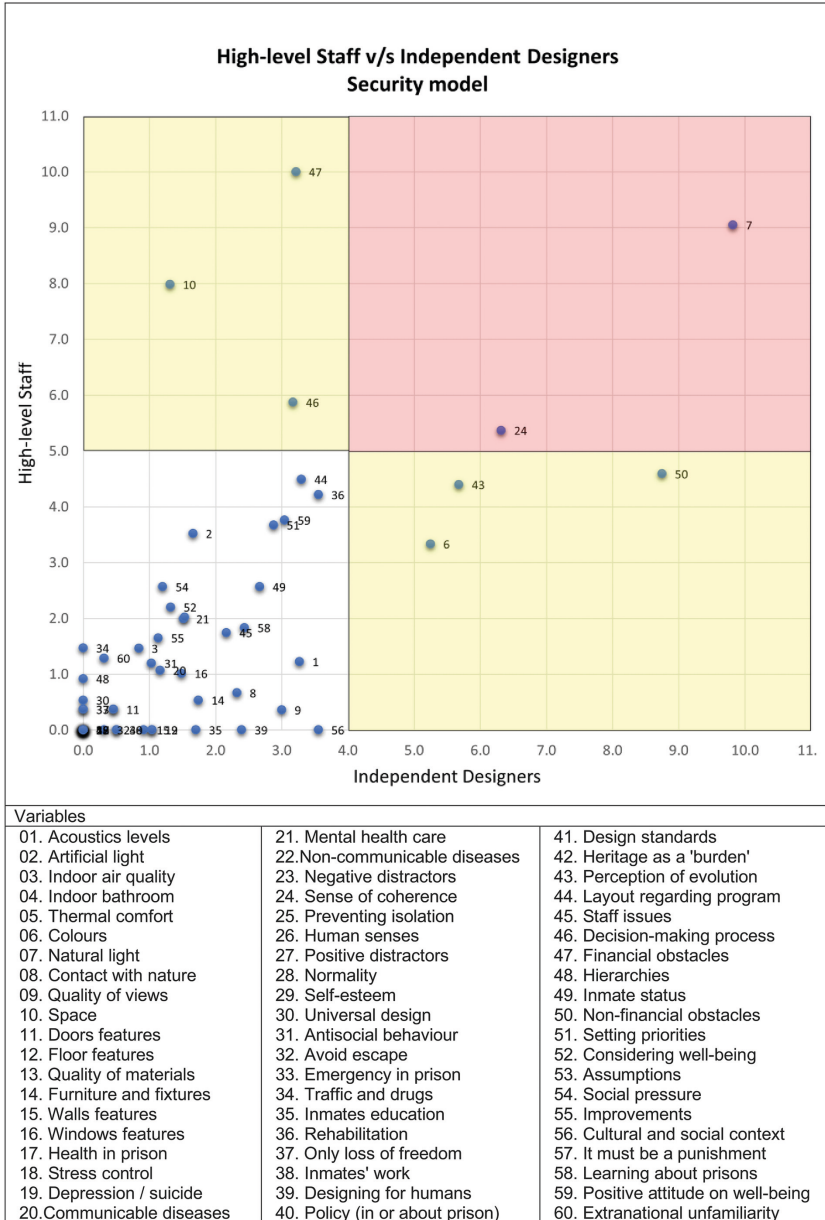|		
01. Acoustics levels	21. Mental health care	41. Design standards
02. Artificial light	22.Non-communicable diseases	42. Heritage as a 'burden'
03. Indoor air quality	23. Negative distractors	43. Perception of evolution
04. Indoor bathroom	24. Sense of coherence	44. Layout regarding program
05. Thermal comfort	25. Preventing isolation	45. Staff issues
06. Colours	26. Human senses	46. Decision-making process
07. Natural light	27. Positive distractors	47. Financial obstacles
08. Contact with nature	28. Normality	48. Hierarchies
09. Quality of views	29. Self-esteem	49. Inmate status
10. Space	30. Universal design	50. Non-financial obstacles
11. Doors features	31. Antisocial behaviour	51. Setting priorities
12. Floor features	32. Avoid escape	52. Considering well-being
13. Quality of materials	33. Emergency in prison	53. Assumptions
14. Furniture and fixtures	34. Traffic and drugs	54. Social pressure
15. Walls features	35. Inmates education	55. Improvements
16. Windows features	36. Rehabilitation	56. Cultural and social context
17. Health in prison	37. Only loss of freedom	57. It must be a punishment
18. Stress control	38. Antisocial behaviour	58. Learning about prisons
19. Depression / suicide	39. Designing for humans	59. Positive attitude on well-being
20.Communicable diseases	40. Policy (in or about prison)	60. Extranational unfamiliarity

Figure 9.3 Comparison of the level of importance of variables between High-level Staff and Independent Designers of the Security prison model

natural light directly benefits inmates' positive emotions and meaning in life, and as a consequence, it increases the odds of improving their relationship with other inmates and staff.

Similarly, the attention placed in this model to the variable *sense of coherence* shows a clear understanding that the fewer inmates and staff are exposed to unknown situations, the lower the anxiety and therefore the higher the feeling of trust and safety among them. Although the aim here is only to improve the safety and security of the prisons, the feeling of being in control of their own *space* and environment reinforces the emergence of positive emotions and positive relationships through the improvement of trust. This cannot boost a sense of meaning by itself, but the avoidance of inmates' infantilisation and over control of their daily routines helps to at least avoid the loss of meaning in life by maintaining inmates' *self-esteem*. Maybe the most relevant finding in terms of their different priorities relates to the importance of the *space* variable, which is very high for staff (3rd) but remarkably low for designers (28th). Prison staff in the Security model highlight the benefits provided by the standards and design of space in third-generation direct-supervision type of facilities for the safety and security of guards and inmates. Prison staff also acknowledge the failure of old prison design philosophies, which did not consider the psychological effect of the environment on inmates' behaviour, nor did they recognise the incidence of old prison designs on high levels of prison violence.

The rather surprising lack of interest among designers concerning the amount of *space* in cells and common areas can be explained as the consequence of a highly standardised process of prison design. Although the use of *design standards* such as ACA, NIC or local States' standards are voluntary, the recurrent lawsuits that prison services have faced in many States as a result of tragic events have forced them to insist architects comply with these norms.

Some of the perceived improvements in prison conditions seem to be the result of the authorities' fear to be found guilty of negligence by a Court, for not following the minimum standard recommendations, rather than wishing to improve the design itself:

> I think we are getting to where we see [attitudes] slowly start to evolve. You know – we've had a lot of very costly lawsuits in this country, concerning prisoner rights and those types of things. So, I think that you're seeing more and more of that coming to the forefront, and agencies being forced to really take a look at their facilities and making sure that those are adequate conditions for that population.
>
> (HLS-S-02)

Conversely, the importance attached by designers to *colours* and improvements is not shared by staff. This may be partly attributable to disciplinary training and education.

Thematic areas arising from High-level Staff interviews

Table 9.1 reveals three areas of concern among the High-level Staff in the Security prison model: *The way we work and the reality as we see it*, showing how High-level Staff address health and well-being in their prisons, their purposes and objectives, and their willingness to learn from successful experiences; *The causes of our problems*, where staff reveal their concerns and point out possible causes for the obstacles that the prison service has to face; and *What we think should be done to improve but is unlikely to happen*, where staff expose action that, although unlikely to be achieved, they consider essential to produce a positive mindset. Each of these areas is discussed next.

Table 9.1 Thematic areas emerging from High-level Staff – Security model

Latent theme	Latent sub-area	Latent thematic area
• Maximising interpersonal *space* while keeping prison control is key • *Natural light* is the most important element • We do consider inmates' well-being	How we address health and well-being	The way we work and reality as we see it
• The more unsafe inmate feels the more risk for staff • Improving trust will improve security	Purposes and objectives of the prison	
• Financiers must be educated on how prisons work		What we think should be done to improve but is unlikely to happen
• Wrong decisions are very costly	Key decisions made by people without prisons knowledge and external interests	The causes of our problems
• Political and economic interests are not aligned with the goals of rehabilitation		

The way we work and reality as we see it

Interpersonal *space* maximisation in combination with good lines of sight is felt by respondents to improve confidence and reduce inmates' fears by making them feel safe, as highlighted by one staff member:

> It is important to have the ability to move freely but also, at the same time, the ability to secure the area quickly, if it was needed. So, I think a lot of it would be to provide a lot of movement, but at the same time providing security – you know – and a lot of the time the inmates do better when they know it's a secure environment, rather than just an open environment with poor sightlines.
>
> (HLS–S03)

Indeed, not having enough *space* results in feelings of loss of privacy, which in turn increases the odds of violent reactions by inmates.

Although there is an organisational intention to provide better living conditions and improve the well-being of inmates, there are clear design incongruences that contradict this intention. Despite interviewees assertions that the well-being of inmates is being considered in the design of prisons, and that *natural light* is the most important element in their designs, High-level Staff in the security model make it clear that having a view is dispensable, but *natural light* is not. This incongruence appears again when one interviewee makes the point that, although they are open to learning from successful experiences from other prison services of the country or even internationally, the consideration of health and well-being is not neglected in the design of their prisons:

> I think those factors have definitely been weighed in the construction of prisons here in Kentucky. We have kind of a prototype of what we have picked as our prison design, and they're in our three newest constructions. They're all built very similar. They provide for a lot of interaction with inmates, a lot of natural light, lot of open space. It's secure at the same time but provides for inmates' movement, provides for inmates' interaction with staff, so I think yeah, on a national level, especially this state level, I see those elements being implemented.
>
> (HLS–S03)

However, this strong conviction seems to be based on their strict compliance with the ACA standards on prison design, assuming that those standards will fulfil the level of well-being that inmates need:

> A lot of those are ACA standard driven – most of it has to do with space that is available to the inmate. So those are the standards we follow,

and we find it– you know – they are very much conducive to inmates' well–being.

(HLS–S03)

Both interpersonal *space* and *natural light* are current trends in county prison design. However, these two factors are not so evident in state prisons. In local county prisons, the design is expected to create a sense of connection with nature without any real connection with the exterior. It seems that the Security prison model design has to fulfil the most basic physiological and psychological needs, such as air, *natural light*, sunlight, and personal security, leaving aside essential elements needed for full human being devel– opment, which are seen as dispensable, and subordinated to prison security needs. However, despite the interviewee's emphasis on *natural light*, this and *space* are negatively affected in the living areas by security elements and restrictions such as windows' bars, barred gates, and segmentation of areas (see Figures 9.4 to 9.6).

Figure 9.4 Prison cell, Luther Luckett Correctional Complex, Kentucky

Figure 9.5 Luther Luckett Correctional Complex, Kentucky. Inmates' living area from a control area

The low quality of connection with the natural environments in state prisons reminds inmates at all times that they are in prison. This seems to be more accepted among staff, because inmates have to move, for small periods, from one building to another through open areas during the day, which is seen as enough *contact with nature* to reduce inmates' anxiety. Paradoxically, this lowering of inmates' anxiety enables a more invasive use of security elements inside living areas, to reduce the risk of misconduct and/or escape. Security elements in this model have the double purpose of deterrence and ultimately by mechanical resistance. Such elements have to be strong and to be perceived as such (see Figures 9.7 and 9.8).

The interest showed by interviewees for minimising uncertainty and increasing trust by design, in conjunction with their utilitarian approach to inmates' well-being – inform their view of security as the main priority. This view is, in turn, part of a higher concept (Latent sub-area), named "Purposes

Figure 9.6 Living area of the State prison block, Luther Luckett Correctional Complex, Kentucky

Figure 9.7 External fence area. Luther Luckett Correctional Complex, Kentucky

Figure 9.8 Guard tower at Luther Luckett Correctional Complex, Kentucky

and objectives of the prison'', which supports the idea that in this model well-being is used as a reward in a stick-and-carrot policy. Health and well-being "rewards" can be removed from an inmate, by the prison administration, depending on his/her behaviour according to one interviewee:

> In my housing here's a good example, if you demonstrate a certain behaviour, you're over here. if you demonstrate a different type of behaviour, you're over there. So you get to pick and choose, where you wanna be, and I'm gonna work really hard over here, to make this as comfortable and as nice as any place in the institution. 'Cos, I want them to live over here.
> (HLS-S01)

This is evident in a solitary confinement section of a state prison in where sanctioned inmates have to wait in iron cages, while being moved (see Figure 9.9), and are kept 23 hours a day in permanently lit cells, without any view to the exterior, and in which *natural light* only can enter through thin slots on the wall (see Figure 9.10).

"What we think should be done to improve but is unlikely to happen" and "The causes of our problems"

In the second and third areas of staff concerns, called respectively "What we think should be done to improve but is unlikely to happen" and "The causes

Figure 9.9 Luther Luckett Correctional Complex, Kentucky. Inmates' waiting cage in solitary confinement area

of our problem'', the analysis clearly shows that what is precluding the consideration of health and well-being in prison projects, from the interviewees perspective, is the lack of knowledge of key decision-makers in how prisons work. As mentioned by one interviewee when talking about health and well-being factors:

> I think it should start at the very beginning, I mean, that has to be a consideration, again, educating those folks who are paying for this, because you know, the majority of them are seeing dollars signs, so educating the people on what needs to be there and why.
>
> (HLS-S-02)

For staff, financiers must be educated to avoid technocratic or political reasons reducing the building's footprint, which damages prison operation and outcomes:

> One of the things that we focus on here more is strictly the square footage and the layouts of the facilities because once that's done, that footprint is set, and those can't really be adjusted.
>
> (HLS-S02)

However, this education needs to extend to designers during the design process:

Figure 9.10 Solitary confinement cell, Luther Luckett Correctional Complex, Kentucky

> I think you need to have professionals, which know how to manage prisons, being involved in designing prisons, I think sometimes you could – somebody who has not worked in prison should not be involved in designing prisons.
>
> (HLS-S03)

The lack of priority given by authorities to health and well-being is also present in the third latent area of concern: "The causes of our problem". This highlights the existence of interests not related to prison purposes, which results in a diminished allocation of financial resources as highlighted by one member of staff when talking about legislators:

> People in prisons don't vote. They're not their constituents. Those people out there who work every day, middle class, that's whom they listen to.
>
> (HLS-S-01)

Thematic areas emerging from Independent Designers' interviews

Table 9.2 shows that designers here focus their interventions in two areas: "Our view on prison design" and "Our problems and obstacles". In the first of these areas – which covers 86.3% of the total codes – designers reveal their point of view about prison design through the emergence of latent themes grouped in three sub-areas: architectural variables that affect health and well-being; relationship client-architect; and operational issues that drive design. The second latent area – "Our problems and obstacles" – covers the remaining 0.16% of the total codes and exposes the barriers that designers face when designing prisons. These areas are discussed next.

Our view on prison design

The apparent contradiction between the need for connection with nature through daylight and the policy of avoiding having windows to the exterior must be analysed in light of their underlying principles. Indeed, when the four first latent themes are considered together, there seems to appear to be a clear principle, which is that in county prisons inmates should lose visual contact with the exterior world, except for a sky view. When county prisons

Table 9.2 Thematic areas emerging from designers – Security model

Latent theme	Latent sub-area	Latent thematic area
• There must be plenty of *natural light* • Sunlight is a key source for well-being • It is hard to include views • Nature is expensive and a security threat • Artificial light affects security rather than health • Colour selection is a matter of taste	Architectural variables affecting health and well-being	Our view on prison design
• We have to show the staff benefits • Designers are pushing clients into more humane prisons	Relation client-architect	
• It must be a rewards and sanctions system	Operational issues drive design	
• Social pressure and owner's apathy prevent improvements		Problems and obstacles

are placed in urban areas, the clients are willing to prevent inmates from having visual contact with the exterior, to preserve privacy for surrounding inhabitants and also for inmates. In turn, designers, in their efforts to win the bids, are willing to grant clients' wishes. To prevent communities from observing inmates through the windows – because inmates will try to make contact with people outside and vice versa – the façades of urban prisons are similar in appearance to vertical fortresses (see Figures 9.11 to 9.12).

These designs seek to fulfil the human physiological needs for *natural light* and the associated perception of time passing while avoiding inmate contact with the exterior urban reality:

> But from the dayroom, we have the cell looking onto the dayroom, and from the dayroom, we have a recreation area, that is also enclosed with solid walls around it but open to the sky. Even if we are three or four five levels above the street, we still have these recreation yards or porches, out there.
>
> (ID–S03)

This design approach also applies to some state prisons located in rural areas in the US where, although there is no possible visual contact with the community, the intention is preventing inmates from seeing staff movements (see Figures 9.13 to 9.15).

Any views to the exterior and *contact with nature* are thus seen as potential security threats. Therefore, the designer has to find a way to simulate them inside the prison to avoid the negative side effect of eliminating them, as one designer explained:

> We have a facility we are working out where the intake, where they are first coming into the facility, we do have a small walled garden. We do not have that in the housing areas themselves. Also, in terms of, if you cannot see actual images of, you know, view of nature, having a simulated view, having a mirror of an outside view.
>
> (ID–S01)

The consideration of simulated nature and views, however, will depend on the clients' willingness, due to the operational cost associated with having them:

> There are so many small window slits and smaller windows, where you could do it larger, but the clients have not invested in that. I guess it's talked about, but it's not high in people's lists.
>
> (ID–S02)

Figure 9.11 Chicago Metropolitan Correctional Center façade

Designers may justify the avoidance of windows to the exterior because of the high cost of glass,

> and the glass the other problem is that it's such an expensive material. The glass is very expensive.

(ID–S01)

Figure 9.12 Close up of windows at Chicago Metropolitan Correctional Center

Figure 9.13 Louisiana State prison "Angola" Camp B. Row of cells (right) separated from the windows by a corridor, to provide daylight (left)

However, they are proud to mention that the walls that separate the cells from the internal common areas of the prison units are heavily glazed to allow inmates to have access to "borrowed" *natural light*. It is natural light coming from the enclosed dayroom. This contradiction shows that design must first fulfil the prison authority's requirements, which, in turn, are focused on controlling inmates' behaviour rather than rehabilitation or well-being.

Figure 9.14 Louisiana State prison "Angola" Camp A. Corridor and a row of cells (left) in front of translucent polycarbonate windows for contact with daylight (right)

Figure 9.15 Louisiana State prison "Angola" Camp A. View from the exterior façade of translucent polycarbonate windows

Similarly, the requirement that inmates are never allowed to be in darkness is a prison system requirement for control, internalised and operationalised by designers, despite their knowledge of scientific evidence about the effect of permanently lit environments:

> I know there are studies that show the importance of understanding the effect of lighting when you have a secure environment and you have someone who's on the night shift, and they're supposed to make sure everyone is safe and so forth. But, you have to decide how much light do they need to do that versus the light level that should be there so that the inmates can sleep.
>
> (ID-S01)

The importance placed by designers on *colours* is underpinned by knowledge on the effect of *colours* on human behaviour, as discussed in Chapter 6. However, their opinions concerning which kind of *colours* to use are diverse. While one designer suggested that pastel *colours* are the most appropriate because of the agitation properties of vivid *colours*, for another, the selection is based on professional experience, highlighting the lack of reliable research evidence in this area. Significantly, the level of importance placed on *colours* can thus simply be related to the designer's personal experience rather than being based on scientific evidence.

The design process is clearly a play of opposite forces, in which the early stages are seen as crucial for designers to influence clients trying to educate them positively. Designers will not do anything that could jeopardise security. Nevertheless, they show possible alternatives and additional perspectives, encouraging clients to soften the environment, even if only eventually:

> If you encourage them to have some more appropriate softer furnishing and they can't afford them, maybe they can buy it eventually – you know – they might not have money initially but purchase them – you know – maybe a couple of years after the building is finished.
>
> (ID-S01)

They try to make clients understand the positive outcomes that design variables can have on human behaviour and the possible benefits for staff safety and the success of the prison operation. Nevertheless, they recognise these negotiations usually do not favour the designers, as revealed by one interviewee:

> That kind of thing needs to be established early right away, and of course you might get a push back from the client or from people

who are establishing the budget for the facility: "you really need to do that?", "how much is it gonna cost?", "is it going to help these people here?" – you know – "is there proof that it will help them?". Yeah, that is fundamental- those fundamental criteria need to happen early. I would be very excited about that, but normally there is too much of a push back – you know – to do those things.

(ID-S01)

Problems and obstacles

Designers feel the social pressure from political authorities, not wanting to be seen as "pro-inmates" by providing "nice environments" for inmates:

I can't make it look too nice because the government officials will say it's not a good public image to make it look too nice. It doesn't happen all the time, but there certainly is a consideration.

(ID-S01)

The transition from the Security prison model – keeping control over the prison population at all times to prevent violence – to the Rehabilitation prison model, aiming to rehabilitate inmates, seems to be a distant possibility given the cultural beliefs of how to deal with criminality according to one designer:

There's a lot of jokes about, you know [Norwegian prisons]. If the government is perceived as spending too much money – you know – they'll use that as an example: "we don't want our jails looking like that" – you know – because the inmates shouldn't be coddled, they need to be – you know – punished for what they did.

(ID-S01)

However, designers perceive that their influence is gradually encouraging clients to open their minds to the need to consider factors that promote health and well-being:

I think that how you deal with those issues is something that each person has to look at, but I don't think there's any reason not to consider them in any facility, and I think most of the clients do a very good job now at least having that discussion about it. How do we introduce colour, how do we introduce light to these people.

(ID-S02)

Although they are clear that this is a long-term fight and the results will not be seen anytime soon:

> I've seen it over the course of my career; it takes years to change people's ideas. Because they're good ideas, that doesn't mean they're going to be accepted. These ideas have been around for years, what we're talking about. But, as practitioners, we're happy to implement those ideas, and in the laboratory of the real world, and see how they work and then improve on them.
>
> (ID-S03)

Key emerging themes and Meta-themes

A total of 14 themes emerged from the analysis of the Security prison model. The review of those themes against the latent content analysis and the reality shown in the fieldwork photographs revealed five Meta-themes – *Using design to lower stress*, *Designing prison to retain prison control*, *Reward and punishment*, *Uneducated decisions*, and *Slow evolution* – which are shown in Table 9.3 below.

The first three Meta-themes – *Using design to lower stress*, *Designing prison to retain control*, and *Reward and punishment* – expose the main characteristics of the process of designing new prisons as expressed by both staff and designers. The classification of themes and Meta-themes in addition to the information presented in this chapter led to a diagram that represents the scenario of the Security prison model (see Figure 9.16).

Table 9.3 Key themes and Meta-themes emerging from the Security prison model

| Emerging theme	Meta-themes
• Interpersonal space • Trust by design • Avoiding agitating colours	*Using design to lower stress*
• Nature through daylight • No windows to outside • Having a view is dispensable. Natural light is not • Overuse of artificial light	*Designing prison to retain prison control*
• A utilitarian approach to inmates' well-being • Health and well-being only if benefits are evidenced • Avoiding amenities that do not lead to increase security	*Reward and punishment*
• Financiers' lack of knowledge in prison matters • Lack of priority of authorities to health and well-being • Importance placed in the initial cost	*Uneducated decisions*
• Indirect external participation	*Slow evolution*
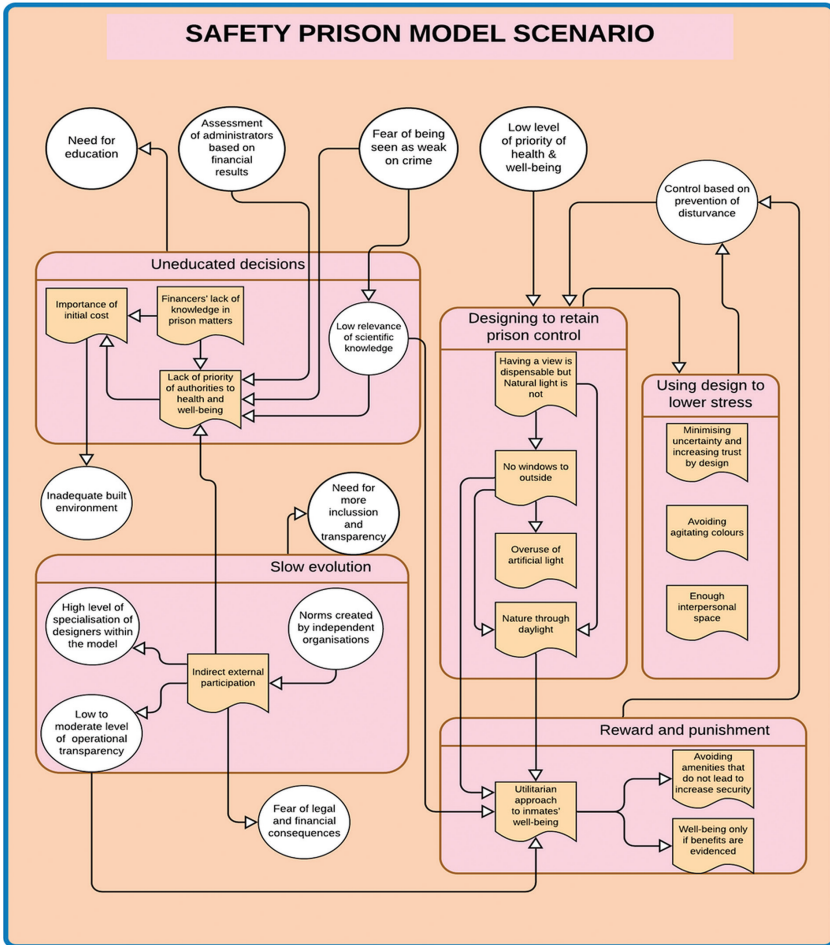
Figure 9.16 Security prison model scenario

   The focus is placed on controlling the prison population, maximising the safety and security of staff and inmates, by avoiding the physical and psycho-logical determinants of fear and aggression and providing prison guards with the best possible conditions for keeping control at all times. The purpose is to help inmates to release the psychological and emotional pressure that is produced by living 24 hours a day in an environment that is effectively cut off from the outside world.

