ABSTRACT

In the late twentieth century Michel Foucault argued that the relationship between the interior and the economy was necessarily an intricate and contingent one. This condition was nowhere more evident than in the case of storage for medical records. Foucault explicitly drew attention to the way in which scientific records de-personalise the individual, establishing a bio-political power structure. However, whereas the power relations implicit in some institutional buildings could be understood architecturally, the problems of bio-politics are more closely tied to issues of interiority. In particular, the connection between the body, its representation in the form of medical data, and the sequencing and storage of this data, are all problems of the interior. In response to this realisation, through the analysis of theory and design, this paper investigates the practice of storing medical records as an unexplored dimension of institutional space and as a reflection of the shift from a phenomenological way of thinking to one concerned with the economics of labour. In parallel with a proposal for a theoretical design for a medical archive, this research examines the changing nature of the interior in the wake of the institutionalisation of data that has occurred in the digital era and begins to develop a reading of the spatial implications of bio-politics.

INTRODUCTION

Morals reformed – health preserved – industry invigorated – instruction diffused – public burthens lightened – economy seated, as it were, upon a rock – the Gordian knot of the Poor Laws are not cut, but untied – all by a simple idea in Architecture!

Jeremy Bentham

In an era where information is ubiquitous, and a myriad of methods exists for sorting, classifying and searching through data, the role of one of the most famous building types from antiquity, the archives, is necessarily under review. In the ancient world the archives of Ebla (Syria) and Ur (Mesopotamia) contained some of the most important records of their day. The buildings themselves are forgotten, but the information they protected and gave order to, a critical record of the social values and beliefs of their era, have partially survived to the present day. The Athenian state constructed one of the first, purpose-built designs to house information around 400BC and over the following six centuries a growing number of buildings were designed for the sole purpose of securing and sequencing government records. While little is known about the majority of these archives, archaeologists have uncovered the remains of the Library of Celsus in Ephesus (117AD). This building, which was rectangular in plan and featured a single, decorated and modelled façade, was designed with one walled structure hidden inside another: In the gap between the outer and inner walls of the building, a narrow ambulatory space was constructed which featured stairs that rose through three levels to a series of connecting galleries that opened into the inner volume. Inside this central space three levels of alcove-lined walls were arrayed around a central void. Each alcove contained a set of books and scrolls that were only accessible from particular galleries.

The plan of the Library of Celsus encapsulates, in its spatial configuration and functional zoning, the raison d’être of the archive type (Figure 1). At its centre is information, ordered in alcoves and protected by its own fortified enclosure. Access to the archive is both restrained between the walls and controlled by the galleries. This building is almost completely internalised only a single façade, with a repetitious series of columned aedicules, is visible from the street. While the designers of subsequent archives have developed alternative planning strategies, the principles remain largely the same. This is a building type where the interior accommodates a particular, extrinsic imperative, determined by the structure of the knowledge it contains rather than the stone and brick of its supports.

As time has passed, and with the rise of new technology and the advent of open access for many collections, the archive typology has evolved. New archives, like libraries, have become hybrid meeting places where information is accessed via a terminal, rather than through a labyrinthine journey. Where security was previously given priority over accessibility, today the two are no longer mutually exclusive: an original record can be secure, but digital access can be freely available. However, there is one type of archive where the problems of security and accessibility are still relevant: medical records. This type of archive cannot be completely separated from the needs of the body. But this is no longer the body of the humanist tradition, which either through...
Even a seamless adaptation of the themes presented in this paper, intended to be a universal solution to the problem of archives, or even a redescription of Foucault’s Discipline and Punish, where it is presented as a system of surveillance that is both practical and symbolic. Developed by Jeremy Bentham, in his nineteenth century incarnation the panopticon was a building type that featured a tower surrounded by a wall. The tower housed a guard and the wall contained a series of prison cells. This configuration gave the guard the freedom to look into each and every cell. However, because the tower was darkened, and the cells effectively back-lit, each prisoner was always on display, but they would never know if they were under surveillance from the guard or not. It is this power relationship, which is both spatially enabled and enforced, that is well known in the design disciplines. In the panopticon each prisoner is effectively trapped by a combination of their own forced visibility and the ubiquitous, if largely symbolic, power of the state.

While, as a result of Foucault’s work, many scholars and designers assume that the panopticon was always intended as a model prison,1 Bentham initially proposed that it was an adaptable architectural mechanism that could under the ‘Gordian knot’ of social ills that had arisen alongside the new capitalist economy. According to the architectural historian and theorist Thomas Marks, Bentham designed the panopticon as a production house for his brother Samuel who had ‘difficulty in finding skilled workmen to supervise his factory.’2 In response to this problem Bentham ‘proposed to place a supervisor in the centre of a circular “inspection house” to watch the unskilled workers.’3 This original application of the panopticon is significant for two reasons. First, even in its earliest incarnation the panopticon supported heightened surveillance through spatial relations. However, its purpose was more explicitly tied to systems of production and labour than to discipline and control. It is the secondary dimension, which Foucault describes, but which design scholars rarely acknowledge, that is of primary interest in the present paper. While the ostensible motive for using the panopticon principle in a similar manner in a factor was notably to inscribe a particular type of power relations in the body, it is this common focus on the body and its physical condition (either present in the cell, or active and productive in the factory), that initially drew Foucault to consider the panopticon plan.