   Although state prisons are not the same as county prisons, these principles still apply to both types, apart from not having windows to the outside. These first three Meta-themes synthesise the utilitarian nature of health and

well-being for prison authorities and governmental administrators and their links with the prison philosophy of treatment of inmates based on reward and punishment.

The last two Meta-themes – *Uneducated decisions* and *Slow evolution* – highlight the slow process of evolution towards a system that respects human dignity. The education of authorities is seen as a cornerstone to provide inmates with better conditions and avoid both prejudices and conflict of interest. These prejudices are present in decisions based on the punitive and retributive approach to crime, while the conflict of interest is present when decisions are taken based on political and/or economic reasons, regardless of the adverse effects that this would produce on prison administration and the accomplishment of the prison system goals. However, although there is an awareness that there is a considerable amount of educational work to do, there is also the perception that things are starting to change, and authorities are gradually taking into consideration inmates' health and well-being. Nevertheless, the evolution that the Security prison model interviewees are talking about is related to providing more *space* and considering human dignity in design, while maintaining – and perhaps refining – the strict regime and its prison philosophy.

Chapter 10

The Rehabilitation prison model

In this chapter, we will discuss the perceptions of key decision-makers involved in prison design in both Norway and Finland as the Scandinavian case relating to the Rehabilitation prison model. Unlike the previous cases, we will identify three different professional groups – High-level Staff, Governmental Designers, and Independent Designers – as working together in the development of the current prison design philosophy. As in previous chapters, the aim is to understand which architectural factors related to health and well-being are perceived to be essential, as well as why, when, and how these factors are displaced. As with the last two cases, we will start with a brief review of the prison context in which prison authorities and designers work. Then, we will discuss the findings regarding each of the three professional groups independently, to then present the themes and Meta-themes emerging from the analysis.

Prison design context

Norway and Finland relatively have similar characteristics. Norway has a prison population of approximately 3,900 inmates and an imprisonment rate of 63 inmates per 100,000 inhabitants. In Finland, the prison population is approximately 3,100 inmates, with an imprisonment rate of 51 inmates per 100,000 inhabitants [295]. In Norway, there are 64 prisons. Almost two-thirds of these are high-security. The largest prison is in Ullersmo with a capacity of 400 cells. The smallest prison has only 13 cells, and the average is about 70 cells. Some 3,600 full-time equivalent staff are employed in the prison service. Medical, educational, and library services are imported from community services [95]. There is no overcrowding in Norwegian prisons. As a matter of principle, the Norwegian prison service does not overbook their prisons, and the judicial system does not send people to prison unless there is available space for them, or when inmates are considered a serious threat to society. There is a waiting list of convicted people (known as prison queue) who

are anticipating being sent to prison to serve their sentence, although people convicted for serious crimes will go straight from pre-trial imprisonment to serving their sentence [142]. However, today, this queue has been discontinued due to the government plans to double the prison places and increased use of electronic control. Finland has 26 prisons. Seventy per cent of the total prisoners are in closed prisons and 30 per cent are in open prisons. The Finnish prison service RISE employs approximately 2,700 officials.

In both countries, the prison facilities are owned by a governmental agency other than the prison services. Statsbygg is the Norwegian governmental advisory body for purchasing, leasing, and construction of government projects, and is where Governmental Designers have worked since 1816, developing the design briefs and bids. The Finnish governmental organisation for this purpose is Senaatti Properties. These organisations also own the public buildings on behalf of the governments and are responsible for managing the performance in terms of their operation and maintenance. Among these buildings are the Government quarters, governmental offices, and also the prisons.

Analysis

In this model, prison authorities show their concern for a larger number of variables in comparison with previous cases. They also have less tendency to concentrate their attention on a few variables, showing a more systemic approach to imprisonment. This could be the result of the interaction of at least two causal factors. First, the problems faced in the Rehabilitation model prisons seem to be far less overwhelming and acute, and their goals more realisable than in the Hybrid model, meaning that the Rehabilitation High-level Staff do not feel the same impotence revealed by Hybrid interviewees. Second, the findings from the Rehabilitation model staff, when compared with the Security prison model staff, suggest that a broader range of variables must be considered and controlled for, to design a better prison in terms of health and well-being. Indeed, the Rehabilitation model High-level Staff are more aware of the factors that will affect the well-being of the users both staff and inmates, and not just focused narrowly on the safety and security of the operation of prisons, as with the previous two cases.

The increase in the level of specialisation in prison work seems to play an important role in the evolution of the Rehabilitation model. Prison officers and prison services workers in both Norway and Finland have a high level of education. In Finland, for example, in a conversation during a visit to the Vantaa prison, one staff participant mentioned that the position of governor in a Finnish prison is held by the prison staff member with the highest

educational degree. In Norway, the prison officers' role has been developed through research and with the support of unions with a long-term perspective. Norwegian prison officer training is aimed towards obtaining a university degree [297].

When analysing prison authorities' interviews in the Rehabilitation model, ten out of the 60 variables under study were identified as the most important (see Figure 10.1), accumulating 43.4% of the total importance. The first six are *natural light* (6.4%), *perception of evaluation* (4.8%), *indoor air quality* (4.7%), *financial obstacles* (4.6%), *sense of coherence* (4.3%), and *space* (4.2%). This first group accumulates 28.9% of the total importance, illustrating the great emphasis prison authorities place on the connection with the natural environment, fulfilling the inmate's needs for privacy, minimising fear, and recreating outside normal life. The next three variables (*rehabilitation*, *layout regarding programme*, and *design standards*) have the same individual level of importance (3.7%). The last variable included in the group of the most important ones is *indoor bathrooms* (3.4%). When all these variables are taken together, they mark a clear graphic boundary between the first group of ten variables (in red) and the rest of the variables.

Governmental Designers' responses also show a low level of concentration in keeping with the staff in this model as discussed previously. For this group, the five most important variables are: *decision-making process* (8.2%), *preventing isolation* (5.9%), *sense of coherence* (5.7%), *natural light* (4.4%), *normality* (4.3%), and *financial obstacles* (4.0%), accumulating 32.5% of the total importance (see Figure 10.2).

They highlight the important role of design to generate spaces capable of emphasising human contact, face to face interaction, positive relationships between inmates, and also between inmates and prison staff. Within the *decision-making process*, Scandinavian designers highlight the importance of involving the community in the decisions and solutions. As one interviewee expressed it:

> we have these yearly seminars and many other activities that include politicians, lawyers from the academic side but also practitioners. There are also prisoners taking part in the discussion. And you still have these seminars yearly. So, I think this is an ongoing debate and with really strong voices and really high profiled politicians, high profiled lawyers, high profiled academics.
>
> (GD-R-03)

However, it is also recognised that even in these yearly seminars, designers have not yet been considered in this discussion, and, therefore, more design research and a more comprehensive debate is still needed:

Importance of design considerations variables among
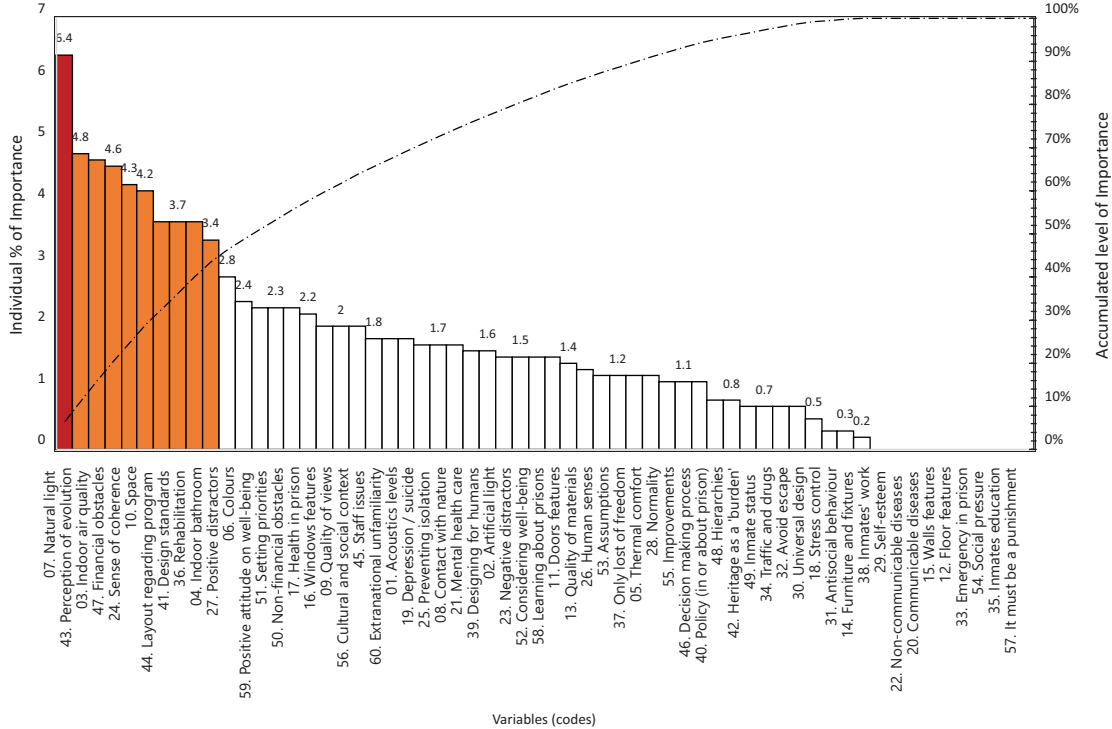High-level Staff - Rehabilitation Prison Model

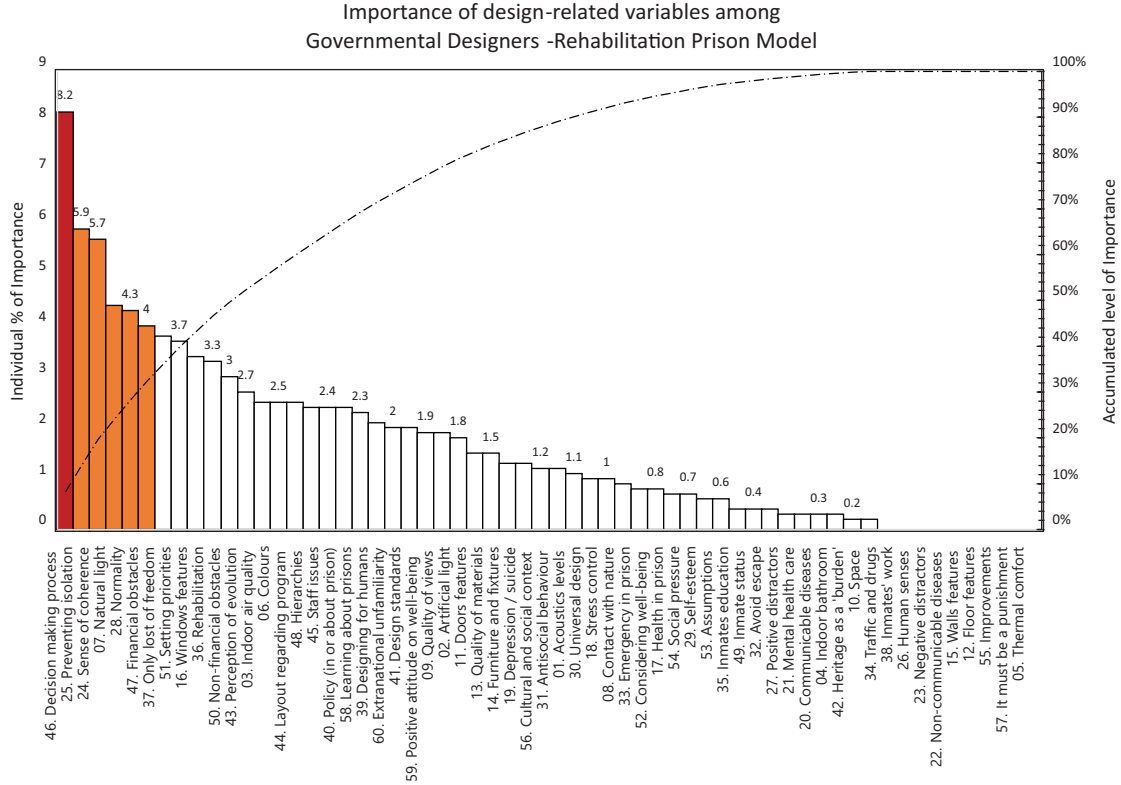*Figure 10.1* Pareto analysis of importance among High-level Staff from the Rehabilitation prison model

Figure 10.2 Pareto analysis of importance among Governmental Designers from the Rehabilitation prison model

I told you about these seminars starting like in the late sixties … but architects have not been present there. I think architects should have been more present there because I think architecture is a very potent [tool] for discussing complex things like that.

(GD-R-03)

This emphasises the importance of involving the community and working together with other organisations.

Governmental Designers also recognise the importance of having high-quality vocational training of prison workers, as one of the key elements that enable good design outcomes:

We have a … Norwegian prison workers have a very long education. They now are working to make it up to the bachelor level. There is a research institution related which share facilities with the college for their training, so there is a lot of knowledge about what is working and what is not working in the prison systems. So, I think all that information comes into when we sit down with the Norwegian prison warden. They have all the experience of what is working or what is not working.

(GD-R-02)

While the Independent Designers' interviews show a slightly higher concentration of issues of concern compared to Government Designers and prison authorities in this model, they also addressed a large group of variables in their responses, consolidating a clear pattern within the Rehabilitation prison model. This concentration is possibly the result of the attention these designers pay to the design brief.

For the Independent Designers, five variables are clustered as the most important. *Financial obstacles* (7.7%), and *non-financial obstacles* (7.2%) head the group (see Figure 10.3), meaning that "Obstacles" overall is clearly the most important variable for this group (14.9%). While Independent Designers recognise the outstanding position of Scandinavian countries in terms of adequate financial resources, they also state that the traditional way of thinking about prisons by prison staff is a big obstacle to evolution and innovation.

The rest of the variables considered by this group are *layout regarding programme* (6.1%), *normality* (6.0%), and *staff issues* (5.5%), accumulating total importance of 32.6% among the most important variables and emphasising the need for creating Normality through design.
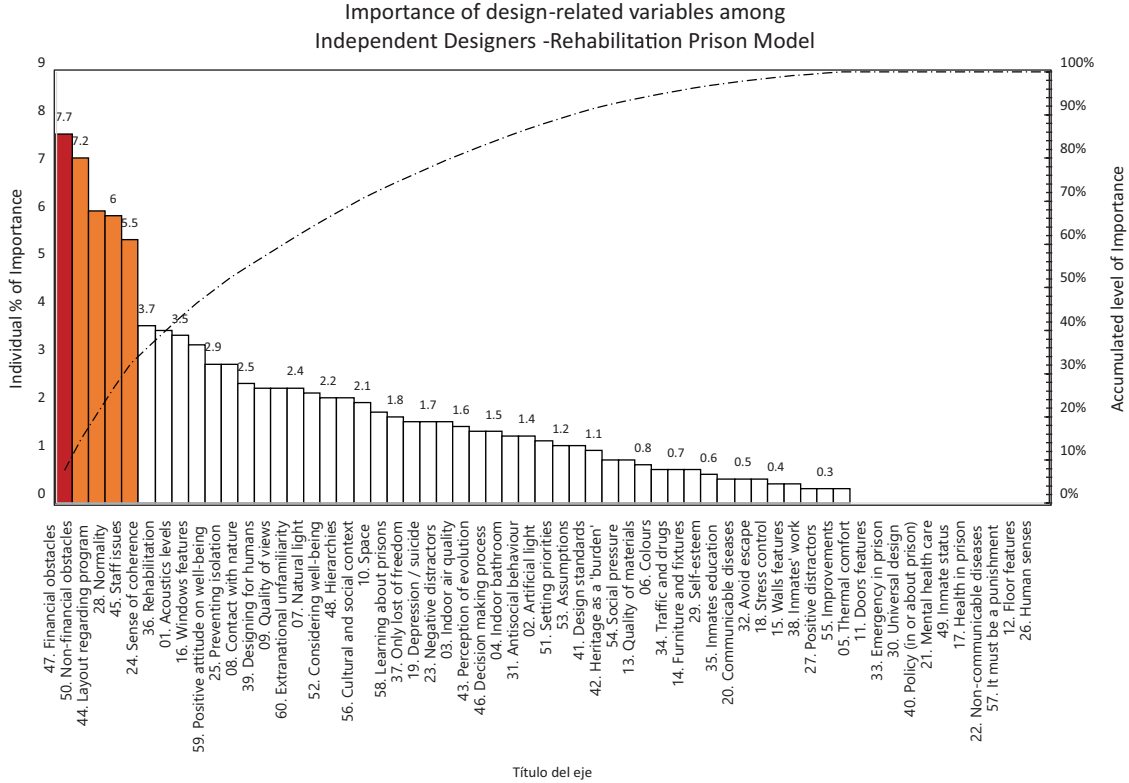
Figure 10.3 Pareto analysis of importance among Independent Designers from the Rehabilitation prison model

Governmental Designers v/s Independent Designers

The scatter plot shown in Figure 10.4 compares the results of Governmental and Independent Designers. Both groups consider the variables *financial obstacles* (#47) and *normality* (#28) as highly significant, showing their agreement in the economic nature of obstacles and the rehabilitation strategy of *normality* as the most important determinant variables of inmates' health and well-being. Interestingly, although *financial obstacles* are the most important variable for Independent Designers, it is the least important among the group of the most important variables for Governmental Designers. A similar situation occurs with *normality*. This contrast is showing that both *financial obstacles* and *normality* are important but not urgent for Governmental Designers because the concepts of health and well-being are embedded into the bases of the design projects, while for Independent Designers the economic constraints are seen as limiting their room for manoeuvring on how to translate the concept of *normality* into an architectural design.

   Seven contradictions are apparent between both professional groups. On the one hand, the Governmental Designers consider the variables *decision-making process* (#46), *preventing isolation* (#25), *sense of coherence* (#24), and *natural light* (#7) to be highly important, while these are less important for the Independent Designers. On the other hand, Independent Designers place a high level of importance on *non-financial obstacles* (#50), *staff issues* (#45), and *layout regarding programme* (#44), while those variables have only a moderate level of importance among Governmental Designers. Moreover, the variable *decision-making process* (#46) represents the highest contradiction between these two groups. These contradictions show that for Governmental Designers, the focus of the design is on the inmate's needs and well-being, and the design *decision-making process* to improve their design outcomes continually. This perspective, however, is clearly missing from Independent Designers, who are more focused on fulfilling the operational requirements of the prison service. Indeed, Independent Designers are not a continuous entity. They chop and change, which disrupts continuous improvement. However, for the Government Designers in the Rehabilitation prison model, two conditions allow them to improve continuously.

   First, although Governmental Designers work in continuous inter-action with the prison service, they actually work for the owner of the buildings they design, and they are not subordinated to the prison authority. This allows them to work towards the optimal fulfilment of organisational aim, to prevent recidivism but also towards the individual strategic goals of the building owners. For example, the goals of Statsbygg – the state body for which Governmental Designers interviewed work in Norway – state
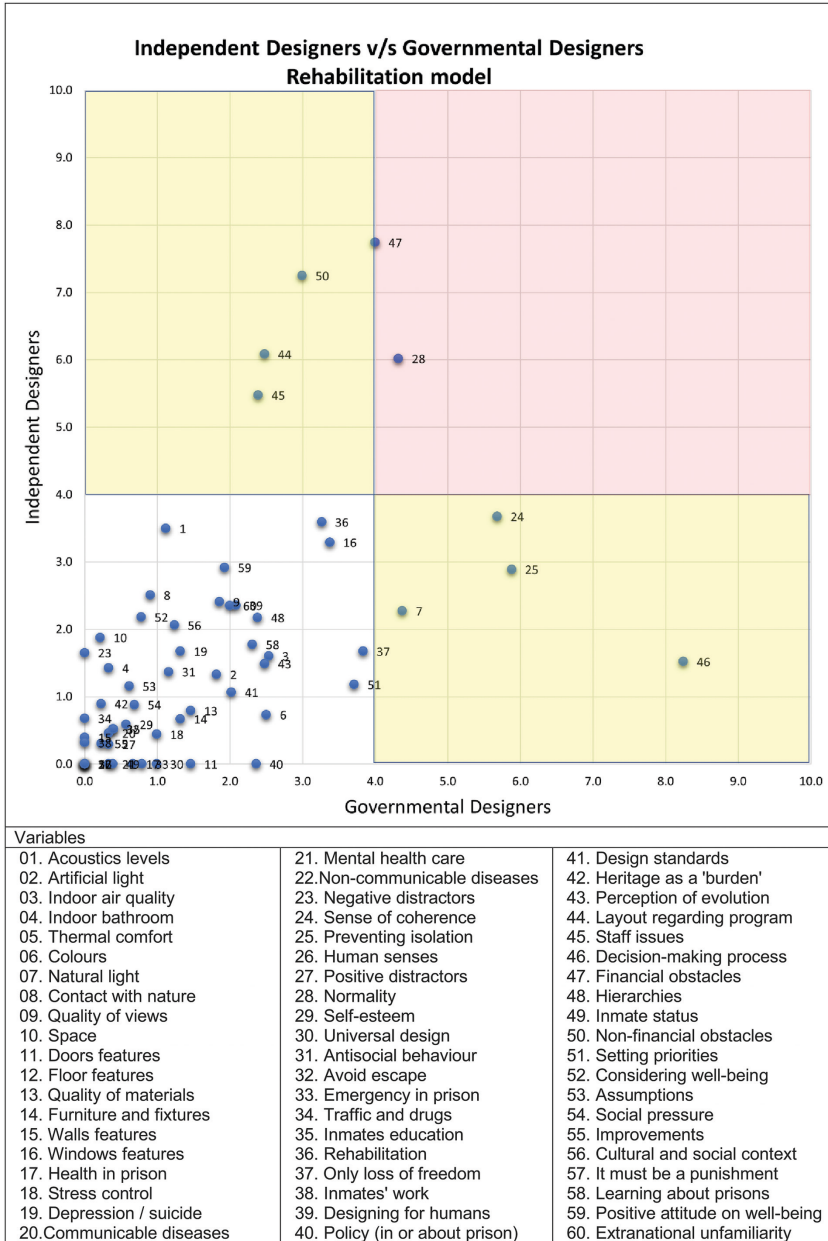
Figure 10.4 Comparison between the level of importance attached to variables by Governmental Designers and Independent Designers in the Rehabilitation prison model

that "Valuable maintenance, long-term management and development will characterise our properties" and "The premises shall enable the customer to perform their tasks in the best possible way. We will create the greatest possible value for the customer at the lowest possible cost" [298]. Similarly, Senate Properties, the Finnish counterpart of Statsbygg, state that "Senate Properties has an important role in helping the civil service not just to make savings, but also in providing new kinds of work environments that are pleasant and promote productivity" [299].

Second, because Governmental Designers work has continuity, they can create a stable institutionalised memory of their *decision-making process* and the evaluation of the effectiveness of their design solutions. This difference between Governmental and Independent Designers is highly significant when it comes to different models of prison and the way they approach improvement.

The importance placed by each professional group on each variable seems to vary based on their scope of competence, and the processes each group adopts, rather than being universally shared. Governmental Designers are the ones that have to deal with High-level Staff in taking strategic design decisions and principles within an institutionalised framework. They also have to guarantee that the brief sent to Independent Designers will ensure the accomplishment of those strategic design principles, such as the importance of *natural light*, providing inmate's *sense of coherence*, and considering *preventing isolation* through the layout and the special interior design. In turn, the Independent Designers emphasise the prison guards' resistance towards innovation as a *non-financial obstacle*. They see the number of staff required for prison as their most pressing creativity constraint, and the prison layout as their main creative input in the prison project.

Governmental Designers v/s High-level Staff

When the Governmental Designer's group is compared with the High-level Staff, three shared variables emerge (see Figure 10.5). *Natural light* (#7), *sense of coherence* (#24), and *financial obstacles* (#47) as their greatest priorities. However, among the rest of the important variables for each of these three groups, ten potential contradictions can be seen. While the two designer groups consider *decision-making process* (#46), *preventing isolation* (#25), and *normality* (#28) highly significant, for the staff group they are far less important. Conversely, variables highly important among staff such as *rehabilitation* (#36), *perception of evolution* (#43), *indoor air quality* (#3), *layout regarding programme* (#44), *design standards* (#41), *indoor bathroom* (#4), and *space* (#10) are much less important for the designers.
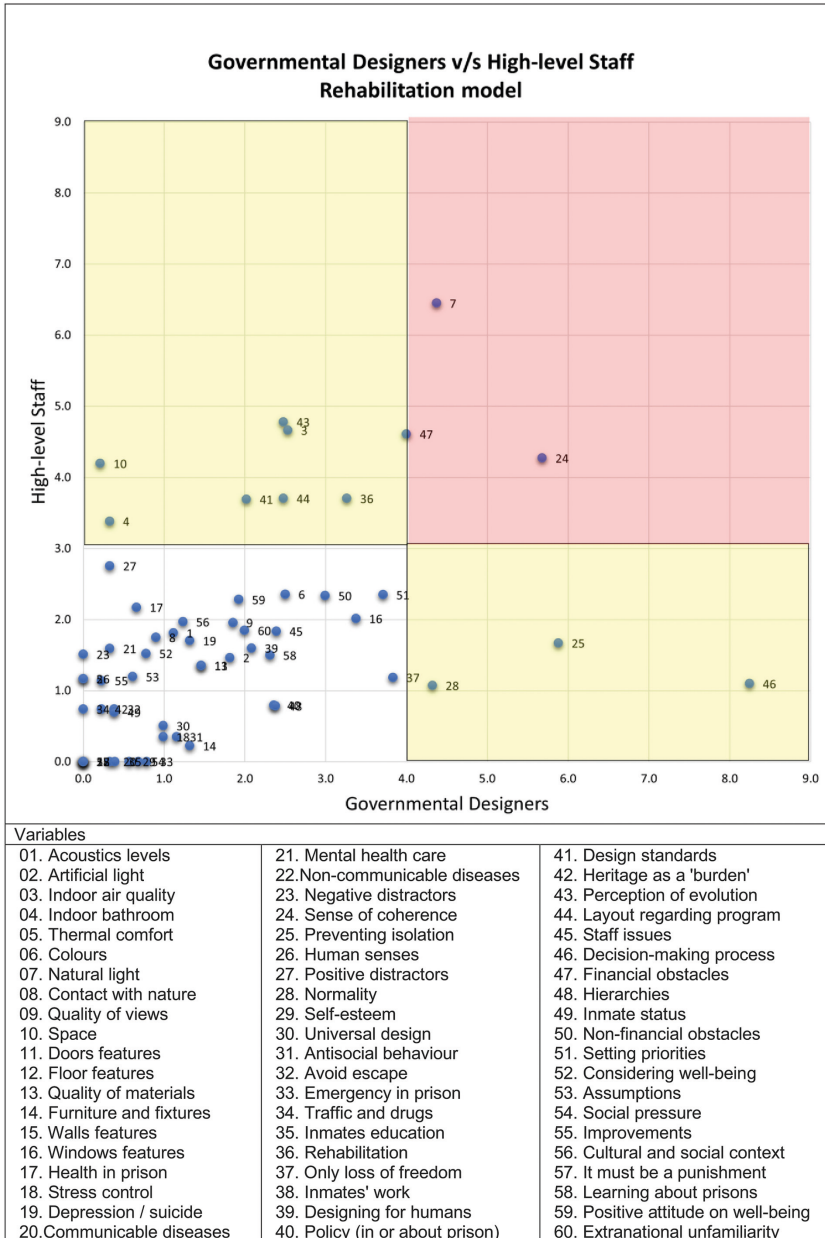
Governmental Designers v/s High-level Staff
Rehabilitation model

Variables

01. Acoustics levels	21. Mental health care	41. Design standards
02. Artificial light	22.Non-communicable diseases	42. Heritage as a 'burden'
03. Indoor air quality	23. Negative distractors	43. Perception of evolution
04. Indoor bathroom	24. Sense of coherence	44. Layout regarding program
05. Thermal comfort	25. Preventing isolation	45. Staff issues
06. Colours	26. Human senses	46. Decision-making process
07. Natural light	27. Positive distractors	47. Financial obstacles
08. Contact with nature	28. Normality	48. Hierarchies
09. Quality of views	29. Self-esteem	49. Inmate status
10. Space	30. Universal design	50. Non-financial obstacles
11. Doors features	31. Antisocial behaviour	51. Setting priorities
12. Floor features	32. Avoid escape	52. Considering well-being
13. Quality of materials	33. Emergency in prison	53. Assumptions
14. Furniture and fixtures	34. Traffic and drugs	54. Social pressure
15. Walls features	35. Inmates education	55. Improvements
16. Windows features	36. Rehabilitation	56. Cultural and social context
17. Health in prison	37. Only loss of freedom	57. It must be a punishment
18. Stress control	38. Inmates' work	58. Learning about prisons
19. Depression / suicide	39. Designing for humans	59. Positive attitude on well-being
20.Communicable diseases	40. Policy (in or about prison)	60. Extranational unfamiliarity

Figure 10.5 Comparison between the level of importance attached to variables by Governmental Designers and High-level Staff in the Rehabilitation prison model

A closer observation, nevertheless, reveals no incongruences but rather contrasts as a result of the different scope of competencies in each group. Governmental Designers emphasise the *interactive process* of defining priorities and organisational goals (*decision-making process*), which are not simply set out as written prison *design standards*, as the case of the Security prison model. Additionally, Governmental Designers see the prevention of isolation and the creation of a normal-like experience as design challenges. However, the variables prioritised by designers are compatible with staff priorities. The difference is that the staff perspective − as prison administrators − is broader in scope, emphasising both aspects habitability and manageability. This means that designers do not see habitability variables as problems but as design inputs.

The variable *decision-making process* represents the highest contrast between these two professional groups. It is rated highly by designers, who are the ones that have to learn and understand their clients to transform staff requirements into a design brief. In other words, the *decision-making process* impacts them strongly. Conversely, it is rated lower among High-level Staff, because this group simply let designers know their requirements and passes on their decisions.

Independent Designers v/s High-level Staff

The scatter plot in Figure 10.6 shows that in this case, both Independent Designers and High-level Staff agree that *financial obstacles* and *layout regarding the programme* are highly important. However, there is a significant contradiction among other variables. *Non-financial obstacles*, *normality*, *and staff issues* have a high level of importance among the Independent Designers' group but show a low ranking among the High-level Staff group.

This difference is consistent with the particular professional scope of action of Independent Designers. The three mentioned important variables for them represent their main constraints. In a counter-intuitive result, these Independent Designers attach a low level of importance for variables such as *natural light*, *indoor air quality*, *indoor bathrooms*, *space*, *sense of coherence*, *rehabilitation*, *design standards*, *or perception of evolution* which are highly rated by the staff. This could be seen as the need for Independent Designers to emphasise the variables they have more struggles with and which are related to organisational and administrative matters, rather than design issues with which they are familiar and which play to their professional strengths. *Financial obstacles* is the only variable considered highly important for all the three professional groups in the Rehabilitation prison model, constituting itself a particularly key theme.
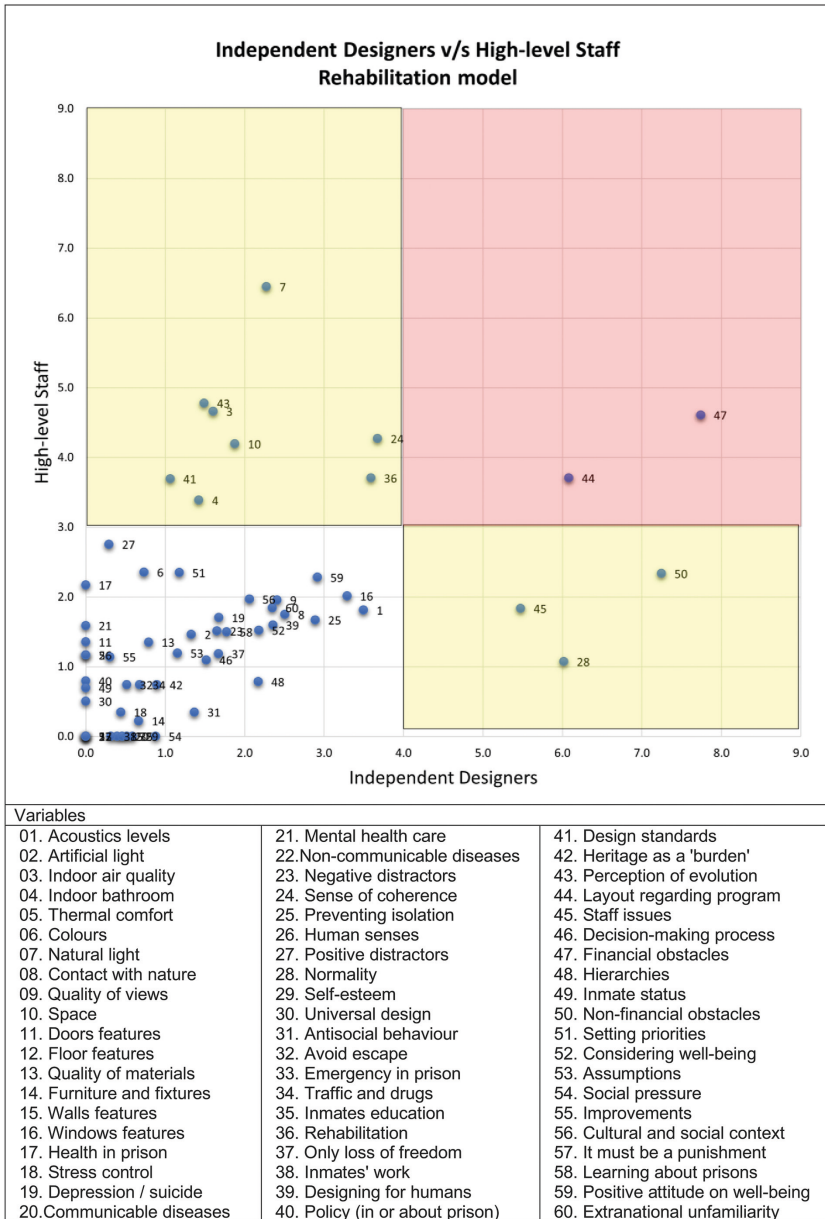
Figure 10.6 Comparison between the level of importance attached to variables by Independent Designers and High-level Staff in the Rehabilitation prison model

Normality represents the highest contradiction in this pair of groups since High–level Staff rated it at a very low level while it was included among the most important variables for Independent Designers. However, the idea of *normality* is so firmly present in Norwegian prison service [138] that their prison authorities do not make many references to it directly.

General comparison in the Rehabilitation prison model

In a general comparison of how each professional group address health and well–being, Table 10.1 shows that there is a low level of agreement between professional groups. Most of the variables are considered important only by one out of three groups. The only variable that all three groups consider as important is Financial obstacles, although there is no agreement to consider it the most relevant of them all.

Table 10.1 General comparison of the most important variables between groups within the Rehabilitation model

Variables	Rehabilitation model		
	High-level Staff	Governmental Designers	Independent Designers
47. Financial obstacles	4.6	4.0	**7.7**
07. Natural light	**6.4**	4.4	
28. Normality		4.3	6.0
24. Sense of coherence	4.3	5.7	
44. Layout regarding programme	3.7		6.1
46. Decision making process		**8.2**	
50. Non-financial obstacles			7.2
25. Preventing isolation		5.9	
45. Staff issues			5.5
43. Perception of evolution	4.8		
03. Indoor air quality	4.7		
10. Space	4.2		
36. Rehabilitation	3.7		
41. Design standards	3.7		
04. Indoor bathroom	3.4		

The following three sections will show the thematic areas emerging from the analysis of the responses of each professional group separately.

Thematic areas emerging from High-level Staff interviews

The analysis of the interviews of prison authorities revealed 11 latent themes, which were classified into seven sub-areas, revealing two main latent areas: "What we design and why" and "The Scandinavian way and the future" (see Table 10.2). Each of these areas is discussed next.

What we design and why

The first latent area, "What we design and why", shows that prison authorities have a clear understanding of what a prison in their countries should look like. The discussion of operational, criminological, psychological, and managerial concepts that support the architectural design of cells, common areas, security systems, and so on, seems to be already finished, and prison authorities seem to be proud of the result.

Table 10.2 Thematic areas emerging from High-level staff's interviews – Rehabilitation model

Latent theme	Latent sub-area	Latent thematic area
• Views and daylight are essential for mental well-being	Designing for mental health	What we design and why
• Privacy and respect for their belongings	Normality through design	
• People must feel safe	Designing for mental health	
• The physical effect of the environment must be considered		
• People must feel safe		
• Normality through design	What design must consider	
• Prisons as training facilities for teaching to live a normal life	Our way of thinking	The Scandinavian way and the future
• Working for improvement	Consolidating a Nordic model	
• Reducing quantity but never the quality		Our way of thinking
• Training inmates to live a normal life		
• Inmates' well-being and health as a state priority		

Figure 10.7 Helsinki Prison, Finland. Overhead lighting with daylight using skylight and lighting of the lower floor through the glazed floor

As derived from prison authorities' answers, daylight and sunlight are both of high importance in Scandinavian prison design. Overhead lighting has been used for many years with different design solutions and materials while still maintaining the concept of obtaining as much *natural light* as possible. Using architecture to bring daylight through not just windows but through the floor (see Figure 10.7), the roof (see Figures 10.8 and 10.9), or the walls (see Figures 10.10 and 10.11) is also considered and appreciated by staff.

The old-style prison architecture is clearly a challenge for prison authorities when talking about daylight and views (see Figure 10.12), but although there are still prisons with barred windows, many of them have generous daylight (see Figure 10.13).

Whether the windows are located in a lower or upper level of the wall, with or without the possibility of looking outside, they result in a

Figure 10.8 Skylight using daylight. Educational area Halden Prison, Norway

considerably different effect on the mental well-being of the users of the building (see Figures 10.12 and 10.13). There is a clear understanding of the need for *connection with the natural environment*. The narrower the openings of doors and windows, the more the feeling of confinement according to one staff participant:

> I think it is quite important where the window is located. Is it high, or is it low? That also has to do with what is the effect that you give to the prisoner. If you want to give the effect on the prisoner that you are really now in high security, at the surveillance, that you are surveyed, you put windows typically very high. Even in Finland in the prisons, you can see this in cells, and more you give the feeling that you belong to this society, you make windows down, and make them bigger. So, it means also that the light is better.
>
> (HLS-R02)

Figure 10.9 Skylight through the glassed roof. Vantaa Prison, Finland

Although interviewees highlight the need for visual contact, this is not just about security and surveillance, as in the previous two prison models analysed. It is also about providing inmates with privacy and dignity. These concepts can be seen in the inclusion of normal-like furniture inside the cell in which inmates can have their belongings as shown in Figures 10.12 and 10.13, or in the normal-like bathroom environments, in which inmates are not exposed to the view of other inmates or prison guards.

The concept of privacy is not only found in the design but also observable in the way in which staff relate with inmates. A clear example is the anecdotal experience of the author when visiting Helsinki prison, where guards politely requested permission from the inmate to allow the author to go inside his cell (room) or to take pictures of the inside.

From the interviewees' point of view, the rehabilitation philosophy rules the design, and that is why they agree that it is both the cell and the whole prison concept which is important. They feel that the layout must recreate

Figure 10.10 Soft daylight through walls (inside view of staff canteen). Halden Prison, Norway

Figure 10.11 Soft daylight through walls (outside view of the prison chapel). Halden Prison, Norway

Figure 10.12 Double cell in an old prison. Helsinki Prison, Finland

a sense of normal life, and it must have *space* for all the activities needed. Having small living units with eight to 12 inmates and the guards interacting with them is part of the prison concept. The staff want to avoid feelings of fear and uncertainty. Staff want inmates to feel safe and to have staff watching inmates and interacting with them as well as inmates having the chance to talk with staff at any time if they want. The possibility of visual contact among staff and inmates is therefore highly important, and for guards to be easily reached by inmates in an environment of *normality* is a key requirement of prison design in this model:

> We talk about safety. It has to be safe for prisoners and staff, but what means safe? I think that it doesn't mean that you are on holiday when you are in your own cell. You are out of your home, but the prisoners

Figure 10.13 Individual cell in an old prison. Helsinki Prison, Finland

have to feel that they are safe inside their cell. But where those kinds of feelings might come from? Have they control in that area? They can see if somebody is out there. It should be a place where it is nice to go even if it's a cell.

(HLS-R03)

The Scandinavian way and the future

The principle of *normality* in Nordic countries is not simply a strategy for improving rehabilitation rates or decreasing recidivism, even though these are positive side effects of this principle [138]. It is a strict application of the law that states that the only right that the prisoners have temporarily lost is the right of free movement in the outside society. This is a fundamental Scandinavian cultural difference compared to the previous two prison models and Hans Jørgen Engbo, a former Chief Executive of the Correctional Service of Greenland in Denmark states that "We … emphasise that it is not legitimate

to create an abnormal framework, except for the (perceptible) framework put in place by the incarceration itself" [138(p341)].

   The above explains why there is a common understanding among the Scandinavian staff interviewed, that the principle of *normality* must rule the whole prison system. This includes the prison regime, how staff treat people in prison, the opportunities that inmates must have inside the prison, access to the welfare system, and, indeed, the built environment. However, this architectural solution means the cell must have no less than the normal standards of life out-side prison – which in Scandinavian countries are already high – but also no more. As mentioned by one High-level Staff interviewed, if the conditions are too good, they could be dealing with homeless people rather than criminals.

> But it has to be good enough that you manage there, but not so inviting that you would love to come back because of the cell. So, this is a big problem because there are a lot of homeless people among prisoners, and especially among those who are coming back.
>
> (HLS-R02)

There are different views in terms of whether the cell design should be similar to a hostel room or a student residential area or even a hospital. However, having visited a high-security prison in Norway and four prisons in Finland (two open prisons and two closed prisons), my final perception is that in both countries the architecture, even in old prisons, is trying to imitate normal home-like conditions. As you can see in Figures 10.14 to 10.19, despite the

Figure 10.14 Inmate's bedroom in Vanaja female open prison, Finland

Figure 10.15 Inmates' room at Vanaja male open prison Finland

Figure 10.16 Inmate's cell Vantaa closed prison, Finland

Figure 10.17 Inmate's cell, Halden closed prison, Norway

Figure 10.18 Inmate's single cell, Helsinki closed prison, Finland

Figure 10.19 Inmates' double cell, Helsinki closed prison, Finland

disparity in terms of the age of the buildings, the quality of materials, and the different security levels, there are not so many differences in the accommodation of prisoners, and the layout of the living areas (see Figure 10.20) could be easily compared with shared student flats.

The difference between student accommodation and prisons is that the Nordic prison has a 24-hour staff presence, and intensive interaction with inmates daily, as explained by the Halden Fengsel governor during the visit to this prison.

Within the Rehabilitation prison model, security is still one of the most important issues and main concerns when designing. However, staff and designers prefer not to have bars in windows. Instead, windows are often designed to be strong enough with security glass, and even if inmates could break them, they will still be held within a secured area. Fresh air comes into the cell by a specially designed steel-made element aside from the window in a way that inmates can take fresh air at any time (see Figures 10.21 to 10.23).

What is noticeable is the significance attached by staff in this prison model to mental health, which is different from the findings from the previous two prison models. Research suggests that, typically, about one in seven prisoners in western countries have psychotic illnesses or major *depression*, which might be risk factors for suicide. Additionally, about 50% of male prisoners and about 20% of female prisoners have anti-social personality
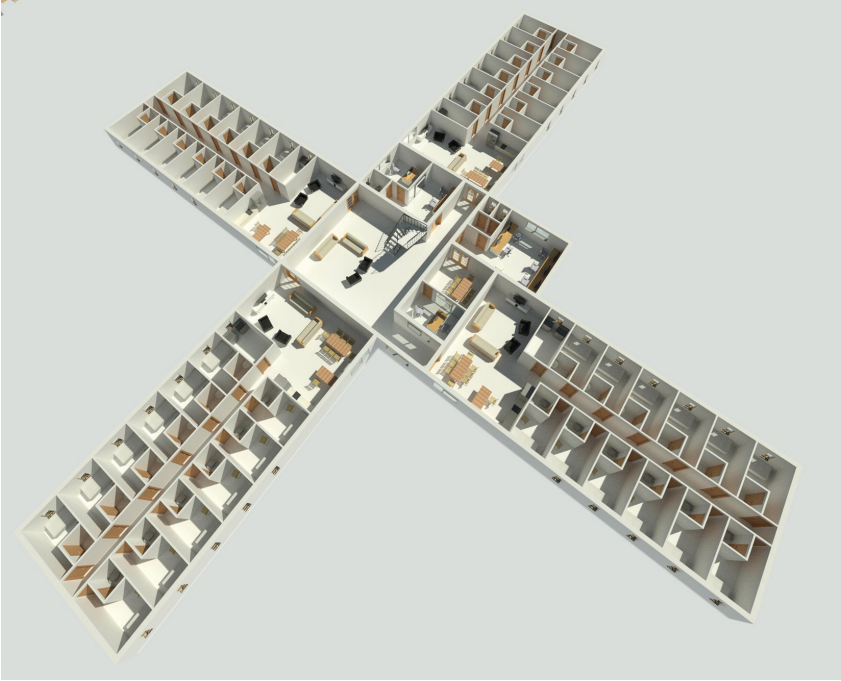
Figure 10.20 Typical layout of Norwegian prisons under the model 2015 (see Chapter 4 for a review). Outlining made by the Chilean architect Andrés Rodriguez-Ravanal, with guidance from the author based on the information collected in interviews and prison visits during the fieldwork

Figure 10.21 Typical window in cell with no bars at Halden Prison in Norway

Figure 10.22 Air intake on one side of the cell window, Halden Prison, Norway

Figure 10.23 Close-up of the air intake on one side of the cell window, Halden Prison, Norway

disorders [284]. However, this still seems an insufficient explanation for the particular level of importance attached to mental health and mental well-being among Scandinavian staff, which is explored next.

Given that the principle of *normality* underpins the whole Scandinavian system as a *sine qua non* of the rehabilitation of people in prison providing adequate physical conditions of *space* (proxemic) and a favourable psychological environment becomes more relevant. The provision of *normality* ensures that rehabilitation occurs in a safe environment, providing security for inmates and prison staff. In this sense, the considerable concern for mental health and mental well-being also becomes a concern for prison security and the safety of all people who live and work within the prison.

The need to have a safe environment to prevent attempts of self-harm is also reinforced by the fact that Scandinavian countries show one of the highest levels of suicide in prison in Europe. This is why, although each room (cell) has a bathroom, there is a crucial requirement that each room/cell must have an intercom system (lifeline) that allow inmates 24/7 communication with staff (see Figures 10.24 and 10.25).

Thematic areas arising from Governmental Designers' interviews

Analysis of Governmental Designers' responses reveals two areas of concern, identified as "the Scandinavian prison design as constant improvement" and "our problems and obstacles" (see Table 10.3), as discussed next.

The Scandinavian prison design as constant improvement

According to interviewees, Scandinavian design is focused on meeting the inmates' needs. Therefore, the design focuses on what the prison service needs to reach its goals and what the inmate requires to get the most out of the prison pathway offered. Thus, the prison design project seems to consider the point of view of all the users, including inmates, about what is essential in good prison design.

Researchers have also linked the high level of prison design evolution in comparison with other models to the long and high level of training of prison staff and the evidence-based and purpose-based decision-making that characterises them [114]. Unlike previous prison models, decisions are based on research, which shows what works in preventing reoffending, and one key element in this successful development is that the Norwegian prison service has its own research institution.

Figure 10.24 Cell intercom system, Helsinki Prison, Finland

Figure 10.25 Cell intercom system, Halden Prison, Norway

Table 10.3 Thematic areas emerging from Governmental Designers' interviews –
Rehabilitation model

Latent theme	Latent sub-area	Latent area
• All the actors are listened to • Purpose-based design as a rule in Scandinavian prison architecture • The client is the prison service, and they know what they want	How we work	The Scandinavian prison design as constant improvement
• Preventing isolation • Versatile design for mental health • The principle of normality as a cornerstone • Prisoners should be taught to make good decisions instead of following orders • Improve human well-being through de-stressing design • Interaction with inmates as normal people is key	The purpose is rehabilitation	
• Highly discreet, non-intrusive but efficient security elements • Staff must always have the upper hand on prison control • Safety and health of staff is key to improve outcomes	Our view on safety and security	
• We need optimisation rather than cost-cutting in the project	Financial cuts can put the goal at risk	Our problems and obstacles

"How we work" – one of the two most important latent sub-areas among Governmental Designers in this case – is related to the statement from designers that all the actors related to the prison buildings have something to say and they must be listened to. This includes not only prison staff and experts, but also inmates, ex-inmates, the inmates' relatives, and the community. Meetings are organised to obtain a particular point of view of each group of stakeholders in specific areas, producing concepts based on research coming out of the discussion. As one Norwegian interviewee stated, when talking about one of the prison services' working meetings:

> They [the Finnish prison service] are focused on building self-confidence and self-supply and to have confidence in others. And they involve the offenders and victims in the design process of new prisons, so they have a panel, and they also want to do new open prisons.
>
> (GD–R02)

The Norwegian Governmental Designers are thus provided with real evidence about what works and what does not, supporting another latent theme which states that the current Scandinavian prison design is a concept involving constant improvement. Even so, all the interviewees mentioned that Scandinavian design is very standardised, having just two or three different kinds of cells for different specific requirements and generally the same cell design within the prison:

> It is actually one-design-fit-all. There are very few custom-built – you know – we will never design different cells for different groups. You have one or two cells that are universally designed or like the percentage of cells that are universally designed.
>
> (GD-R02)

However, the reason that all the new prison projects have the same cell design is as a result of several research studies into the design of cells. The current stage of development of prison design is the result of the constant development through research by the prison service and then developed as a set of architectural solutions, to achieve the desired solution, according to one designer:

> It has been a constant of development really if you want, towards the … I mean, to get the perfect cell.
>
> (GD-R01)

However, although designers are aware that Norwegian prisons have a reasonably good quality of design, they are also clear that there is still room for improvement.

The second most important sub-area in the latent themes among Governmental Designers – *The purpose is rehabilitation* – is closely related to the PERMA theory of well-being presented in the first chapter of this book, as evidenced by interviewees' concerns of design spaces that encourage human contact; recreating as much as possible normal outside life; and generating positive and meaningful relationships between staff and inmates.

The importance of encouraging human contact refers to the design concerning the mental health and well-being of the people in prison. The main concern is how to avoid the effect of isolation, evidenced as part of the health and well-being sub-theme.

Although all the references about isolation and its effects were made by only one of the interviewees (GD-R03), the remarkable importance

conferred to mental health and well-being during the design process represents an essential portion of this latent sub-area and is also supported by the literature [300–303]. This significant concern is also aligned with the high rates of suicide in prison within Scandinavia [1].

Designers' interest in the feelings and psychological state of inmates appear in their design decisions concerning materiality and layout. Rehabilitation prisons are designed to promote social contact rather than prevent it – as is more usual in the other two prison models – which creates opportunities for meaningful relationships and engagement. However, the system is also based on the right to make personal choices and there is always the possibility of inmates being alone if they desire to be.

The concern for recreating as much as possible normal outside life refers again to the principle of *normality* where Governmental Designers' responses show a conceptual alignment in both the meaning of the principle and the importance of its application through the design. This design principle is present at all levels from the prison layout down to the most intimate details such as door handles, to avoid creating a counterproductive environment. The principle of *normality* is applied to the prison layout to promote an environment of normal social life and also into the detailed design as a way to create and maintain a relaxed environment among inmates, ensuring a low level of aggressiveness, even in high-security prisons, according to one designer:

> It's a little bit about design. Of course, is about daylight, is about how should the prison be placed, how should be related to the outside world and these things, but what I think is a major factor in this organisation of the social life, and how to lower their shoulders, how to make both those who work and those who live or stay there feel safe and to be safe.
>
> (GD-R03)

The design challenge is always how to create a homely environment without compromising the security of the facility. According to the interviewees, this is accomplished by creating small units that carefully resemble a normal shared flat, with no more than 12 inmates per unit as can be seen in the architectural sketch shown in Figure 10.26, which is similar to the Norwegian layout.

The whole unit is inside a wider, strong security perimeter so that there is no need to use bars in windows. The rooms are carefully designed, including the furniture. Even though it is designed to be extremely hard to be destroyed or taken apart, the furnishings are homely and visually non-aggressive.

Figure 10.26 Finnish layout of the standard house unit. Outlining made by the Chilean architect Andrés Rodriguez-Ravanal, with guidance from the author based on the information collected in interviews and prison visits during the fieldwork

In Norway, such vandal–proof elements use metallic wooden-covered doors or unbreakable glass in windows or even wooden purpose-built vandal-proof furniture in a cell to provide a homely feeling. The underlying concept here is that when inmates are exposed to good quality – home-like environment – they are less likely to cause a disturbance. Figures 10.27 to 10.29 illustrate what is understood as a home-like cell by Governmental Designers. First, the "cell" room is a generous 12 m², including a bathroom. The room contains not only a bed and a night table but also a desk, a wardrobe and cupboard with a mini-fridge, a TV set, a blackboard, and an internal call system.

Second, the whole prison is designed to imitate how inmates would normally travel from home (unit) to work or to school daily, by providing exterior walking through "normal" outdoor pathways (see Figure 10.30), without the heavily barred gates that are the norm in Security and Hybrid models. There are restricted areas, but they are demarcated by ordinary fences (see Figure 10.31), because everything is inside the very strong perimeter, permanently monitored using CCTV, and sensors (see Figures 10.32–33).

The concern for promoting *positive and meaningful relationships between staff and inmates* is expressed by interviewees through another sub-theme: teaching inmates to make good decisions rather than obey orders. The second pillar of the rehabilitation approach, mentioned as the

Figure 10.27 Halden Prison, Norway – cell's bathroom

Figure 10.28 Vantaa Prison, Finland – standard prison cell

Figure 10.29 Halden Prison, Norway – interior of a typical inmate's room (cell)

Figure 10.30 Halden Prison, Norway. Inmates' pathway to work. The building in the background is a module of inmates' living units. The windows in its fac¸ade are inmates' rooms (cells) windows

Figure 10.31 Halden Prison, Norway, delimitation of restricted areas

Figure 10.32 Halden Prison, Norway, perimeter wall

Figure 10.33 Vantaa Prison, Finland, perimeter wall. A view from the window of an inmate's room (cell)

sub-theme *interaction with inmates as normal people*, is to ensure a high inter-action between inmates and staff. These two principles effectively trans-form a group of guards into personal coaches, who stay among the group of inmates in a specific area as much as possible to teach and support them. This vision is a prison service's demand that has been present for a long time, according to one designer:

> and it has always been a focus in Norwegian prisons, from my experi-ence, on the guards being among the inmates. They don't want to sit secluded in a guardroom behind safety glass. They want to be among them, among the inmates and be part of it and that's of … again, treating them with respect.
>
> (GD-R01)

Treating inmates as normal human beings seem to be a constant theme in Scandinavia as well as ensuring staff spend enough time in direct con-tact with prisoners to increase the rehabilitation programme efficacy. This strategy also provides a higher level of support to inmates as a result of a more fluid interaction with staff [304].

Our problems and obstacles

For Governmental Designers, the design must maximise the use of per-sonnel and minimise running costs. This reveals an important level of awareness about the need to maintain a properly controlled level of running costs. Governmental Designers work for the governmental agency which owns the facilities and is responsible for their maintenance. This explains why such a high level of significance is attached to operational optimisa-tion, and reducing running costs rather than just the capital costs. Many design decisions that could be seen at first sight as simply providing good architecture or aesthetics have actually been made to reduce the running cost of a project, providing a win-win situation in terms of cost and quality overall. This is part of the argument of having bathrooms in every inmate's room, for example:

> 'cos running the prison is very important, I mean toilet and bathrooms in the eh … in the cell … eh is important for – from that factor … 'cos then obviously, you do not have to have guards to come at night to take them to toilets.
>
> (GD-R01)

Or in selecting high-quality fixtures which will last a long time:

> The materials that will be used are chosen because of durability or because of life cycle cost considerations. You want something that's dur-able. And then it also looks nice. You know it looks like good quality products.
>
> (GD-R02)

However, one of the interviewees was more explicit concerning the issue of costs of maintenance and personnel, saying that:

> In Norway, we have a lot of money, so we could not really say that. In the building project, we have a lot of money, but you have less money in like running the prison.
>
> (GD-R03)

Adding later:

> You have to really ask for, OK, if this is our limitation when it comes to money, so how can we use it the best.
>
> (GD-R03)

Table 10.4 Thematic areas emerging from Independent Designers' interviews –
                Rehabilitation model

Latent theme	Latent sub-area	Latent thematic area
• Prison service looking for modular design and standardisation to save time and money • New prisons are focused on reducing the staff needed to run them	Not everything is nice and good	Our problems and obstacles
• Staff and inmates must be and feel safe through design • It does not need to look like a fortress • Pleasant and normal environments as an investment for prison safety and future community security when released • Changing or creating habits to live a normal life • Normal-like architecture to teach to live and behave in society	Improve safety, security, and behaviour through the principle of normality	Our way of designing prisons

Thematic areas emerging from Independent Designers' interviews

The analysis in this group reveals several underlying latent themes, grouped into two main thematic areas, as shown in Table 10.4. These latent areas are discussed next.

Our problems and obstacles

For Independent Designers, innovation is prevented by prisons' staff restriction, revealing a conflict between Independent Designers' ideas about prison design and the perspectives of the prison service concerning the new model of designing prisons, called "Model 2015". The fact that Halden Prison took too long to complete as a building project and was very expensive seems to have impelled the government and prison authorities to develop a faster process, based on what they have learned from Halden, according to one Independent Designer:

> Halden is a very designed prison, and it took ten years to develop. Ten years and billions. So, they have sort of "No, not that money again. We

have to rationalise it". They want to build faster and less expensive, so the new model is some prefabricated kind of prison, that is the new model.

(ID-R03)

In other words, the fact that most of the construction process is pre–designed and prefabricated offsite is highlighted by two out of four interviewees as a serious obstacle to creativity preventing new ideas in rehabilitation, as revealed by one designer:

They made this model they want to implement in all prisons, and I think why? Why cannot we design all the different prisons individually?

(ID-R04)

Our way of designing prisons

Independent Designers contribute to the rehabilitation process by ensuring the satisfaction of basic physiological and safety needs through the layout design. The prison layout in Scandinavian prisons is seen for them as the core of their success, creating a homely and normal-like experience, to foster a favourable state of mind that improve human relationships, and lessening, as much as possible, aggressive reactions. This enables the inmates to potentially reach the highest levels of both psychological and self-fulfillment needs:

The cell in this kind of prison is more like a bedroom. Because you have your own living room, just outside, and a kitchen and a washing room. You are supposed to go and find the vacuum cleaner in the washing room and do it yourself. You are supposed to learn to live.

(ID-R01)

The architectural design is assembled in such a way that is not possible to see security and rehabilitation as separate subjects. Independent Designers aim to recreate a secure and normal daily routine to follow, set by the schedule to wake up, prepare breakfast, go to school, go to work, and so on. One of the designers (ID-R04) was even more ambitious when describing the possibilities of *normality* as a principle, arguing that prison must be seen as a scale replica of the society where inmates go to study and go to work, and they are paid for their work, manifesting that it should even be possible for inmates to be taught to pay for their accommodation and their bills and manage their budget like a normal person outside.

Key themes emerging from the Rehabilitation prison model

As shown in Table 10.5, 14 key themes emerged from the analysis and discussion in each of the three professional groups of the Rehabilitation prison model. All the themes were then grouped into five Meta-themes – *Creating normality through design*, *Financial optimisation*, *Operational transparency*, *Education*, and *Operational coherence*.

Additionally, based on this table and additional information discussed during this chapter, a Rehabilitation prison model scenario diagram was developed (see Figure 10.34).

The first Meta-theme, *Creating Normality through design*, shows a prison model design focused on creating healing, a useful and safe prison experience, using the layout as a tool and *normality* as a driving principle, in clear opposition to any deterrence approach as seen in other prison models. This Meta-theme highlights that the whole process of imprisonment, which includes the design of the prison as part of the mechanism of rehabilitation, is under-pinned – deliberately or not – by the promotion of all five components of the well-being theory PERMA: Positive emotions, Engagement and flow, positive Relationships, Meaning or purpose in life, and Accomplishment.

The evolution from the old perspectives of imprisonment and punishment to the current rehabilitative focus in this prison model promotes a treatment based on respect and equality of human value as the key elements for delivering behavioural change. These values include the promotion of health and well-being of inmates as a goal in the process.

Table 10.5 Meta themes emerging from the Rehabilitation prison model

Emerging themes	Meta-theme
• Connection with the natural environment • Privacy • Minimising fear • Recreating outside normal life • Human contact • Normality through layout • Positive relationships	*Creating Normality through design*
• Staff restrictions • Minimising running cost	*Financial optimisation*
• Involving community • Joint working	*Operational transparency*
• Highly educated staff	*Education*
• Recidivism reductions justify the initial cost • Operational coherence	*Operational Coherence*
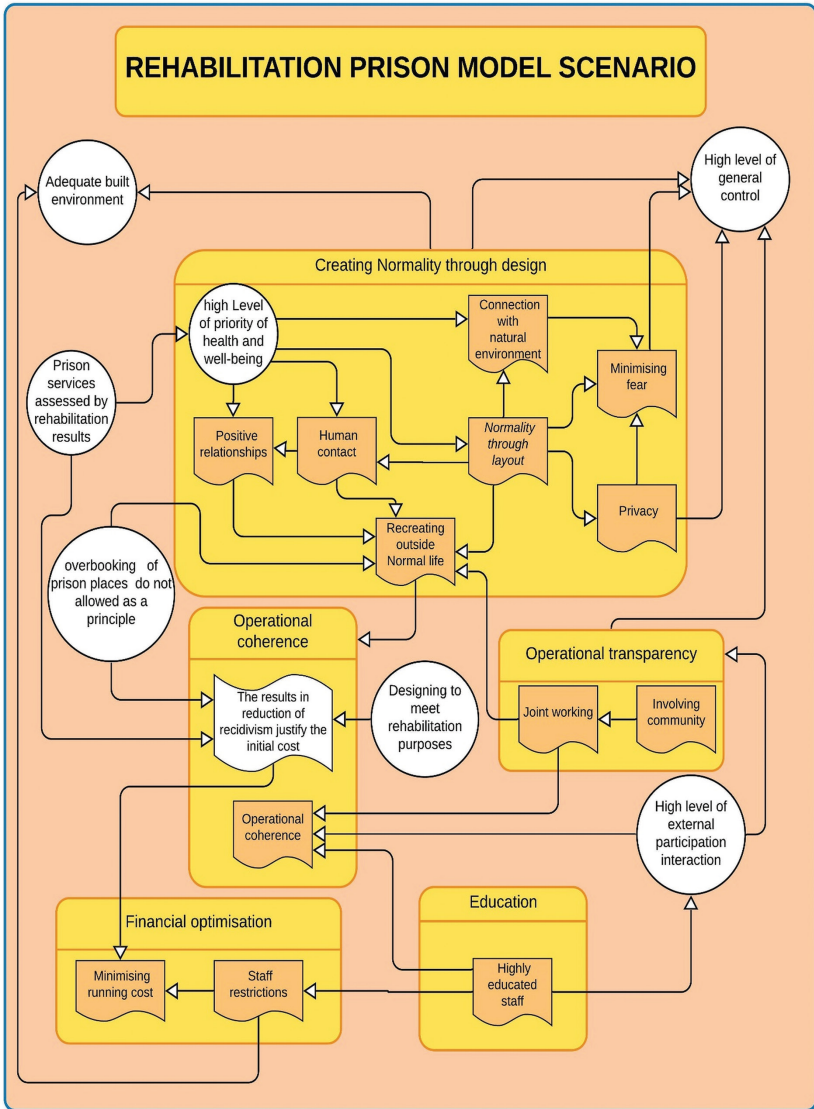
Figure 10.34 Rehabilitation prison model scenario

The second Meta–theme – *Financial optimisation* – shows that the cost of staff and the cost of running the prison are what the majority of interviewees consider the most critical constraints they have to deal with in each project.

The third Meta-theme – *Operational transparency* – exposes the high level of communal integration in the Scandinavian prison services, in which several actors from unrelated communal services have to take responsibility in the rehabilitation process while providing transparency and external surveillance over the actions of the prison service.

The last two Meta-themes – *Education* and *Operational coherence* – show the Scandinavian prison system as having socially and culturally evolved prison services, in which the effectiveness is the result of a very well-educated staff that is discussed with and overseen by the civil, political, academic, and professional community.

Note

1   Northern Europe generally shows higher rates of suicide in prison and this is consistent with the comparison with general population (GP). The suicide rate in general population in the first study is between 3.1 and 7.9 times the suicide rate in prison population (PP) within Scandinavian countries. In the second study the same indicator varies between 4.9 and 14 times. In both studies the lower ratio PP/GP is in Finland and the highest in Norway. The high level of suicide in prison shown by those studies explains the high level of concern among Governmental Designers about the aspects of design which affect mental health and well-being.

Part IV

Towards a new outline framework for prison design

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Chapter 11

Cross-case comparison of prison models

In the previous four chapters, we combined content analysis and Pareto analysis to reveal critical Meta-themes related to prison management and design processes in each case, and across the cases. This chapter develops a broader and deeper perspective to bring together the main findings of the study, through cross-case synthesis. The chapter is divided into four sections. The first section offers a summary of the individual case findings presented in the previous four chapters, adjusting them in positive terms to find initial cross-case Meta-themes. The second and third sections reveal cross-case Meta-themes by comparing the views of each professional group against their peers in each model. Finally, the final section addresses the vacuum created by the issues ignored in each case.

Summarising and organising individual case findings

The actualisation – or non-actualisation – of health and well-being in the different prison models during the *decision-making process*es of prison design is the result of the interaction of underlying causes and mechanisms. To extract the underlying dimensions which tie the prison model themes together, the emergent themes were compared in previous chapters with their correspondent content analysis and photographs from the three prison model cases. However, the international advisor group case was not analysed in this deeper way because, although they play an important role in supervising governments and putting pressure on their decisions to ensure compliance with international agreements, they do not directly participate in the *decision-making process*es associated with their prison services.

The analysis in the three previous chapters resulted in one process diagram for each prison model showing the interaction between the emergent themes and the case-based Meta-themes. This showed that among the three prison models, the Rehabilitation model has the highest degree of alignment

with the PERMA theory of well-being. The case Meta-theme *Creating normality through design* and the case Meta-theme "Operational transparency" have multiple points of convergence with the five PERMA components – Positive emotions, Engagement/flow, Relationships, Meaning/purpose, and Accomplishment.

In the Rehabilitation model, interviewees perceive the current evolution of their prison approach as the result of the influence of two main factors: its "operational coherence" through the engagement of the community, including a broad range of actors involved in the process of administrating justice; and the consolidation of a high level of "education" of prison staff, with a staff training standard that produces highly qualified personnel. These approaches are also seen as the right way to further improve the model and include joint work between prison services and external governmental entities such as the Health and the Education Ministries.

In the Security prison model, adequate *space*, *natural light*, and noise control are considered as specific and essential elements to help avoid critical events taking place. Inmates' well-being is not a priority for the Security prison model. However, designers reduce the internal pressure of the physical prison environment through the use of environmental psychology's evidence in prison design [84,188]. By "using design to lower stress", the designers address three components of PERMA: Positive emotions among inmates and staff, positive Relationships, and the maintaining of Meaning in life. However, imprisonment is still only seen as the consequence of wrong decisions made by inmates, and they are deemed fully responsible for the acts that have led them to prison. Therefore, inmates have to learn discipline by being rewarded for their good behaviour and punished for their misconduct. The prize for good behaviour is a better quality of life. Thus, inmates' well-being – when it is not related to security – is a commodity. While important elements such as *natural light*, *sense of coherence*, or *contact with nature*, are used to lower inmates' stress and maintain control of the prison, these can always be withdrawn in case of the need for punishment. Accordingly, the inclusion of elements that provide an increase in inmates' well-being is evaluated in terms of the benefits to security and staff well-being. For interviewees in the Security prison model, what precludes the improvement of prison design is the lack of awareness of the need for health and well-being in prison design. This requires more research in the field, to show supporting evidence for a positive approach to health and well-being through design. Nevertheless, the slow evolution of the Security model aims to bring more respect for human dignity, but within the contemporary "punishment" prison philosophy.

In the Hybrid prison model, prison design is heavily influenced by certain aspects of the Security model, such as control of movement, escape

and the use of security elements, but without the regime, their minimum staff/inmate ratio, and the financial resources characteristic of the Security model prisons. The result is a prison system in which health is only understood as a lack of illness, and the inmates' well-being is considered as a luxury. Unlike the Security prison model, the purpose of the Hybrid model is to deal with critical events when they occur. However, the Hybrid prison model does not provide the minimum conditions necessary to enhance Positive emotions or Engagement, cultivate positive Relationships, find Meaning in life, or Accomplish goals according to PERMA theory. There is no mention of what is needed for evolution apart from the call for a change of mindset.

Finally, The International Advisors group highlights a series of essential issues that must be addressed and solved as a prerequisite to allowing a breakthrough in prison design and management, such as the *operational incoherence* which result in incongruence between purposes and actions, the overuse of imprisonment resulting in massively overcrowded prisons, the lack of awareness of prison consequences, lack of technical knowledge, and acknowledgement of cultural differences. The connecting thread here is operational incongruence in prison services. The link between a lack of awareness concerning consequences, and the need for authorities to be educated, is again identified as the critical element for evolution.

The construction of a new prison design framework for promoting health and well-being needs to be based on the design dimensions for health and well-being revealed in this study. These dimensions must be expressed in positive terms to reach these goals. Thus, all the themes and case-based Meta-themes expressed in negative terms have been transformed and presented in positive terms to enable appropriate action to take place. A total of 18 case-based Meta-themes are identified, which includes 16 individual cases and two shared cross-case Meta-themes (*operational coherence* and *operational transparency*) as seen in Figure 11.1.

However, to reveal the deeper dimensions, new cross-case Meta-themes are extracted from a comparative cross-case analysis – first between High-level Staff and then between Designers. The next section will explain how these new cross-case Meta-themes are revealed.

Cross-case comparison among High-level Staff

The three prison models present quite different approaches concerning the findings. Therefore, the following sections expose the process of comparison between cases, which results in the extraction of new cross-case Meta-themes.
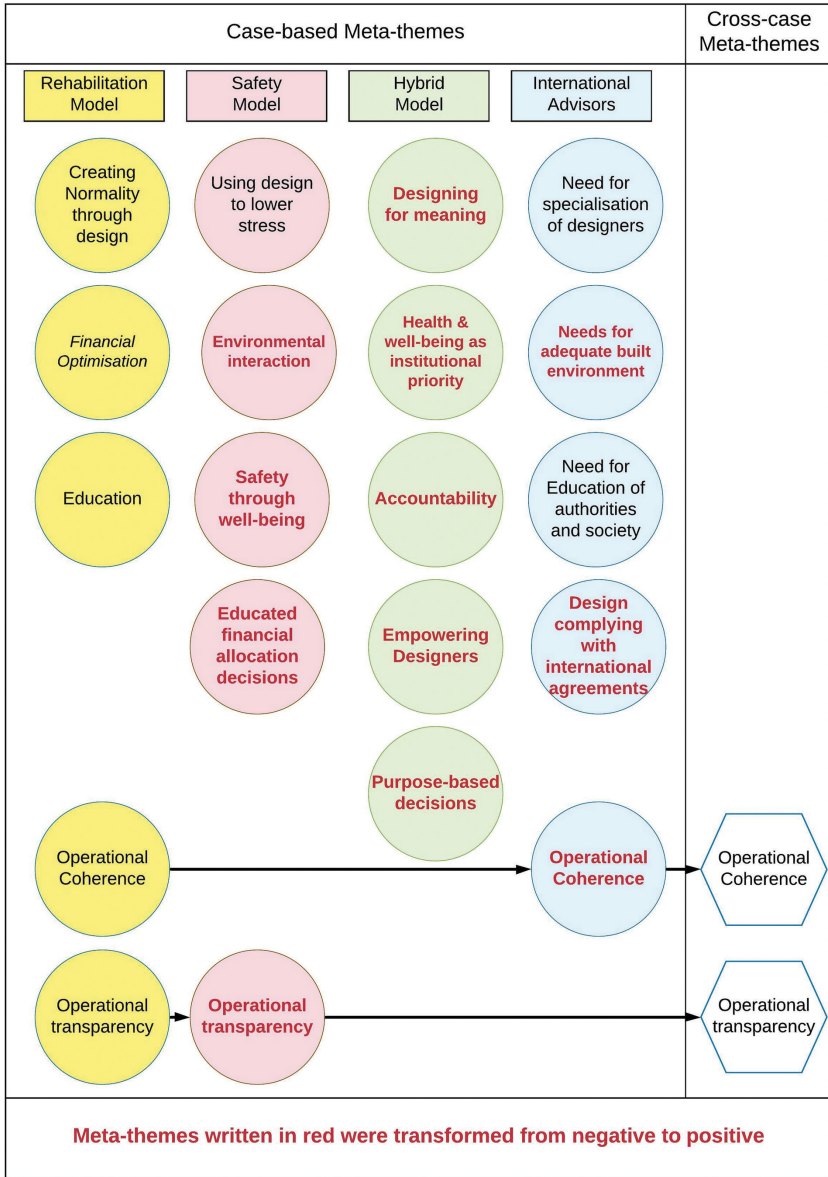
Figure 11.1 Individual Meta-themes and cross-case Meta-themes extracted after the positive transformation from cases in Chapters 7 to 10

Different prison models, different perspectives

Among staff interviewees from the Rehabilitation prison model, at a Meta-thematic level there appears to be a balance between the need for taking care of inmates' well-being; the importance of ensuring the safety and security of staff; and the accomplishment of the inmates' rehabilitation goal as an outcome. The Rehabilitation staff's focus is on the broader process of taking care and trying to transform the offender into a valuable member of the community. They talk about a broader range of variables compared to the other groups in this case study. Unlike the High-level Staff from the Security and the Hybrid prison models, the Rehabilitation staff group is the only one that talked about *creating normality through design*, for normal people, rather than creating fortresses, and avoiding any unnecessary difference between the life inside the prison and normality outside. This perspective includes design guidance based on health and well-being considerations to accomplish the rehabilitation goal of the penal system.

In contrast, staff interviewees in the Security prison model seem to focus primarily on how to design to retain the control of the prison. Although there is a genuine interest in the improvement of inmates' physical environment, the perspective is utilitarian: *using design to lower stress*, inmates' anxiety, and violent responses to lower risks to the staff. The implementation of the third-generation direct-supervision prisons design has brought in a new approach that emphasises well-designed building features and socio-psychological elements that could reduce the risk of violence between the inmate-inmate and inmate-staff relationships in their daily interaction [84]. However, rather than reducing risk to improve well-being, the *design guiding principle* here is to improve well-being to reduce risk. The former is an inmate-centred approach while the latter – *safety through well-being* – is a staff-centred one. For the Security model staff, lack of education is preventing improvements in design for health and well-being at two levels. First, the need for *educated financial allocation decisions*, ensuring that financiers and politicians involved in the *decision-making process* are aware of how prisons work and what is essential when designing them. Second, designers have to learn in the field about how prisons really work. However, this may not result in an aim to improve inmates' health and well-being, but more probably the instrumental use of health and well-being to control inmates' behaviour and ensure staff's safety (under the Security model paradigm).

Conversely, for the Hybrid prison model, the most critical issues all the staff interviewees refer to is the permanent conflict between punishment and rehabilitation perspectives during the process of decision-making. The

traditional punitive perspective is characterised by the beliefs that inmates are dangerous and violent by nature, and that inmates have to abide by the prison rules and accept the carceral conditions, even though this could affect their health and well-being. Those staff supporting a rehabilitation approach appear very small in number, poorly resourced and incapable of showing evidence that rehabilitative efforts pay off. In this scenario, health and well-being appear to be understood only as a lack of illness. Interviewees celebrate any local action that improves inmates' well-being, but there are few financial resources available and no political interest for embedding these actions more generally in prison policies.

These essential differences in the approaches towards imprisonment in each of the three prison models studied raise a question of whether there are also any apparent similarities between the models concerning staff's views on health and well-being in design, as discussed next.

Thematic similarities in staff's perception

Financial obstacles, a *sense of coherence*, and *space* are considered among the most critical issues when designing for health and well-being by staff in all the three prison models (see Table 11.1). However, the approach in each prison model places a different emphasis on these issues.

Financial obstacles

Financial obstacles are considered important in all three prison models. However, for Hybrid model interviewees, it is about the low level of priority of health and well-being during the *decision-making process*. For Security model interviewees, it is about the need for education of financiers in prison matters and Rehabilitation model interviewees, it is a matter of *operational coherence* because their positive outcomes in reducing recidivism justify their high operational cost.

Paradoxically, there seems to be no relationship between the wealth of the country and the financial concerns expressed by prison staff. Indeed, staff from the Security model and the Rehabilitation model, both belonging to the wealthiest countries, still consider *financial obstacles* as a critical issue. Moreover, for the Security model staff interviewed, it is the most important of them all. These phenomena also have different causes, however. In the US Security model, the *financial obstacles* are closely related to pressures for budget cuts and *financial optimisation* [1].

As the US has by far the largest prison population in the world, the budget that local and federal governments must divert to the prison systems is high. This increases the need for economic efficiency in prison projects, reduces

Table 11.1 Comparison of the most important issues considering only High-level Staff and International Advisors

Critical issues	Prison models			Across prison models
	Hybrid model	**Security model**	**Rehabilitation model**	*Number of models that consider this variable as important*
	High-level Staff	*High-level Staff*	*High-level Staff*	
47. Financial obstacles	5.8	10.0	4.6	3
10. Space	4.2	8.0	4.2	3
24. Sense of coherence	4.9	5.4	4.3	3
07. Natural light		9.0	6.4	2
46. Decision-making process	4.9	5.9		2
41. Design standards	4.7		3.7	2
50. Non-financial obstacles	8.4			1
03. Indoor air quality			4.7	1
40. Policy (in or about prison)	4.7			1
25. Preventing isolation	4.8			1
43. Perception of evolution			4.8	1
44. Layout regarding programme			3.7	1
04. Indoor bathroom			3.4	1
36. Rehabilitation			3.7	1

the running cost of the prisons, and turns them into attractive candidates for budget-cutting to maximise local government resources. As mentioned by one interviewee:

> Every government is struggling to find the money for corrections. The cost of running correctional facilities in this country is going up and up and up.
>
> (HLS-S-01)

However, the staff interviewees' main concern is the lack of *educated financial allocation decisions* made by politicians and financiers, and an obstacle best removed by educating them to eliminate false beliefs about what a prison should be. In the Rehabilitation model, the concern is more about the high cost associated with the exceptionally high staff-per-inmate ratio, which is roughly one prison officer per inmate. Again, the need for *financial Optimisation* within prison projects is a significant constraint.

For the Hybrid model interviewees, the lack of financial resources is patent and endemic. The budget that governmental authorities allocate for prison operation and development is insufficient for all the needs generated by the old and overcrowded prisons. This budget, therefore, has to be optimised and distributed across all the prisons in the country, leaving only a small portion for emergencies and unavoidable critical events. These concerns are shared by International Advisors, who see the lack of financial support as a common issue across all the countries and all three prison models.

Although the nature of the concerns related to financial issues varies among prison models, the common cross-case theme across all the models is this need for *financial optimisation*, which can affect the health and well-being of prisons' users. Prison project costs are significantly higher than in traditional buildings, and as they are not considered a financial priority, they often face budget cuts. When those cuts are made without considering their impact on the outcomes of the system, they often create dangerous places, as well as inefficiency in rehabilitating inmates.
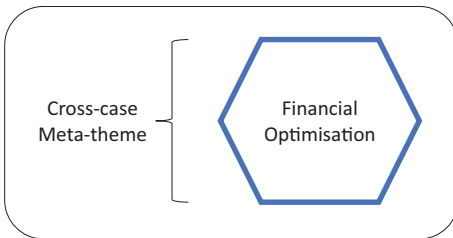
Different approaches to space

There is unanimity across all the prison staff in considering both physical and interpersonal *space* as important, which justify spatial considerations as part of the *DESIGN PRIORITY* dimension. However, when the data is carefully examined, some significant differences appear in the apparently congruent views of the staff. This is because each group again has different objectives and interests. International advisers must ensure that prison models comply with international conventions, while the staff, as prison administrators, place more emphasis on fulfilling their prison model objectives.

For the Rehabilitation model staff interviewees, inmates enjoying enough personal *space* in cells reduces the psychological pressure that their interaction with other inmates produces in prison. Therefore, having enough *space* is seen as a prerequisite for providing the right mental and emotional state of inmates for rehabilitation. For the Security model staff interviewees, the importance of having enough *space* to separate inmates is the reduction of the odds of violent events and risk situations.

In turn, the Hybrid model interviewees recognise that overcrowding in the current prison environment is damaging the mental health of inmates related to the failure of public policies to provide the minimum *space* necessary to treat inmates with dignity. However, they have no clear policies or evidence-based design guidance on this matter. For the International Advisors group, the *space* issue is different again, linked to preventing the spread of *communicable diseases* and protecting mental health (see Table 11.2).

Although International Advisors recognise the different cultural perspectives in spatial needs, they highlight the common misunderstanding about what a minimum *space* is, and why it is needed. Therefore, although the focus varies according to the interests of each group, *space* is identified here as a cross-case theme within the *DESIGN PRIORITIES* dimension.

Table 11.2 Importance of *space* by case study

Variable	Case study	Importance
Space	Rehabilitation model	Providing positive mental and emotional state for rehabilitation
	Security model	Reduction of the odds of violent events
	Hybrid model	Recognition of importance for mental health but no actions
	International Advisors	Communicable diseases control and mental health protection
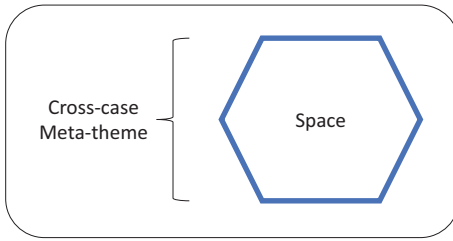
Sense of coherence

The notion of coherence in physical design allows inmates to manage everyday situations – such as controlling their own light or having a key in their cell – and trying to avoid uncertainty. Although International Advisors do not include it among their important variables, a *sense of coherence* is valued among staff across all three prison models as a *design priority*. It is in the Rehabilitation model, where a *sense of coherence* is most strongly linked with the purpose of rehabilitation, meaning, and promotion of well-being.

   In the Security model, although coherence is seen as a practical tool to promote trust towards the staff and minimise uncertainty, giving inmates control over their personal environment is also seen as a benefit, and therefore used as a reward to incentivise good behaviour. However, in the Hybrid model, concessions in this direction are seen by staff as unthinkable as a solution in countries such as Chile because of the tendency of inmates to destroy everything. As one interviewee comments:

> you have also to think in the material that is used. You have to design thinking that they will try to destroy it. That at some point they will want to do something harmful.
>
> (HLS-H-02)

Although the image of inmates as dangerous and unpredictable is present in the comments of many Chilean staff interviewees, there is little awareness in this case about the possible link between the carceral conditions and the level of aggressiveness and unpredictability of inmates (see Table 11.3).

   Therefore, a *sense of coherence* is identified as another cross–case Meta-theme, located within the *DESIGN PRIORITIES* dimension.

Table 11.3 Importance of *sense of coherence* by case study

Variable	Case	Importance
Sense of coherence	Rehabilitation model	Rehabilitation, meaning and well-being promotion
	Security model	Reward for good behaviour
	Hybrid model	Ideal but not feasible
	International Advisors	-------------
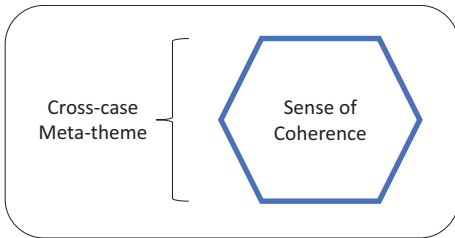
Neglected issues

Attending to those areas not mentioned at all by any interviewees is as important as extracting the cross–case Meta-themes. Their omission can be understood as resulting from the activation of more powerful counterforces which can help us to understand the interviewees' priorities from a broader perspective. The issues neglected by staff in all the prison models are *inmates' education*, *self-esteem*, *non-communicable diseases*, and *it must be a punishment*. Other issues neglected in two out of three prison models' staff include the need for an *indoor bathroom*, awareness of the presence of *negative distractors*, avoidance of *communicable diseases*, importance of *inmates' work*, appropriate consideration of *floor* and *wall features*, and elements to prevent and control peoples' *stress*. This "negligence" deserves deeper investigation.

Comparing views between the prison authorities and the International Health Advisors reveals another dichotomy. Indeed, *non-communicable diseases* are neglected by staff interviewees in all the prison models, and only the Security model staff include *communicable diseases* but with a low ranking. Additionally, only the Security model staff talked about *indoor air quality* among the critical issues. This suggests that health, including airborne diseases, is not a priority for most prison staff while it is for Prison Health Advisors, who are trained to be more focused on health issues.

In the Rehabilitation model, the low priority of these issues is probably because inmates' health is the responsibility of the Ministry of Health and is operationalised by public healthcare centres, meaning that the staff interviewees do not have to focus on this issue. The same applies to education matters. However, this is not the case for the Security or the Hybrid prison models where prison services have to provide health services as well. The most worrying concern from all these findings is the lack of importance placed by staff interviewees in the Hybrid prison model on *communicable diseases* and *indoor air quality.* Even when their prisons show high TB and HIV rates [232,305] and there is no mechanical management of air quality in any inmate areas, these issues are not seen as relevant. The failure to focus on creating healthy conditions seems to occur because of the lack of adequate economic resources, and the prison authorities' apathy towards inmates' basic needs because they are offenders – which in turn, is worsened during the prioritisation of resources. This suggests a need to share responsibilities with the health sector and have transparent and comparable assessments of compliance with international agreements to satisfy basic human needs in prisons.

In addition to the above, the lack of understanding of the adverse effect of issues such as the presence of *negative distractors*, poor quality of housing areas, poor *stress control*, or low *self-esteem* reveals the need for dissemination of knowledge to staff regarding the interaction between design and health and well-being. Staff across the prison models appear to have an interest in providing better conditions, but a low level of knowledge concerning the impact of the built and natural environment on people in prison. Therefore, the cross-case Meta-theme that emerges is the *need for knowledge of the effects of design on well-being*, located within the newly revealed EDUCATION dimension here.

Cross-case
Meta-theme

Need of
Knowledge
on the effect
of design on
well-being
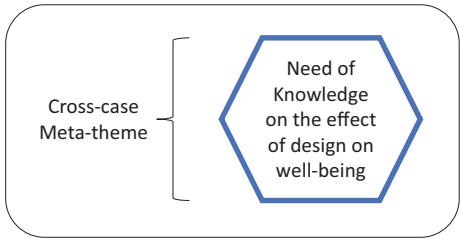
Four important new cross-case Meta-themes – *financial optimisation*, *space*, *sense of coherence*, and *need for knowledge of the effects of design on well-being* – were obtained from the cross-case comparison of staff as described above. The next section shows how additional cross-case Meta-themes were extracted from the cross-case comparison of designers' views.

Cross-case comparison among designers

To unearth the underlying patterns across the cases, a cross–comparison is undertaken separately between Governmental Designers, and then between Independent Designers' groups, due to their different characteristics (see Table 11.4).

Governmental Designers

When comparing the Governmental Designers' groups, both Scandinavian and Chilean groups agree on a high level of importance for the same three issues: *decision-making process*, *natural light*, and *financial obstacles*. However, on closer examination, there are actually no commonalities in what interviewees are saying about this. The reasons why and how these particular issues are essential for each group are significantly different. When the Scandinavian interviewees talk about the *Decision-making process*, they talk from the deeper *operational transparency* and *decision-making* dimensions. They show pride in the constructive and inclusive way in which decisions are made and how knowledge is acquired and shared. The Scandinavian *decision-making process* appears to have a precise aim, and multiple external actors participate by working alongside the prison service in harmony with this aim. Although some voices are asking for a more punitive approach, and some politicians are willing to gain their appreciation by populist campaigns, their views seem to be countered by underlying stronger forces. Indeed, the respect-able place that knowledge and scientific evidence have in those countries has played an essential role since the late 1960s in transforming their pre-vious Security approach into what today is the Rehabilitation model. As mentioned by one interviewee:

> You have some voices, but you do not have strong voices that would ask for a prison climate that is not a nice place, [saying that] it should not be a place for well-being … And that could come from politicians; I guess you can find people arguing a bit like that. … In my experience, those voices are fewer and less strong than the voices from different actors that are trying to fulfil the Rehabilitation goal by making it nice for those who work and nice for those who stay there. So, it is not strong, but you find those arguments as well in all the groups.
>
> (GD-R03)

This shared objective seems to bring into play several forces such as the evidence provided by research (from the prison service research institution or academia), the opinion and experience of a highly educated prison staff, and the voice of the community which is also included in the discussion.

Table 11.4 Comparison of critical issues considering only Designers and International Advisors

Critical issues	Prison models				Across prison models
	Hybrid model	**Security model**	**Rehabilitation model**		*Number of models that consider this variable as important*
	Governmental Designers	*Independent Designers*	*Governmental Designers*	*Independent Designers*	
50. Non-financial obstacles	**13.7**	8.7		7.2	3
07. Natural light	6.1	**9.8**	4.4		3
47. Financial obstacles	5.8		4.0	**7.7**	3
46. Decision-making process	6.1		**8.2**		2
24. Sense of coherence		6.3	5.7		2
06. Colours	3.9	5.2			2
03. Indoor air quality	5.2				1
28. Normality			4.3	6.0	1
41. Design standards	5.8				1
25. Preventing isolation			5.9		1
43. Perception of evolution		5.7			1
44. Layout regarding programme				6.1	1
45. Staff issues				5.5	1

Although Scandinavian Governmental Designers seem to be proud of their prison systems, they also believe there is still room for improvement, through more research, and by including designers in the discussion. They also mention the need for designers to see the built and natural environment through the eyes of the inmates to understand their particular psychological states and needs.

By contrast, the Chilean Governmental Designers interviewed highlight the flaws and weaknesses of the decision-making dimension characterised by lack of planning and a lack of rehabilitative organisational objectives, with an emphasis on quantity rather than the quality of actions. They see no clear prison aims concerning rehabilitation, with decisions based on political considerations rather than scientific evidence. This situation results in reactive short-term policies, buffeted by every change of government. Although in theory prison projects must abide by national general design standards, in practice there is a relaxation of architectural requirements whenever "security reasons" or the need for financial savings are put forward.

The underlying forces in the Hybrid model seem to be characterised by two key factors. First, the weak influence of external technical and social actors – such as academia, research institutions, local communities, judicial actors, or international bodies, and internal actors such as the rehabilitation area of the prison service. Second, the strong presence of both the populist political pressure and the fear of the security staff from the prison service prevents changes to the status quo.

This results in a cross-case Meta-theme of the level of external influence and participation, which affects the underlying dimension of OPERATIONAL TRANSPARENCY. This participation is extensive in the Rehabilitation model but narrower in the Security model, due to judicial and economic pressure, and almost non-existent in the Hybrid model.
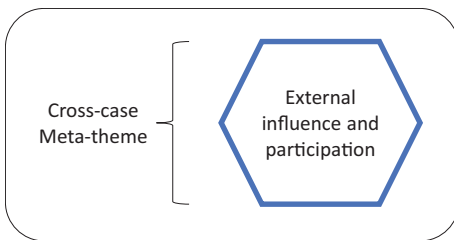
Natural light is another critical cross-case Meta-theme within the DESIGN PRIORITIES dimension, considered important by both Scandinavian and Chilean designer interviewees and Independent Designers in the Security

model. However, the actual use of *natural light* varies depending on the geographic location and the nature of the prison model.

For both designers and staff in the US, where windows to the exterior world are avoided and guards rely hugely on observation and control to keep things safe, having plenty of daylight is paramount, which explains the significantly high level of importance placed by both professional groups in this factor (as seen in Tables 11.1 and 11.4). The Scandinavians take advantage as much as possible of daylight and sunlight, by designing large security windows, contextualised within a layout and a prison regime that make unnecessary the use of bars, while Chilean designers under pressure from security staff reduce *natural light* as much as possible to prevent any probability of escape. As mentioned by one Chilean designer:

> Light is a difficult subject to handle. It is difficult to manage for two reasons. On the one hand we do not have new prisons. Most of our prisons are very old. They have windows that do not allow enough light, and the buildings' extensions that have been made – sometimes because of the need to supply additional cells or have spaces for more dormitories – turn them into truly caves of mice, so there is no greater concern in the subject of light. On the other hand, our closest referents are the public-private partnership prisons and some other complex prisons that were built in the 1990s, and for security issues [providing them with enough natural light] is not allowed either. Perhaps it is because of the materials of the time, but we are not allowed to design big windows for a matter of security, to prevent a possible escape.
>
> (GD-H-01)

Hybrid model designers are eager to emphasise the importance of *natural light*, *indoor air quality*, *colours*, and *design standards* as a way to highlight the design elements that should be considered but complain that these factors are neglected due to inadequate budget allocation and a lack of commitment from prison authorities in requesting adequate funding from the government.
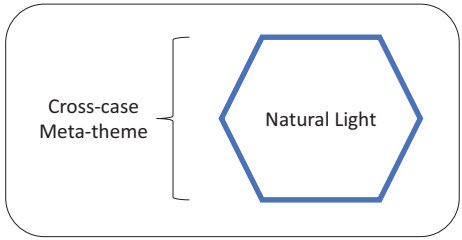
All groups interviewed recognise that there is a need for optimal use of finances arguing that prison services are the lowest priority for governmental funding. The Scandinavian designers see *financial obstacles* as challenging them to maximise the efficiency of human resources use and the efficacy of the architectural layout. The Hybrid designers – who lack financial resources – see scarcity arguments as an excuse to justify bad political decisions in the allocation of resources. These findings are consolidated in a cross-model/cross-case 1 Meta-theme *financial optimisation*, as an underlying dimension also.

Independent Designers

Among Independent Designers from both the Security and the Rehabilitation models, there is even less agreement on the key issues. Only *non-financial obstacles* are considered important for both of them. The fear of authorities at being seen as weak on crime constitutes an obstacle for evolution, making politicians and decision-makers feel insecure for fear of being accused of not doing the right thing. This insecurity is enhanced by a lack of knowledge. The lack of evidence for obtaining optimum outcomes and being able to thus justify their decisions in front of the public leads them to avoid controversial situations. However, uneducated decisions made by financiers and politicians can result in inadequate financial allocations, increasing the risk of loss of prison control by staff and jeopardising rehabilitation.

One way to address this fear is to promote prison research that guides decision-makers toward *evidence-based decisions*. Evidence provided by research can help to contain both community pressure on decision-makers – often driven by emotions – and the negatively populist use of those emotions by some politicians. Research can show justifications for prison design that helps to reduce reoffending when the entire prison system is geared toward rehabilitation.
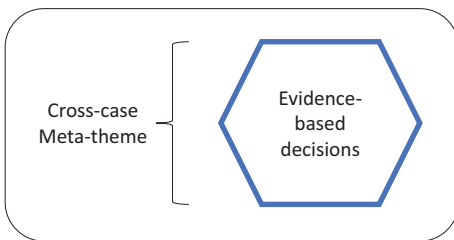
The Rehabilitation model evolution is not due to benevolent penal institutions but rather to the accountability of prison services through the constant observation and intensive actions of non-governmental pressure groups of criminologists, lawyers, and social workers among others. Similarly, many of the improvements in the carceral conditions related to the health and safety of inmates in the Security model have been due to legal battles in which the existence of discretionary design norms developed by Independent Designers' organisations have played a fundamental role in their accountability. In the Hybrid model, however, neither external monitoring nor external regulation is present. The underlying cross model theme emerging here, within the OPERATIONAL TRANSPARENCY dimension, is, therefore, one of *accountability*.
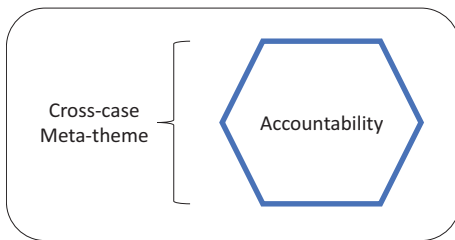
Interviewees from all four cases consider that *financial obstacles*, the presence of *natural light*, *the process of decision-making*, and *space* are key issues for health and well-being. Moreover, when comparing only prison models, a *sense of coherence* adds to these needs. However, to understand the key shared issues across all groups, it is necessary to look closely at what these similarities mean at a deeper level for the interviewees.

The approach to decision-making from the Rehabilitation model works as a plural process, which considers a wide range of stakeholders, with a focus on the rehabilitation of inmates and the safety of the prison staff. The well-being of the prison stakeholders is considered a priority. In the Security model, the approach to decision-making is linked with the staff concerns about their diminished project decision-making power, which usually lies with people unrelated to the prison service. The institutional priority and focus of the design is the safety of the staff and control of inmates. In the Hybrid model, the focus is not placed on rehabilitation or the health and well-being of inmates, but instead on warehousing inmates and keeping them under control, while trying to avoid being affected by the legal or political consequences of riots, suicides, or escapes.

The interviewees' concerns here are that external and internal design decisions are made without evidence, feedback, technical information, or planning. All these concerns are aligned with the views of International Advisors, who highlight the need for prison authorities to understand what humane conditions mean. The above confirms the cross-case Meta-theme of the need for establishing Health and well-being as an organisational priority within the overall dimension of DECISION-MAKING.
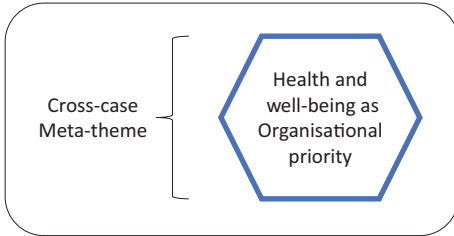
How and why are some issues ignored?

The absence of some topics among the concerns of the interviewees may be due to such problems they have successfully addressed in the past and their solutions have been internalised and standardised, or perhaps it is because their socio-cultural approaches make them see that there is no reason to address those issues; or perhaps because the seriousness of the main problems is so great that these issues are relegated to the background. The former seems to be the case of the Rehabilitation model, where issues such as *thermal comfort, floor* and *walls' features*, or the control of *non-communicable diseases* have been successfully addressed for a long time through their organisational purpose of creating normality through design.

The neglected issues among the Security prison model, in particular, reinforce the need for *operational transparency*. Many issues are neglected in the prison design, such as *indoor bathroom* (other than a toilet in the middle of the cell); *preventing isolation*; *positive distractors*; *normality* (as recreating outside normal life); or *promoting self-esteem*. The presence of powerful counterforces against these factors being considered is illustrated through a shared principle among Security prison model interviewees that the prison must transmit a message to the inmates along the lines of: "This is not home, this is not a place of vacations. This is a prison. You are under the control of, and being permanently monitored by prison officers". Therefore, to weaken the effect of those counterforces requires increasing the *level of external influence and participation*, identified as a cross-case Meta-theme within the higher

dimension of OPERATIONAL TRANSPARENCY. This requires the engagement of social actors and academic entities that can improve the visualisation and transparency of what happens inside the prison.

The Hybrid prison model also shows a moderate percentage of neglected issues. However, compared with the other prison models, it has the lowest number of these shared between its professional groups (only six coincidences). This highlights the different priorities between High-level Staff and Governmental Designers. In other words, there are counterforces among the staff that is different from the counterforces present among the designers, resulting in a disagreement about which issues are essential and which are not important at all. Therefore, the first and most urgent task in this model – to promote the evolution towards a Rehabilitation model approach – is to establish health and well-being as an organisational priority, as an aim shared by all the levels of the prison services, within the DECISION-MAKING dimension.

The International Advisors also evidence different sets of priorities. Prison Policy Advisors ignore nearly half of all the issues covered in this study, showing their urgent need to deal with just a few critical economic, administrative, and political issues that prevent the actualisation of health and well-being policies. On the other hand, the Health Advisors seem to have a more comprehensive diagnosis of the situation of health and well-being in prison – leaving aside only nine issues, six of which are shared as being absent from prison Policy Advisors consideration also. Despite the above, the efforts of International Advisors seem to have little impact on prison services. The fact that International Advisors act through recommendations seems not to be enough to promote real changes and provides only cosmetic interventions. Therefore, a more coordinated effort is needed, to get governments to commit to allocating financial resources for cost-optimal solutions in the dimension of FINANCIAL OPTIMISATION, as well as to creating and supporting – in both dimensions OPERATIONAL TRANSPARENCY and EDUCATION – the conditions for establishing a local and powerful critical mass.

Maybe the most significant finding here is that all the professional groups in this study – except the Prison Health Advisors – excluded *non-communicable diseases* as an essential variable which in turn informs the case-based Meta-theme of *need for adequate infection control*. The Prison Health Advisors are more likely to recognise the link between the design of the built environment and *non-communicable diseases* due to their medical background; for example, by considering the effect that noise pollution or feelings of fear and insecurity can produce on the health of inmates with particular health conditions during sleeping hours:

> If somebody is deprived of sleep, it then has a knock-on effect on a lot of other health issues. You know, somebody with diabetes, if they are not getting enough sleep and rest, it can have a physical impact.
>
> (PHA-01)

The above findings show the need to include a broader range of professional backgrounds in the DECISION-MAKING dimension of the design process, or at least in the DESIGN GUIDING PRINCIPLES dimension, during the drafting of the technical requirements that prison design must abide by. This would help to avoid the omission of critical issues that need to be collectively addressed as part of health and well-being in prison design but which designers see as apparently unrelated variables at the moment.

Negative distractors and *self-esteem* are only considered as issues by some of the Rehabilitation prison model and international advisor interviewees as part of the DESIGN GUIDING PRINCIPLES dimension. Despite their immediate impact on inmates in terms of their health and well-being, there is a striking omission of aspects related to the design of *walls'* and *floor features* by many groups, including designers in all three prison models. This could be partly explained by the minimalist trend in prison design underpinned by security and economic constraints, in which the need for robust, durable walls and floors is so self-evident it does not even need to be mentioned. However, the findings could also be showing that these issues are not seen as a determinant of health and well-being by interviewees. This again supports the findings in this study that there is a need for knowledge of the effects of design on well-being within the dimension EDUCATION, highlighting the need for more research dissemination in the area.

Note

1   In this research the term *financial optimisation* refers to the actions of making the best or most effective use of the natural, material, human, and financial resources needed during the entire life cycle of a prison project. This means minimising the total cost of the project – including design, financing, building, and operating the project during its lifetime – without affecting its efficacy and effectiveness in complying with its legal mandate and providing the safety environments and reducing recidivism.

Chapter 12

Towards a new outline framework to design prisons that promote health and well-being

Building the new outline framework for prison design

In the previous chapter we clustered and adjusted single-case Meta-themes from earlier single-case analysis, identifying nine cross-case Meta-themes: *health* and *well-being as an organisational priority*, *financial optimisation*, *evidence-based decisions*, *need of knowledge on the effect of design on well-being*, *sense of coherence*, *space*, *natural light*, *external influence and participation*, and *accountability*. These Meta-themes are now presented in Figure 12.1, showing the juxtaposition of cases and their findings, and revealing how they result in six primary dimensions: DESIGN PRIORITIES, DESIGN PRINCIPLES, FINANCIAL OPTIMISATION, DECISION-MAKING, OPERATIONAL TRANSPARENCY, and EDUCATION. A further simplification of the dimensions' tributary elements is presented in Figure 12.2.

These six extracted dimensions are interrelated because, to establish the *design priorities*, it is necessary to have *design guiding principles* that support those priorities. However, these guiding principles are always financially constrained, requiring *financial optimisation*, which in turn are the result of the organisational policies and practices in *decision-making*. Those policies and practices are, in turn, always influenced by the level of *operational transparency* of the organisation, and this transparency is modulated by the level of knowledge and education of all the related entities.

Figure 12.3 shows how these interrelated dimensions and their components – as evidenced in the findings of this book – form an initial outline framework for prison design for health and well-being. This framework shows how these six dimensions are interrelated through a process of interaction and feedback, and the scope of action of each entity involved in the process.

The central core of the framework – *design priorities* – is of prime concern for designers and represents the three main priorities identified in this
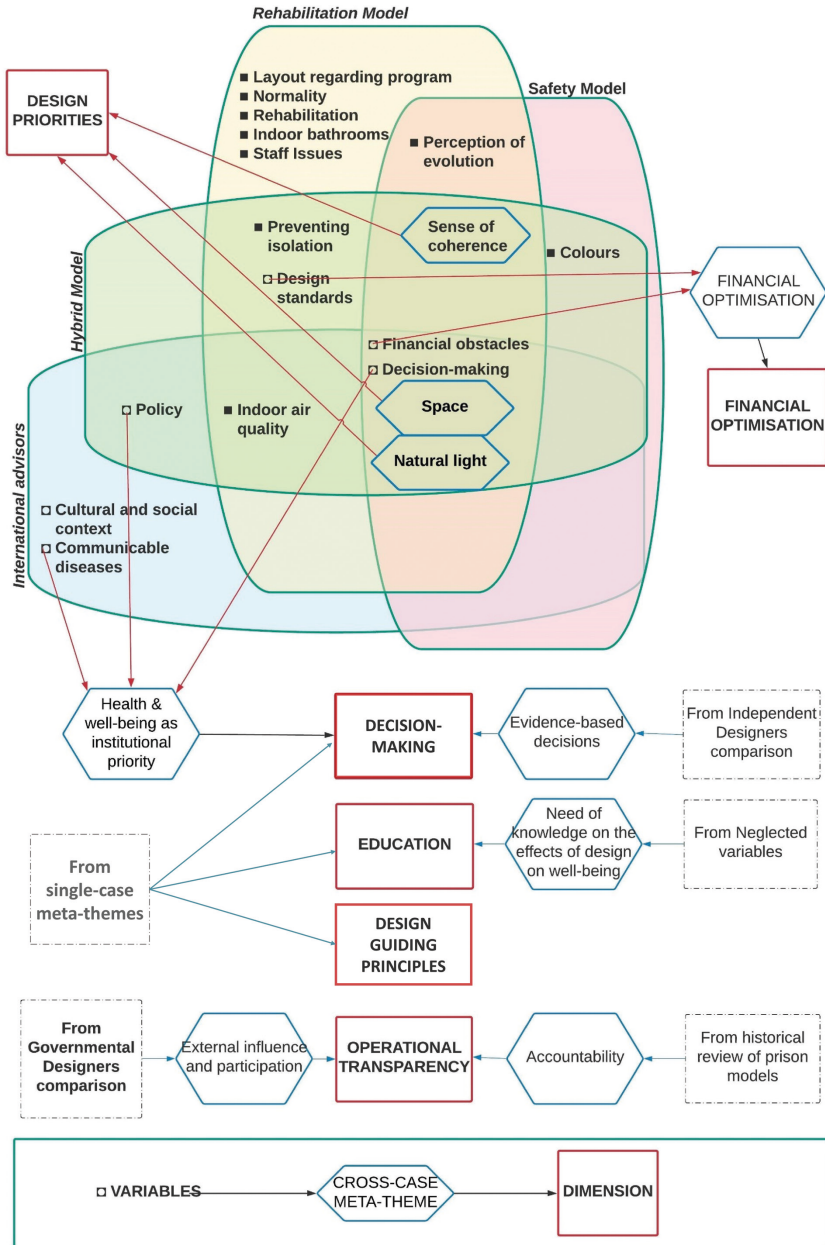
Figure 12.1 Meta-themes and dimensions extracted from the cross-case comparison
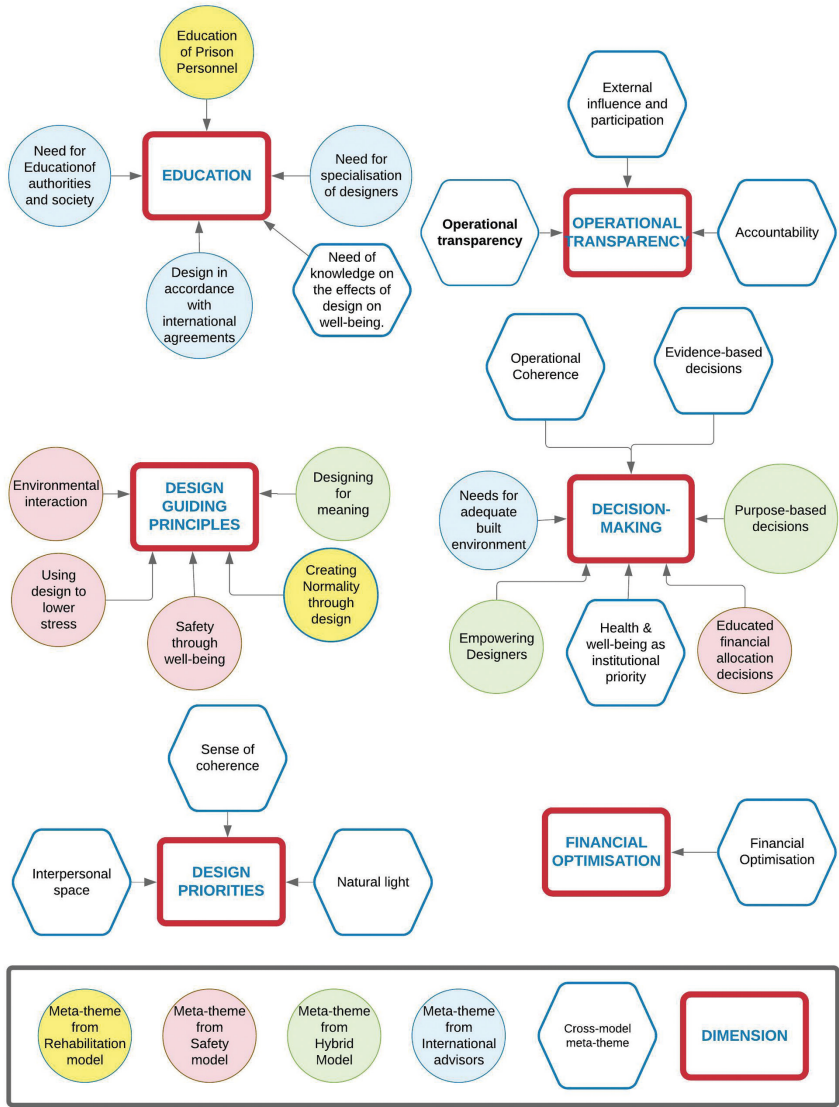
Figure 12.2 Dimensions resulting from clustering single-case and cross-case Meta-themes

comparative case study – *sense of coherence*, *natural light*, and *space*. Designers have to be aware of these three crucial components when designing for health and well-being in prisons. These components also cover all the 17 individual factors identified in the literature review (Chapter 6) that can affect health and well-being in prison design (see Table 12.1).
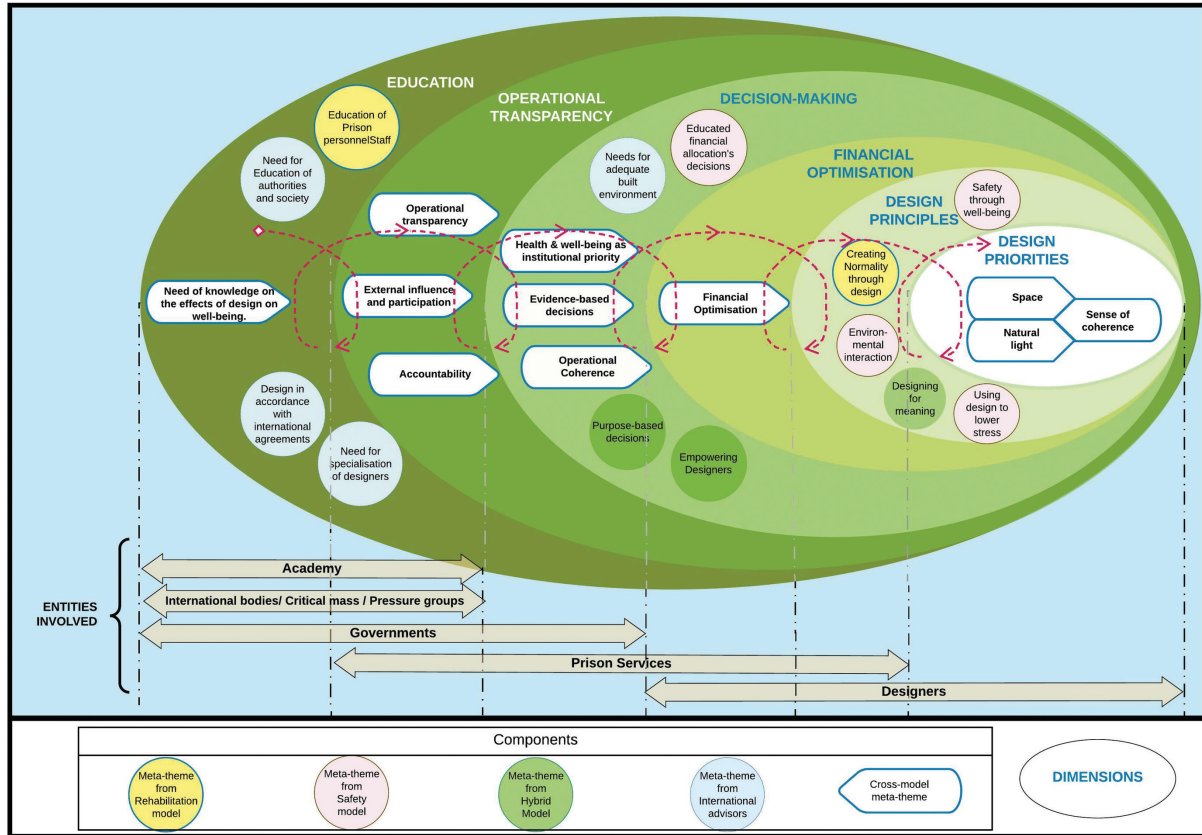
Figure 12.3 Dimensional interaction for designing prisons that promote health and well-being

Table 12.1 Relation between factors and Meta-themes

Area	Factor	Meta-theme related
COMFORT	Acoustic levels Artificial light Indoor air quality Indoor bathrooms Thermal comfort	Sense of coherence

SENSORIAL	Natural light and sunlight
	Colours
	Contact with nature and
	  sunlight
	Quality of views
	Space
		Natural light
		Natural light/Sense of
		  coherence
		
		Space

PHYSICAL FEATURES	Quality of materials and environment	Sense of coherence
HEALTH AND SAFETY	Stress control Depression/suicide Mental healthcare	Space/Sense of coherence/ Natural light
WELL-BEING	Sense of coherence Universal design	Sense of coherence
SECURITY	Anti-social behaviour	Space/Sense of coherence/ Natural light

These priorities must be aligned with five basic *design principles*, established as being paramount for promoting health and well-being in prison design in this book. This means that the design of prisons – both as a process and a product – has to fulfil five basic health and well-being principles as a consequence:

a. To foster interaction between users and both the natural and the built environment.
b. Focusing on decreasing users' stress by using friendly and relaxing design elements, materials, and layout.
c. Using colours, forms, and architectural elements, full of positive meanings, regarding social, cultural, and geographic local particularities.
d. Recreating "normality" layouts. Defining as minimal design standards the supply of areas with characteristics equivalent to the average existing housing in the area where the prison is located, it is allowing inmates to maintain daily routines that are similar to those of any local citizen.
e. Generating a safe and secure environment by ensuring a positive mental and emotional state of inmates and staff.

These design principles must be agreed upon by both designers and prison service authorities to align the design and operation of prisons. Financial constraints require a design capable of balancing initial and running costs, optimising the use of personnel, energy, and other resources. Designers and prison service authorities should work together to optimise financial resources to maximise the benefits sought by the design priorities and principles, with *financial optimisation*, as an underlying dimension, conditioning the *design principles* and *design priorities*.

Decision-making then conditions the *financial optimisation*, which in turn conditions the design principles and priorities. This deep level of decision-making by the prison service authorities is related to the principles that underpin the prison service and its objectives as an organisation to provide a valuable service to society. None of the previous positive dimensions identified will produce a successful result if the whole prison service is not aligned in its decision-making to provide a constructive prison pathway for inmates. This means that the health and well-being of inmates and staff have to be an organisational priority and the prison services have to ensure that decisions made in this direction are supported by available evidence and made by experienced design professionals. Similarly, design decisions have to seek the right balance between the psychological state of inmates and staff concerning their well-being, which conditions the *financial optimisation* by maximising the positive output of the investment on programmes and personnel.

Governments also have a key role in decision-making related to prison design. Among the decisions that have to be taken, based on the prison system purposes, are the budget allocation for both the initial cost of building new prisons and financial support for running them. Additionally, governments are responsible for ensuring adequate staffing of the prison service in terms of numbers and quality. The desired outcomes of health and well-being will be possible only by providing the correct number of sources needed – financial and human – which should not be compromised during the planning process of a new prison. Otherwise, a prison risks losing control over the daily routine and worsening the mental well-being and physical integrity of their users – drastically decreasing the odds of producing a positive social outcome. One example of this can be seen in the failure of HMP Berwyn, a £220m Category C prison in the UK, opened in 2017 and promoted as "the flagship for the rest of the country [and] England to emulate" [306(p1)]. A decision to make a series of budget cuts from the very beginning of its operation have resulted in fewer rehabilitation programmes than planned, lack of personnel, and lack of expertise of the staff. HMP Berwyn is today an unsafe prison. "Since the prison opened, 338 ambulances have been sent there; the police have been called 135 times and the fire service 27 times" [306(p1)].

Transparency conditions this decision-making by establishing that the appropriate external entities have to interact with prison services inside the prison to avoid a hegemony in the administration of punishment and prevent the adverse outcomes that can result from overly secretive and restrictive access to prison operations. Governments, through external public services, prison services, non-governmental organisations, and groups of pressure such as inmates' organisations, have a primary role in ensuring this essential dimension of *operational transparency*.

Finally, *education* as the need for specialisation and access of the different entities to knowledge is the most crucial dimension of all, and conditions all the other dimensions in this initial framework. The successful change of social and personal behaviour of people in prison – which is essential to ensure rehabilitation and desistance – requires the delivery of high-quality vocational training for prison staff, turning them into life coaches rather than guards. Additionally, through the interconnected work of the academy, international organisations, national bodies of critical-mass and the work of the government, the dissemination of research and empirical evidence maintains the focus on the aim of improving health and well-being in prison through design among all the entities involved – including the community.

These six dimensions in the framework – *design priorities*, *design principles*, *financial optimisation*, *decision-making*, *transparency*, and *education* – have to interact continuously to encourage ceaseless feedback at each stage of the process, in a permanent process of revision and correction of actions, and subsequent improvement of the quality of the design, based on the evidence from the feedback.

The objective of designing prisons that promote inmates' *and* staff health and well-being also requires organisational coherence concerning this proposed framework. This means eliminating the visible lack of coherence between the official organisational discourse of prison systems – such as their published missions – and the real actions of the prison services – their *decision-making* processes. Therefore, to identify plausible recommendations for evolving toward health and well-being promotion in prison design, the nature and extent of this gap need to be explored and understood, because the wider the gap, the less considered health and well-being will be, in the design of prisons.

Three dimensions – *decision-making*, *transparency*, and *education* – help to understand which prison model a prison service is aligned to. There seems to be an inverse relationship between the level of education of both the prison staff and the community, and their apathy toward the conditions of people in prison. Furthermore, the greater the social apathy, the more power prison services have to control the body and mind of prisoners. Similarly, the less operational transparency there is, the more significant the gap between

what the prison service says, *what decisions it makes, and what its daily actions are*. One example of this incongruence is exposed by the comments by one staff interviewee when asked to what extent the architectural factors affecting the health and well-being of inmates have been considered in the design of their prisons:

> I think those factors have definitely been weighed in the construction of prisons here in Kentucky … and they're in our three newest constructions. They're all built very similar, they provide for a lot of interaction with inmates, a lot of natural light, lot of open space. It's secure at the same time.
>
> (HLS–S 03)

Here, inmates' health and well-being is seen as a design goal by naming the more visible factors present in their designs that contribute to well-being, but the reality is that these are present because they are simply necessary to control the prison and the safety of the staff, while other crucial well-being factors, such as *preventing isolation*, *depression/suicide*, *normality*, or *stress control*, are absent, or at least severely diminished in the design.

Because *decision-making* is a crucial dimension in prison design, the theories of decision-making can help explain why this phenomenon of incongruence between apparent aims and actual aims of a prison service occurs. However, this analysis cannot be restricted to what researchers refer to as "Architectural assembly" [178], which involves the processes between the decision of building a new prison and the beginning of the construction, but must include the entire organisational approach towards the objectives of the prison services.

In traditional decision theory [307], a decision is taken to indicate a future action, or at least the decision will increase the probability of such an action. Talks are expected to have the same effect as decisions, with a planned trajectory. Talks can be management presenting visions, business concepts, objectives, policies, or political programmes with no decisions regarding specific actions but simply aimed at convincing members of the *organisation* to act by management talk. Decisions can be seen as a particular type of talking that indicates a will to act and a choice of action. There is also talking without decisions [308(p111)]. However, there are not always strong connections between talks, decisions, and actions for individuals and *organisations*.

In the next and final sections of this book, we will observe the reality of each prison model through the lenses of Nils Brunsson's decision theory of "organised hypocrisy" [308–311], offering a more realistic and plausible explanation of apparent incongruences, while explaining how to increase the consideration of health and well-being in prison design through this new understanding.

Organised hypocrisy in prison services

For Brunsson: "Hypocrisy is not an accident. It has even been argued that *organisation*s sometimes make decisions to avoid action, that decisions may relieve people of the burden of acting, and that decisions may obstruct action" [310(p176)]. Organised hypocrisy – as the capacity of an organisation to talk independently of decisions or actions – can thus satisfy a variety of different interests [308(p112)].

   Hypocrisy is most likely to appear when organisations are exposed to conflictive and divergent interests from different external entities and when the actors of the organisation have a special interest in a particular type of outcome – the status quo. Hypocrisy is thus a response to a world in which values, ideas, or people conflict. It is a way for individuals and organisations to handle such conflicts. People have different and often contradictory ideas about how an organisation should work and what it should achieve, and to satisfy one demand fully may be to poorly satisfy, or even fail to satisfy, another [308(p113)]. For example, there is a tension between keeping inmates away from the society during the time stipulated by the sentence, and rehabilitating them [62], reducing recidivism [70], or increasing desistance [312]. Some suggest prisons should also be highly secure to keep the community safe while others suggest that prisons should provide employment in a good and safe environment, creating opportunities for both staff and inmates' personal development [313], or providing their employees with decent wages [314]. Yet again for some other people, prisons should be just a place of punishment, to induce repentance or inflict pain proportional to that caused by the offenders to the victims [59]. However, as legitimate as these conflicting demands may be, it is not easy for a prison service or the state to satisfy them all. Success in one dimension, such as *financial optimisation*, often decreases success in another, such as *design principles* or *design priorities*, or both.

   Prison services are therefore subject to strongly conflicting demands. They have to interact with inmates and other entities such as the judicial system, politicians, the media, social organisations, and the community in general. They are also accountable to all these entities, to some extent, in a democracy. Therefore, for the prison services' talking and decision-making are of great importance – their visions, programmes, and important decisions are often published today. Modern prison services have communication departments that specialise in explaining to the community and their personnel the *what* and *why* of current strategies and decisions to be accountable to external and internal parties. Thus, "talk and decision have value as a kind of output created by organisations" [308(p115)]. Therefore, it seems that for prison services, what they say and the decisions they make are often as important as their actions, as illustrated in the findings of this study (see Chapter 11).

If the different entities who place demands on a prison service were to attach importance not only to the actions routinely carried out by the prison service but also to what is said or decided, the prison service could meet some demands through talk, others through its decisions, and yet others through action – and thus to some extent satisfy three conflicting demands. For example, dealing with both keeping staff morale high and fulfilling the governmental needs for avoiding communal pressure or disapproval over their management of security matters, creates conflicting demands in the Chilean prison service. Factors such as the inadequate physical conditions in which prison employees have to work, the stressful psychological environment, and the excessive work burden because of the understaffing affect their morale and the designers' sense of helplessness in the Hybrid prison model. This creates conditions for *depression* – a possible cause of the alarmingly high rates of sick leave – and generates significant indifference to the situation of the inmates and the acts of violence [290]. On the other hand, the government's political interest can be profoundly impacted by sensationalist news about escapes and prison riots, and they do not want such critical events. Accordingly, the Chilean prison service states in its Prison Organic Law that they aim to take care, monitor, and contribute to the social reintegration of people in prison [315]. They also speak of the commitment to rehabilitation and social reinsertion of inmates as a decision-making policy, through webpages and distributing information leaflets, showing examples of the organisations' positive interventions in rehabilitation (decisions), to satisfy the staff's need for meaningful work. However, rehabilitation is far from being a strategic goal in this instance. This study demonstrates that, in reality, the thematic fear of legal and political consequences is more critical for the Chilean prison service than inmates' rehabilitation, and therefore, the dimension of *design principles* is focused on security, control of movements, and avoiding escape rather than the health and well-being of inmates. Additionally, because the prison organisation has insufficient financial resources, and critical events have adverse political effects, the allocation of most of its annual budget is into security, surveillance and control equipment, with a semi-militarised prison guard structure (what is done) [316] that satisfies the government's needs for control of community reactions.

This heterogeneous approach, however, makes it challenging to act consistently with what is said, what is decided, and what is acted on. Talk and decisions in one direction can compensate for actions in the opposite direction and vice versa [308(p115)]. In the hypocrisy model talk, decisions, and actions are causally related, but talk or decisions in one direction actually decrease the likelihood of corresponding actions, and actions in one direction decrease the likelihood of corresponding talk and decisions [308(p116)]. In the previous example of Chilean prisons, trying to fulfil the organisational

goal of rehabilitation effectively produces a decrease in the available resources for security purposes and vice versa. As expressed by one interviewee:

> I feel that there is a predetermined approach to privilege security in any situation, and as long as we are not able to modify that approach from the perspective of social reintegration to modify the designs are not possible.
>
> (HLS-H-01)

For Brunsson [308,310], in conflicted scenarios, such as in prison management and design, hypocrisy can be seen as a solution. Hypocrisy makes it easier to act forcefully in one direction, even with several opponents, such as the policy of using harsh solitary confinement in the US [132], or in the case of the UK, the implementation of government policies to reduce overall public spending that has resulted in a reduction of nearly a quarter of the National Offender Management Service budget since 2010.

The act of hypocrisy also makes it easier to maintain the legitimacy of organisations, even when they are subjected to conflicting demands. Without hypocrisy, one party or interest would be completely satisfied, and all others completely dissatisfied. However, with hypocrisy, in situations such as the personnel versus government needs described above, neither party has their needs fully met, but neither is anyone left completely unsatisfied.

How hypocrisy works in prison design

Talk and decisions generally reach wider audiences than actions. Typically, those who are directly affected by the prison service's actions are a very small group of entities such as the inmates, the inmate's family and friends, judicial actors such as lawyers or judges, and the prison staff. Usually, only these entities actually experience the actions of the prison service. The rest of society is an outside spectator, with no first-hand knowledge of the actions; at most, their "knowledge" is hearsay [308(p119)]. Indeed, the higher the secrecy of the prison service, the more challenging it is to gain knowledge about those actions, which in turn facilitates hypocritical organisational behaviour because it is not easy to compare public talks and decisions with actions hidden from collective knowledge. Therefore, prison services which speak of high morals even in the face of a harsh reality – such as Hybrid model prison services publicly stating their commitment to rehabilitation but without political or financial support – will be open to using hypocrisy because they consider their interests and values to be at least partially satisfied through what is said and decided [308(p117)]. However, Security model prison services such as the Kentucky correctional department can also be susceptible to

hypocrisy due to the lack of external public services in prisons' daily work, which results in low levels of operational transparency.

Due to the limited possibilities for external entities to be transparently involved in observing the prisons' daily routine in the Hybrid and the Security prison model facilities, the level of tolerance to hypocrisy is high. For example, in the Hybrid prison model, due to the lack of financial resources, the need to reduce the chances of escape but without eliminating some access to daylight was "satisfied" by reducing as much as possible the width of the windows, despite the psychological effect of confinement and the resulting reduction in *natural light*. This situation is worse in old prisons, where windows are heavily reinforced with obstructive bars or metal mesh. Again, the highly secretive operation of prisons, in addition to the lack of mechanisms for inmates to counteract the prison system actions, turn the Hybrid model into the most hypocritical of them all. In both Security and Hybrid prison models, interviewees acknowledge the need to improve access to *natural light* but argue that a change in mindset is needed (education), to prioritise an adequate allocation of budget. In the Rehabilitation model, however, prison cells are designed with large, laminated double-glassed windows, and without bars. This is only possible because the whole prison design concept, including the layout, the staffing, and the prison regime, although expensive, generates a quiet and safe environment for both inmates and staff, based on the principle of designing for *normality*.

In relation to prisons, the governments, the victims, the community, the political parties, and relevant NGO organisations are all spectators, and each one has its specific interests. The interest of governmental entities is usually related to political and financial accountability, as critical factors revealed in this study that affects both dimensions of *operational transparency* and *financial optimisation*. The victim's interest is focused on retribution and the execution of the judicial sentence. The community's interest – uneducated in the cause-effect chains concerning punishment and human behaviour – is usually placed on retributive punishment, incapacitation as a measure to prevent an increase in delinquency, and deterrence as a measure to prevent new people from starting to offend. These are also linked to the prison service's actions through the meta-theme "fear of being seen to be weak on crime" discussed earlier in this chapter. Politicians in power are interested in minimising the media effect and political costs of major critical events, while politicians in the opposition are interested in the opposite effect. Most international spectators place their interest in promoting the health and well-being of inmates, in all three elements – talks, decisions, and actions. However, how they operate is through sporadic visits to prisons and, as spectators, their interaction with prison services is merely through recommendations (talks), debilitating the efficacy of these organisations in

improving the prison services' actions. Thus, an effective increase in their efficacy will require the detection of shortfalls, issuing the recommendations, and promoting joint work with as many government services as possible to create operational and decision-making transparency. As independent entities, these international organisations can and should help in creating the conditions for the growth of a critical mass of social scientists in prison matters in those countries.

Based on Brunsson's model, when a prison service faces a scenario with multiple entities interested in their particular and competitive demands, the result is hypocrisy. The prison service can satisfy the government financial interests through a financially optimised budget focused on security, and maintaining enough lack of operational transparency to avoid community reactions against abuse of power.

Increasing the level of education of the community and decision-makers in prison matters would engender educated pressure groups and strengthen evidence-based decisions and monitoring of the prison *actions* against *talks* and *decisions*, which, in turn, could lead to a more socio-technical managerial approach, weakening the political control of governments over the prison services. Conversely, the lack of external monitoring helps maintain the public image of an effective and safe organisation, thus satisfying the victims and community needs for security (talks).

Politicians, as a third decision-making entity, benefit from both sides. They receive public support from the image of professionalism and efficacy of the prisons as security organisations, underpinned by communicational strategies and operational opacity, and they receive support from the pro-rehabilitation community by partially including some of the design principles and design priorities in their prison projects. Similarly, staff's demands of security and working conditions can be addressed by investing in security elements and providing them with good salaries and additional benefits. Finally, due to the limited impact of the actions of NGOs and international inspectors on the prison services and government policy, it is in the interest of the prison service to create and support – through a lack of operational transparency – the spectator's impression that talk and decisions are accurate descriptions of actions. In Brunsson's words, if they are "successful" as projected through talking and publicity, everyone is happy – except perhaps, in this case, the inmates – and thus the status quo can continue.

A scenario of conflicting demands implies that there are always entities questioning what the prison *organisation* is doing in a particular matter. Therefore, it is not unusual for a prison organisation to set goals – by talking and taking decisions – in areas where the organisation is weak, or in which it has not succeeded in satisfying a particular interest through action. For example, within the dimension of *design priorities*, although the Hybrid

prison services may have neither the critical minimum conditions of *space* and *natural light* in their infrastructure to promote health and well-being, nor sufficient personnel to bring a *sense of coherence* to inmates and provide rehabilitation, they seem to be willing to include some rehabilitation of inmates. This requires the organisation to provide inmates with minimum levels of health and well-being – as part of their organisational mission. Countries such as Chile, Mexico, or Peru publicise their limited rehabilitation programmes as having a high social impact. This publicity has the effect of satisfying both external spectator entities such as NGOs and the need for internal actors such as the prison personnel to feel they are doing socially meaningful work. This can be observed in the Chilean case when they say in their mission statement sentences such as "contributing to the social reinsertion of inmates". Such goals are, by definition, examples of hypocrisy, for they express what is not being done [308(p121)].

A further factor that leads to hypocrisy in prison services is the tension in the *decision-making* dimension between ideology and practice. Talk and decisions follow the rules for what can be said within the service. Actions follow the rules for what can be done. These rules are not always consistent. The official truth about organisations can deviate substantially from how these organisations operate [308(p123)]. For example, the Kentucky Department of Corrections in the US include as part of its mission: "to provide a safe, secure, and humane environment for staff and offenders", while their prisons have some units with barred cages and solitary confinement in cells with no windows.

Stability and destabilisation of hypocrisy

The idea that talks, decisions, and actions should be consistent is a widespread norm in society, and organisations are not supposed to engage in hypocrisy. Therefore, what they say, what they decide, and what they do should be congruent. If prison authorities can be proven to be hypocrites, they can be censured according to this norm [308(p124)]. This gives a strong incentive towards secrecy surrounding their empirical actions.

The stability and level of hypocrisy in prison services is directly proportional to the visibility of their actions and the social level of tolerance to hypocrisy. The more visible the actions of prison service, the lower the level of tolerance to hypocrisy, and the more unstable the hypocritical style of management. Scandinavian prison systems show deep penetration of external communal services in the daily work inside prisons and the constant pressure of academic and practitioner organisations [114,301]. In the US, prison services – which work with lower daily interaction with other governmental services, if any – show a considerably higher tolerance to hypocrisy

and therefore higher stability of hypocritical management style. In this case, the counter-forces are created by the existence of independent norms of design and management of prisons and the existence of organised groups of inmates' families which through the judicial system put pressure on the prison services. As mentioned by Riveland in his article on prison management trends in the US, "the very positive changes that we have seen occur in our prisons over the past 15 years never would have occurred without the involvement or at least the threat of involvement of the courts" [317(p184)]. In turn, the Chilean prison system shows the highest level of hypocrisy of the three prison systems considered in this study due to its highly secretive operation mode, the superficial level of external intervention and the almost inexistent organised pressure over their procedures and results.

Time as a stabiliser

Time is one of the key stabilisers of hypocrisy. By adding a time dimension, and deferring actions to the distant future, it becomes easier to create tolerance for the incongruences between talk, decisions, and actions [308]. Decisions affecting the *financial optimisation* dimension for the long term, such as 10- or 20-years' development planning for a 10- to 20-year future period, can create the hope that one day what is said will be consistent with what is done. Moreover, creating changes in the political arena or the economic conditions can easily help to perpetuate hypocrisy. This "change and perpetuation" process is clear in the Chilean case prison service and the implementation of the public–private partnership programme. The initial promise of the concession system was the creation of a strategic alliance between the public and private sectors to generate flexible, profitable, efficient prison systems, of higher quality and lower cost than traditional prisons – thus being financially optimal [318]. Ten years *after* the end of the initial seven-year deadline, only seven prisons were built and the cost of imprisonment was three times higher than the original prison system [319]. An eighth additional prison was opened in August 2013. However, there is no significant difference in the perception of inmates between the habitability of the old traditional prisons and the new PPP prisons [318]. The level of overcrowding was diminished partially, but this was mainly as a result of both densification and the hypocritical modification of the procedure in the calculation of the "official" design capacity of PPP prisons, rather than due to the original prison service planning. Indeed, despite the original governmental promise to increase prison capacity by 16,000 new places, only eight PPP prisons of the ten originally planned were built between 2000 and 2013, with a total combined design capacity of 12,435 inmates. This capacity data was obtained during the case study from the original terms of the tendering

procedure, published by the Chilean government[1]. In 2013, however, the prison service stated in an administrative act a higher capacity, calculated as 120% of the design capacity (see Table 12.2). This is because the actual PPP contract allows the prison service to overpopulate by as much as 120% of the design capacity without a surcharge payment for overcrowding, despite no significant expansion in the footprint of the facilities. Therefore, by adding an additional bed, triple cells become quadruple, leaving inmates with less *space* than what authorities and designers originally considered as optimal. The designers have no power in this situation.

Today the Chilean prison service still has a high level of overcrowding, insufficient staffing in rehabilitation, inadequate physical conditions in traditional prisons, affecting the health of inmates [320,321], and harsh environments in both these systems which affect the well-being of both inmates and prison staff [322]. However, the prison service still maintains in its mission statement that the organisation must contribute to the social reintegration of inmates. At the end of this long-term planning period, when critical events caused a shock in the public opinion, the Chilean prison services and governments reacted with new talks – repeated in cycles – about the crisis of the prison system. This was the case in 2010 after the San Miguel prison fire, where President Sebastian Piñera described the prison system as "inhumane" and said reforms should be speeded up [323]. This can partly explain why the prison – as an organisation – is in permanent crisis and has been the object of penal reform since its very birth [61].

Changing the visible head as a stabiliser

Another factor that makes hypocrisy more tolerable is the extent to which the prison service is perceived as a group of different entities with different interests, rather than a single accountable actor. In this regard, the more unstable and subject to rotation the head of the prison services is, the higher the level of tolerance for hypocrisy. The service becomes an arena for different interests, in which the new prison head inherits the old administration incoherencies, and it does not seem reasonable to expect that much consistency as a result of these factors. This is illustrated in the Chilean case, where since 1981 the National Director of the prison service only remains in office for 1.9 years on average, often for political reasons. If tolerance of hypocrisy is high because the head of the prison service is seen separately from the organisation, and therefore there are doubts as to whether the prison service is really an actor, the prison service does not pay much attention to the incongruencies. Internal actors such as High-level Staff and designers, accept the current conditions as inevitable, reproducing old and ineffective decisions, solutions, and designs. External observers "tend to think that a

Table 12.2 PPP prisons' design capacity vs official capacity by contract group.

Contract group	Prison name	Security level	Built-up area	Original design capacity	Official capacity informed in 2013(*)	Increase from original capacity	Current official design capacity 31/01/2021 (**)	Increase from original capacity	Increase in original built-up area	Prison population as of
			m2							31/01/2021
1	Alto Hospicio	High	35,508	1,679	2,015	20%	2,351	40%	0%	1,955
	La Serena	Medium	37,079	1,656	1,987	20%	2,298	39%	0%	1,811
	Rancagua	High	39,022	1,689	2,027	20%	2,365	40%	0%	2,067
2	Bío-Bío	High	19,660	1,190	1,427	20%	1,427	20%	0%	1,123
	Antofagasta (***)	Medium	19,991	1,160	0	-	1,314	13%	0%	1,212
3	Santiago 1	High	28,665	2,568	3,082	20%	4,000	56%		4,636
	Valdivia	Medium	17,394	1,248	1,498	20%	1,747	40%		1,091
	Puerto Montt	Medium	19,043	1,245	1,494	20%	1,707	37%		1,223
4(***)	Santiago 2	High	-	2,500	0	-	-			
	Talca	Medium	-	1,400	0	-	-			
Total	10 Prisons			16,335	13530					

(*) Official capacity informed by Chilean Prison Service in Administrative Act 22, considering a densification of prisons of 20%.
(**) Current official capacity as informed in the Chilean Prison service Webpage. No data were available regarding the construction of new cells' built-up area in these prisons that could explain the increased capacity beyond additional densification.
(***) Antofagasta prison construction was finished (and started running) after 2013. Group 4 was never built.

new actor has been created, and interpret what has happened as an inconsistency between actors rather than the hypocrisy of one actor" [308(p130)].

Destabilising hypocrisy in prison services

There are potentially two ways to destabilise such hypocrisy in prison services and improve the situation for prison design and management: justification and consistency. Justification means ensuring that talks and decisions match what the prison service is really doing – their actions. However, when actions have a negative connotation or are morally unacceptable, this is not a socially acceptable option, because it eliminates the contradictions by simply recognising and embracing the unacceptable performance. For example, a prison service in the Hybrid prison model may decide to justify their actions of placing inmates in overcrowded and unhealthy places by eliminating any mention of healthy prisons, spatial requirements, social reintegration, or rehabilitation from its aims, and deciding not to have rehabilitation programmes or health improvements. Although this prison system would now be classified as Repressive, there is no longer any hypocrisy because their actions – although morally unacceptable – have become consistent with their talk and decisions. The way to destabilise this situation would be to expose the missing elements from the prison service narrative to the public and disrupt the self-serving justification here, demanding a more inclusive form of justification.

The second way to destabilise hypocrisy is by applying the norm of consistency – the norm that actors should not be hypocrites. However, this requires two additional elements. First, the hypocritical prison service must be exposed as such. Making organisational hypocrisy visible requires monitoring and reporting of organisational behaviour. It is easy to forget what was once said and what was once decided upon, and it is not always easy for one individual to know about all the talk, decisions, and actions of an organisation [310]. These monitoring entities could be the media, but they also could be interrelated NGOs or unrelated government organisations that interact with the monitored prison service. They can be academic organisations, formally organised associations of families of inmates, or interrelated organisations working inside the prisons – and, therefore, aware of the prison service's actions – such as governmental organisations hierarchically independent from the prison service and even from the Ministry of Justice. Close and independent monitoring of the Chilean prison service, for example, could have detected the managerial practice of calculating official capacity based solely on how many double bunks beds can fit into the cells [150], regardless of the existence of other key variables such as the total volume of the cell, the existence of windows, the air renovation rate, or the

accessibility to, and sufficiency of hygienic facilities. Similarly, official capacity in public-private partnership prisons was increased by densification, which entails increasing the number of beds in existing cells while lowering the number of square metres available per person.

Second, for monitoring to be effective as an action to destabilise hypocrisy, there must be an associated sanction. Once hypocrisy has been discovered, its stability is dependent on the extent to which it is tolerated and sanctioned. If there is a superordinate hierarchical level that can sanction hypocrisy, as discussed next, instability increases [308,310].

Sometimes the legal system of a country allows a court system to be a powerful destabiliser of hypocrisy in the prison service. The visibility of the incongruences can result in legal actions that force prison services to align their actions to the legal norms by economic or criminal sanctions. This is the case in the US, where most of the improvements in physical conditions and treatment about the health and well-being of inmates have been as a result of losing costly lawsuits. In other cases, the sanction can be moral, as in the case of the prison services from the Rehabilitation model, in which there is a constant and deep interaction between the prison service and several other organisations which act as secondary monitoring entities. For instance, in both Norway and Finland, the Ministry of Health is in charge of the health of inmates inside and outside the prison. The education and training of inmates are under the responsibility of the Education Ministry. The buildings of the prison service are owned by a third party[2], which is in charge of their design and construction – and in the case of Norway, this party is also responsible for their maintenance. Under this multilateral monitoring, any incongruence – such as the mentioned presence of barred cages in the Kentucky prison service – becomes visible to the rest of the actors, and, therefore, easily exposed as hypocritical. This could create operational frictions, destabilising the hypocritical situation, and creating pressure for actualising the re-alignment between the goals of the prison, the prison regimes, and the associated design of the buildings.

Prison models and hypocrisy

When Brunsson's model of hypocrisy is considered concerning the themes and dimensions identified in Chapter 11, it could be argued that the three prison models in this study represent three different scenarios of organised hypocrisy about these identified themes and dimensions. In the Hybrid prison model, the tolerance to hypocrisy is high concerning themes such as preventing suicide because although there is an official discourse about the importance of preventing suicide attempts, there is no consideration about the conditions in which inmates are being kept, justifying in some cases the

deterrence and retribution through design. It is also possible to observe a high level of tolerance to hypocrisy when the mission of the prison service talks about rehabilitation and social reinsertion, but the revealed reality is lack of priority of health and well-being, the deplorable state of prisons, or lack of design regulations. Here no entities are interacting with the prison service to monitor these areas related to health and well-being in design and no organised or powerful entities are acting in the best interest of inmates, such as inmates' family organisations. The judicial norms make it difficult and expensive to sue the State for its actions. Most of the prison service staff have a low level of education and are organised in a militarised hierarchical structure. They are thus relatively unaware of some of the critical health and well-being issues, as shown in Chapter 8. The position of head of the prison service is always temporary and highly politicised. The result, in critical realist terms, is that the consideration of health and well-being in the Hybrid prison design is a non-event. It is an event that has not yet been actualised.

In the Security model, the level of tolerance to hypocrisy is lower than the Hybrid but still high. This is reflected in the presence of situations such as no windows to the outside, *natural light* without views, and well-being only if benefits are evidenced, while their mission talks about providing a humane environment. In this model society justifies a punitive approach to inmates' treatment, with a low level of internal monitoring from external institutions; there are, nevertheless, independent entities that create norms and guidance for prison design and prison regimes. These norms, together with the laws of protection of human rights, have been used in court by inmates and civil rights defender organisations against prison services and state governments [317] to destabilise the organised hypocrisy and promote greater alignment between prison service's aims and actions. This can generate a higher coherence between talks, decisions, and actions of these prison services compared to the Hybrid model. However, the Security model's utilitarian approach – which allows the use of elements that could promote health and well-being as a reward for good behaviour – still results in health and well-being in the design of prisons being a semi-actualised event which is not fully considered according to the restricted norms in this model.

The Rehabilitation prison model, in turn, has an even lower level of tolerance, if any, to hypocrisy. In this case study, no visible incongruences between talks, decisions, and actions concerning design in this model were found. This is due to years of permanent action by monitoring entities concerning inmates' rights, and an increasing governmental policy of involving external entities, who, in turn, act as monitors. Here, the community is systematically involved in the analysis and discussion of the strategic development of the prison service. This interaction is the core of the Scandinavian model, which,

together with a highly trained staff, helps to prevent the onset of organised hypocrisy. Moreover, the fact that the prison service is oriented towards the principle of *normality* and focused on the rehabilitation of inmates as an organisational aim in itself means the consideration of health and well-being in prison design in this model is a relatively actualised event.

Recommendations for promoting health and well-being in prison design

This book has identified the possible mechanisms underlying the interaction between different entities, creating what is recognised – in the realm of the Empirical – as the different prison models. This final section provides a set of targeted guidelines for both Hybrid and Security prison models. It discusses the conditions that have to be created and possible recommendations to be followed to overcome the barriers that are preventing the consideration of health and well-being in prison design.

No evolutionary movement will be possible if the health and well-being of inmates is not an organisational strategic goal of the prison service, and subject to be measured and monitored to guide the organisation toward operational transparency and purpose-centred *decision-making processes*. However, as the history of the Rehabilitation prison model has shown, such an evolution does not come from the prison services. Indeed, history shows that prison services will try to maintain the status quo because it is less conflicted and provides them with more extensive space for manoeuvring – even ignoring internationally accepted norms. Therefore, positive change requires the simultaneous actualisation of three core dimensions: *education*, *operational transparency*, and *decision-making*.

In light of the above findings, the following are a set of key recommendations considered as essential to creating the conditions that will move the Hybrid and Security models towards a Rehabilitation model.

First, it is necessary to promote *operational transparency*, with the participation of other governmental, communal, or non-profit entities, in the daily work inside prisons. This would help to permanently monitor whether the public discourse of prison services is aligned with their actions, concerning prison operating procedures and their design and maintenance.

Second, specialised services to the prison service such as health, education, rehabilitation, treatments, work training, or psychological follow-up should be provided and subject prisons to external monitoring.

Third, The UN and WHO play a crucial role here in promoting the conditions for governmental support. The more transparent the actions of the prison service, the higher the chances to resolve incongruences and increase the transference of technical information to facilitate the

specialisation of designers. Additionally, such transparency would help to establish organisations that can encourage the education of other entities based on scientific evidence.

Fourth, it is necessary to invest in *education* concerning health and well-being in prison design to create a critical mass in each country. This should have a broad scope, including the education of politicians, other key decision-makers, and the wider community, producing, providing, and disseminating scientific evidence and knowledge in the field.

Fifth, highly educated academics, social scientists, and professional groups should be promoted and supported to produce and disseminate the needed evidence.

Sixth, non-profit organisations should be promoted and supported to disseminate the knowledge in criminology, carceral geography, and prison design, which is crucial to educating politicians, financiers, and other decision-makers. This would improve the odds for external influence and participation in prison operations and would increase pressure to prioritise health and well-being.

Seventh, an educated group of entities should lead the prison organisation towards *financial optimisation*, based on criteria of maximisation of outputs of health, well-being, and rehabilitation. Increasing education should produce an increase in the general level of control of prisons due to the greater dissemination of knowledge informing design and operational decisions. International bodies need to play an important role here also in creating the right conditions for such education to flourish.

Eighth, it is particularly necessary to promote the improvement of the level of education of prison officers who need to be trained as coaches rather than as armed guards. At the same time, it is crucial to demilitarise and professionalise their prison officers' careers. Operational transparency and better education of prison officers will reduce the chances of politicians and prison officers making inadequate decisions due to being afraid of being seen as weak on crime, which is a critical factor underlying the *decision-making process* in the design of prisons.

Ninth, the specialisation of prison designers needs to be promoted through education in terms of security, combined with carceral human interaction, spatial organisation, prison operation, environmental psychology, rehabilitation, and environmental factors of health and well-being in prison. This should aim to improve the quality and quantity of both physical and inter-personal *space*, *natural light*, and *sense of coherence* as design priorities, helping to improve the general control of the prison and to improve the design of built environments.

None of the above recommendations by themselves or even a combination of a few of them can generate the long-term effect needed for a

change in mindset. All six dimensions underlying these recommendations are necessary as a combined contribution to the process of evolution of prison systems toward a Rehabilitation prison model.

Notes

1 See https://concesiones.mop.gob.cl/proyectos/Paginas/proyectos_operacion.aspx.
2 Statsbygg is the Norwegian government's key advisor in construction and property affairs, building commissioner, property manager and property developer. In Finland, Senate Properties is a governmental agency responsible for managing State properties as well as rental of premises and is a government partner in work environment and premises matters.

Appendix A: Physical stressors for health and well-being to be considered in the design of health and well-being promoting prisons

Conditions	Stressors	Findings, Possible Effects	PERMA Components affected	Ref.
Acoustic Levels	Noise	Decrease in well-being and health.	P E A	182, 195
		One of the most important contributors to stress.	P	190
		Violence is significantly lower in prisons with less noise.	P R M	188
		Cognitive impact, annoyance, sleep disturbance, and cardiovascular health.	P E M	195
		Positive Emotions and life satisfaction.	P M	193
		Can result in annoyance accompanied by anger, displeasure, exhaustion, and stress-related symptoms.	P E R M	195
		Explains variance in annoyance, which is associated with psychological and physical symptoms, psychiatric disorder and use of health services.	E M	197
		Affect the cardiovascular system and causes manifest diseases e.g. hypertension, ischaemic heart diseases, and stroke.	P	195, 208
		Systolic and diastolic blood pressure increase with noise exposure, producing the release of stress hormones.	E R M	189, 195, 208
		Decrease in environmental satisfaction and job satisfaction.	P M	181
		Lower sleep quality.	P E	195, 205, 207

Continued

Conditions	Stressors	Findings, Possible Effects	PERMA Components affected	Ref.
Indoor air quality	Air stagnation	Prisoners typically have a high prevalence of tuberculosis (TB) related to the normal population, and the difference is even higher in many low-income countries.	P R A P R A	233
	Air pollution	Ions reduced complaint rate for a headache by 50%. It also significantly reduced complaints of nausea and dizziness.	E R M A	235
Thermal comfort	Temperature	Thermal comfort has been associated with well-being and health.	E R M	234, 235
		Although higher mean temp. in the coldest month can increase happiness, higher mean temperatures in the hottest month have a counter effect.	P M	234
		In a controlled environment, the increasing operative temperature can have a slight but significant negative effect on general Sick Building Syndrome symptoms. Similarly for self-evaluated concentration ability and performance.	E M A	236
		A lack of control of temperature and humidity will contribute to the day-to-day variation in complaints of illness and discomfort.	P M	235
		Increase in temperature are positively correlated with suicide rates.	P M	237
Artificial light	Inadequate exposure	Exposition to the bluish wavelength light spectrum during night-time leads to melatonin suppression.	P M	218
		Lack of exposure to light results in alteration of the biological clock while exposure to LED light as little as 136 lux can produce the immediate melatonin suppression and cortisol secretion.	P E M	217
		Mood variations as a result of inadequate lighting features.	R M	213, 214
		Behavioural and Psychological Symptoms of Dementia (BPSD) problems had been experienced when the light was dim or at dusk among patients with dementia, showing symptoms such as dysphoria, wandering, emotional disorders, and insomnia.	P R M	216

Conditions	Stressors	Findings, Possible Effects	PERMA Components affected	Ref.
		Bright-light treatment led to a more than 50% decrease in the Hamilton Rating Scale for Depression (HRSD).	P M	220
		Bright light produces an increase in subjective mood and alertness.	P R M	221
		Using LED and fluorescent light (which has no blueish wavelengths), show increased fatigue ratings.	P E A	222
Natural light and sunlight	Lack of sunlight	Vitamin D deficiency.	P	187, 225, 228
		Circadian (daily) and circannual (seasonal) rhythms.	P E A	212
	Lack of light	Health and well-being.	P M	229
	Lack full light spectrum	Circadian rhythm of hormone secretions and body temperature with implications for sleep/wake states, alertness, mood, and behaviour.	P R	222
	Lack of exposure to	The rate of production of serotonin by the brain was directly related to the prevailing duration of bright sunlight and rose rapidly with increased luminosity.	P E A	210

Appendix B: Psychological stressors for health and well-being to be considered in the design of health and well-being promoting prisons

Factor	Harmful agents	Findings, possible effects	PERMA Components affected	Ref.
Space	Lack of space	"Is the number [of people in the cell] that triggers the unhappiness rather than Space per person, even when it could be generous."	P E R A	245
		The minimum time an inmate must be allowed to spend out of their cell will depend on if they have shared cells and if they have the minimum per capita space in the cell.	P R	244
		Even short-term exposure to overcrowded prisons has revealed significant negative impacts on positive emotion and psychological distress.	P E	182
		Crowding affects the ability to develop positive relationships, leading to social withdrawal, reduced pro-social or cooperative behaviours, and stress-related impacts on physical and mental health.	P E R A	84
		Increasing the level of available space in prison units was associated with a decrease in aggressive incidents.	P R	239
		Lack of space and privacy has been linked with increased aggression, especially in men.	P R	240
		Higher rates of sick call were found among prisoners exposed previously to high-density conditions than among prisoners who not.	P M	241
		Complaints and perceived crowding increased as the number of inmates increased.	P R	245

Factor	Harmful agents	Findings, possible effects	PERMA Components affected	Ref.
Privacy (as lack of indoor bathrooms)	Lack of privacy	Not only affect positive emotions by exposition to degrading situations and loss of dignity but also can negatively affect human relationships and producing a loss of meaning in life through dehumanisation.	P E M	245
		Access to basic acts such as using the toilet prevents inmates the sensation of having a normal life and conducts them to a state of dehumanisation.	P M A	245
		Affects well-being and certainly increases the probabilities of affecting physical health.	P M	13, 182, 245
		The feeling of unsafety is even higher for those with mental disorders and recent prison-based victimisation.	P R A	248
	Fear	Fear of crime, theft victimisation, and physical assault negatively influences inmates and staff's well-being.	E R M	249
		Feelings of vulnerability and fear of crime have a major impact on positive emotions and indirectly in life satisfaction by decreasing people's sense of control over their lives.	P E M	250
		Victims of crime systematically report lower levels of well-being, and, to some extent, higher levels of fear than non-victims.	P E R	251
	Lack of safety	The physical environment can affect actual rates of crime as well as fear of crime.	E R M	13, 84, 122
		In prison, the areas considered most dangerous were showers and segregation units, followed by travel to and from prison wings, with 23% of the prison population perceive danger in these places.	P E A	252

Continued

Factor	Harmful agents	Findings, possible effects	PERMA Components affected	Ref.
Quality of views	Lack of views	Positive "green" and outwardly viewed urban landscapes were found to have a positive effect on health.	P M	258
		The number of visits to the infirmary for legitimate health reasons was significantly less for patients with an "outward" natural view (p≤0.05).	P R M	257
		Short-term recovery from stress or mental fatigue, faster physical recovery from illness and long-term improvement on people's health and well-being as effects of exposure to natural landscapes.	P E A	258
Contact with nature and sunlight	Lack of nature	Natural landscapes provide a stronger positive health effect compared to urban landscapes.	P	258
		Actual and pictorial nature contact benefits moods, but actual nature is more effective.	P R M A	256
Colours and patterns	No natural patterns	Studies on visual discomfort measured through neural responses demonstrated that visual discomfort is associated with colour combinations and patterns that are rare in nature – conditions that are not rare in the modern urban environment.	P E M	262
	Colours	Specifying colours to be congruent with the mental or behavioural activities they enclose is simply unjustified. However, there are demonstrable perceptual impressions of colour applications that in turn can affect the experiences and performances of people in settings.	P M	261

Factor	Harmful agents	Findings, possible effects	PERMA Components affected	Ref.
Stress control	Sleep quality	Several studies have found a positive relationship between good quality of sleep and psychosocial functioning.	P R	278
	Burnout	Burnout is a condition that is produced when stress is not mediated, or that cannot be reduced by the individual, including psychological symptoms, as well as physiological symptoms by some.	P E A	267
	Lack of control	People who do not have control over their environments often suffer from various kinds of stresses.	P R M	280
		Among individuals with disabilities, control over social aspects of the housing areas was more important than control over physical aspects in predicting satisfaction.	P A	283
Quality of materials and environment	Lack of design	Design and quality of a home and surrounding built environment is a key contributor to the health and well-being of people who live there.	P R	48
	Grime	Life satisfaction can also be reduced by living in a place which has pollution, grime, or other environmental problems.	P R M	15, 274
	Deprivation	Living in an area which people perceive as deprived reduces subjective well-being.	P R M A	274, 293
		Design and quality of living areas and the surrounding built environment is key contributor to health and well-being of people.	P R M A	48
		Poor physical conditions in the prisons staff worked in was detrimental for their well-being, resulting in more sick leave and they were more likely to have increased levels of drinking and smoking.	P E M A	188
	Double/multiple cells	Prisoners housed in older units and in units with more double cells were less positive about the officer–prisoner interactions.	P R	271

Continued

Factor	Harmful agents	Findings, possible effects	PERMA Components affected	Ref.
Sleep disorders	Sleep deprivation	Sleep problems have also been associated with a decrease in both positive emotion and a sense of purpose in life.	P M	273
		Sleep problems have also been associated with lower life satisfaction.	M	274
		"Optimal sleepers" (those reporting an average of 6–8.5 hours of sleep per night) have reported fewer symptoms of depression and anxiety and higher levels of environmental mastery, personal growth, positive relations with others, and self-acceptance.	P E R M A	278
		Sleep problems have also been associated with deterioration of physical and mental health.	P M	275
		Sleep deprivation in prison inmates can be related to aggressive behaviour, violence, and anger.	P R M	272, 276
		Treatment of sleep disturbances reduces aggression and problematic behaviour. Sleep deprivation increases aggressive behaviour in animals and angriness expression of aggressive impulses in humans.	P R	276
		Overall aggression was found to be predictive of sleep quantity and quality in a sample of incarcerated adolescent males.	R	277
		Sleep problems most likely contribute to loss of control over emotions, including loss of regulation of aggressive impulses to context-appropriate behaviour.	P R	276

Factor	Harmful agents	Findings, possible effects	PERMA Components affected	Ref.
Normality	Lack Comprehensibility	Comprehensibility improves positive relationships through social integration, social engagement, participation, and social support.	P E R A	282
	Lack of control	Feeling in control of situations (manageability) is an important factor affecting stress levels and health conditions.	P R M A	279
		Finding refuge in the housing area of the prison contributes to the sense of manageability and, therefore, to the general well-being.	P R M	182
		Comprehensibility, manageability, "sense of control", and meaningfulness have been independently or collectively related to well-being.	P M A	280, 281

Appendix C: Codebook manifest content analysis

Nodes

1. Architecture factors	Architectural factors related to health and well-being that can be present in *the architectural design of any typology of building in general*
01. Acoustic levels	Any mention that is important (or not) to consider acoustic control and to reduce the negative effect of noise.
02. Artificial light	Any mention of the importance of paying attention (or not) to the quality of artificial light.
03. Indoor air quality	Any mention to the importance of paying attention (or not) to the quality of air inside the building (or cell). It also considers any mention of bad smells and their consequences.
04. Indoor Bathroom	Any mention of the existence or non-existence of indoor-cell bathroom. Including technical features but excluding statements about the reasons for considering them.
05. Thermal Comfort	Any mention of thermal conditions consideration. Includes heating, cooling, or the consideration of local temperatures or climates.
06. Colours	Any mention of colours as a variable important (or not) to paying attention to promote health and well-being.
07. Daylight	Any mention of daylight as an important (or not) architectural variable in relation to well-being and or health.
08. Nature	Any mention of the relevance (or irrelevance) of paying attention to include nature as a variable that promotes health and well-being.
09. Quality of Views	Any mention of the relevance (or irrelevance) of paying attention to the quality of views from the cell's windows to promote health and well-being. It includes remarks on the quality of views as well as the designers' efforts to provide the spectator with more than simply walls, bars, and security elements to behold.
10. Space	Any mention to square footage or surface in a cell. It includes mentions to geometry, number of occupants of the space, overpopulation, or overcrowding.
11. Doors' features	Any mention to size, quantity, or characteristics specifically related with doors.
12. Floor features	Any mention to size, quantity, or characteristics specifically related with floors.

13. Quality of materials	Any general mention of physical, sensorial properties of materials (not specifically mentioned as a feature of windows, doors, walls, floor, or ceiling).
14. Furniture and fixtures	Any mention to features, quality of textile elements like curtains, or the need to consider any furniture in the cell. It also considers any mention to features, quality, or the need to consider fixtures such as lamps or affixed beds.
15. Walls' features	Any mention to size, quantity, or characteristics specifically related with walls.
16. Window's features	Any mention to size, quantity, or characteristics specifically related with windows.
2. Health and well-being	**Factors affecting inmates' health, safety, and well-being**
17. Health in prison	Any mention of the health condition of inmates before, during, or after being in prison as a particular aspect of imprisonment.
18. Stress	Refers to any *situations* that can promote stress. Promotors can be elements or situations that create non-desirable and stressful emotions like fear, anger, lack of control. However, negative distractors, which are ambient components rather than circumstances, should not be considered as stress factors.
19. Depression, self-harm, suicide	Any mention of any issue related with inmate depression, self-harm, or suicide.
20. Communicable diseases	Any mention of the need to pay attention to the design process to prevent infections or transmission of diseases.
21. Mental health care	Any mention to consider the pre-prison, in-prison, or post-prison mental health condition of the inmate or the staff.
22. Non-communicable diseases	Any indication of how the design affects (or does not affect) the transmission of communicable diseases.
23. Avoiding negative distractors	Environmental elements that elicit negative feelings, stressing the individual and increasing worrisome thoughts.
24. Sense of coherence	Three components: 1. The ability for people to understand what happens around them; 2. To what extent they were able to manage the situation on their own in their social network; 3. Ability to find meaning in the situation. These three elements, comprehensibility (cognitive), manageability "sense of control" (instrumental/ behavioural), and meaningfulness (motivational), formed the concept: a sense of coherence. Include coherence for inmates and staff, between purpose and architecture.

25. Preventing isolation	Refers to any consideration of the importance of social relationships for users in general and prisoners in particular. It includes any mention about if or how the built environment affects positively or negatively over the social relationship. Any mention of the presence of social support or social contact or lack of presence of social support as isolation.
26. Human senses	Any mention of any issue related to vision, hearing, olfaction, and touch.
27 Promoting positive distractors	Environmental elements that elicit positive feelings hold attention and interest without stressing the individual and reduce worrisome thoughts.
28. Principle of normality	Any mention or suggestion related with the Scandinavian "principle of normality" that says that "One day living in prison must be as normal as a day living outside prison".
29. Self-esteem promotion	Refers to any consideration of the importance of self-esteem for users in general and prisoners in particular. It includes any mention about if or how the built environment affects positively or negatively users' self-esteem.
30. Universal Design	Any mention to design for disabilities or different ages, cultures or languages or gender.
3. Prison factors or issues	Concerns about security, prison purposes, prison architecture issues, and decision processes.
31. Anti-social behaviour	Any issue related with inmate to inmate assault, inmate to staff assault, aggressive behaviour, antisystem behaviour, anger.
32. Escape	Any mention of the possibility, method, or attempt to escape.
33. Emergencies in prison	Any aspect related to the risk or experience of fire in a prison.
34. Traffic and drugs	Drug-related issues (consumption or treatment) , or any issue relating to the prevention of illegal or unauthorised items from being hidden or traded.
35. Inmates Education	Any mention of the importance (or not) to providing education and training programmes.
36. Rehabilitation	Any mention of rehabilitation as a prison or system goal.
37. It's Just Deprivation of Liberty	Any mention of rehabilitation as a prison or system goal.
38. Work for Prisoners	Any mention about the need or the benefits of working programmes in prison.

39. Designing for humans	Any sentence that shows a high level of awareness on the respect of the humane dignity of the users.
40. Policies (in or about prison)	Any mention of the presence or lack of any policy. It includes comments about any necessary policy.
41. Designing by standards	Any mention of the presence or lack of standards.
42. Heritage as a "burden"	Any mention or suggestion about the cultural or architectural heritage of the old system or the older way to design prisons.
43. Perception of evolution	How the way of thinking about prison design or prison regime or prison goals has changed or is changing through the years from one model to another or within a model at the time.
44. Layout in relation to programme	Any mention of special layout or distribution of prison facilities or architectural units in relation to the programme. It includes the nominal capacity of cells.
45. Staff issues	Any issue related to the lack of staff, their necessities, risk or lack of risk for staff.
46. Decision-making process	Any mention of decisions that have to be taken or to the process of making decisions about any aspect except when the decision is transferred for hierarchical reasons or financial reasons.
47. Financial obstacles	Any mention to prison issues related to budget, cost, or finance.
48. Hierarchies	Any sentence that shows that a decision or guidelines must be resolved at a higher level or from a more directly affected person, institution, or authority.
49. Inmate status	Any mention to status of prisoners as: 1. LEGAL STATUS: condemned, pre-trial, detainee; 2. DEMOGRAPHIC STATUS: gender, ethnicity, age or ageing (juvenile adult); 3. SECURITY STATUS: level of security of prison (open, closed minimum, closed medium, closed maximum); 4. LEVEL OF RISK OF PRISONERS.
50. Other obstacles	Any mention of barrier or obstacle (other than financial) that prevents something from happening. It also includes the beliefs or facts about undesirable effects of too much comfort and a good environment in prison.
51. Setting priorities	Any mention of or suggestion of priorities in architectural factors.
52. Inclusion from the beginning	Any mention that the decisions regarding health and/or well-being are made from the beginning of the project.

4. Interviewee personal view	
53. Assumptions	Any sentence that, in the eyes of the analyser, the interviewee has clearly taken something for granted.
54. Awareness of social pressure	The interviewee reports about social beliefs or ways of thinking related to how prison, prison purpose, prison treatment or prison conditions must be.
55. Awareness of improvements	Any architectural solution, process, or change that can be seen as an improvement.
56. Cultural differences and social context	Any mention of cultural aspects or differences and external social context.
57. It must be a punishment	Any argument that it is necessary to make the prisoner perceive he or she is being punished.
58. Learning about prisons	Specific events, processes, or solutions that are seen as learning about prison design.
59. Personal attitude	It considers two scenarios: FACTS: An interviewee personal statement about personal feelings, preferences, likes, or dislikes in relation to something. It includes the interviewee's view about what a prison should be and any personal proposition. INTERPRETATIONS: A sentence that can show the personal or professional motivations of the interviewee.
60. International unfamiliarity	Expression or evidence of lack of awareness or lack of specific knowledge in some area.

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