From his earliest works, Foucault was interested in the body as a site of power relationships, authorised by the state and embodied by institutions. In his famous structuralist works in the 1960s, he focused on psychology and the asylum in Madness and Civilization, and medicine and the hospital in The Birth of the Clinic. In each of these works the body is treated as a social construct, dissected, delineated and displayed in an appropriately arrayed space.4 Parallels between the way knowledge is ordered and the way space is used to reinforce (or enable) this level of control, are implicit in both works. Indeed, such is the extent to which the body is spatially ordered in these studies that political philosophers, such as Fredric Jameson, have argued that Foucault’s interpretation of the panopticon was a recurring theme long before Foucault became interested in prisons.5 Elden observes that Foucault’s concerns with surveillance and society do not stem from his studies of penal institutions but rather from the realm of public health. However, it was only in the late nine-teen seventies that Foucault was to adapt his theory of the relationship between the body and space – encapsulated in the panopticon – to account for the impact of capitalism on both the economy and the workforce. The cultural and spatial institution that became the subject of this later work was the medical archive.

For Foucault, the act of constructing and ordering a set of medical records is necessarily a type of surveillance that operates by gathering information from a population. In The Birth of the Clinic, more than a decade before, Foucault suggested that the medical gaze both defined the body in the space of the clinic and, by implication, it exerted its regard (or scientific outlook) to society en masse. Much like Jonas, the ancient Roman god of transitions, the medical discipline is presented as looking simultaneously into the space of the institution and out into society with its institutionalising gaze. In the case of the medical archive, this transition between exterior and interior is especially significant. Medical records can be used to systematically devise programs and treatments for raising the health standard of a community. However, Foucault argues that this seemingly altruistic agenda is motivated by optimising, individually and collectively, the body for productive labour. The purpose of the medical archive is not only partially derived from its structural imperative (to contain information in such a way that it can be readily used), but also from its economic drivers; to ensure a healthy, productive and reliant workforce. With the body newly defined as a locus of production, the role of the institution (and in particular, the hospital) was no longer to control or punish, but rather to improve the productive potential of docile or sedentary bodies. This connection between information, the body and the economy, a connection which is spatially embodied in the interiority of the medical archive – is at the heart of Foucault’s notion of bio-politics.6 Since it was first proposed, bio-politics has become a cornerstone of many current theories and many disciplines, addressing the relationship between politics, economics and the formation of society.7 In the following section the origin of the bio-political economy is considered.

THE RISE OF BIO-POLITICS

The rise of the process of information-gathering in the service of social medicine can be traced to the end of the nineteenth century in England. At this time an increasingly industrialised economy was placing new demands on the working class, simultaneously exacerbating the problems of air quality and the spread of disease. In response to this situation, the Poor Law was introduced to provide tax-supported medical interventions to ensure that economically disadvantaged people would be fit for labour.8 The medicalisation of the working class was therefore a form of both health reform and social control.9 As Foucault observes, the Poor Law re-framed health in relation to economics: the poor were no longer thought of as debased souls, but as components of the apparatus of production.10 Thus people in the industrial economy were regarded as being the equivalent of machines that either worked or didn’t; the good poor, the bad poor, the industrious, the involuntarily unemployed, those who could ‘do some kind of labour and those who could not’.11 As a population, it was the workers bodies that interested public health administration, but insofar as they constituted to combine to constitute a labour force,12 this heightened vigilance was traced to the late nineteenth century; a time when economic viability became reliant on the health of the general populace.13

This shift from viewing the body as an individual with specific needs to seeing it as a collective entity with a capacity for labour shaped the nature of the hospital system. The hospital was no longer a charitable institution but now one based in economics; it had become a ‘curing machine’ that maintained the health of the working class. It was expected to not only neutralise dangers to the working class (injury and epidemics), but also to increase proportion or phenomenology is accommodated in the interior. The body at the centre of the medical archive is informational and political; its worth is measured in economic terms. Drawing on two facets of Michel Foucault’s writings that are rarely considered in design discourse, this paper examines the spatial and political implications of the medical archive as a type of interior. The two notions adopted from Foucault are an alternative reading of the purpose of the panopticon plan and the concept of bio-politics. The paper commences by tracing the origins of Foucault’s interpretation of the panopticon to his earlier medical works, and then develops an argument that, rather than being concerned with imprisonment, the panopticon was structured around the economics of the body. Thereafter the paper summarises Foucault’s theory of bio-politics, a theory that explicitly acknowledges the problems of the medical archive and a mechanism that Foucault saw as replacing the human body with information derived from it. From this theoretical foundation the research returns to the question of design and the particular problems of a medical archive. Because this design problem is both complex and extensive, only a limited overview of themes relating to the body, space and information, is developed in the paper. However, in parallel with the discussion of the political and spatial issues, the paper describes some facets of a speculative proposal for a medical archive that has been inspired by the same ideas. This design revisits Bentham’s original panoptic diagram to consider its potential for accommodating a different type of power structure. Only presented in parts, the design is not intended to be a universal solution to the problem of archives, or even a seamless adaptation of the themes presented in this paper; it does record one possible investigation of these concepts. Finally while the focus of this paper is on medical archives, the design is potentially relevant for the design of all architectures and systems – whether they are spatial, formal or organisational – that seek to contain information about the body. As the paper reveals, the biopolitical machinations of the state are present not only in medical records, but in sporting tables, gaming machines that either worked or didn’t; the good poor, the bad poor, the industrious, the involuntarily unemployed, those who could ‘do some kind of labour and those who could not’.11 As a population, it was the workers bodies that interested public health administration, but insofar as they constituted to combine to constitute a labour force,12 this heightened vigilance was traced to the late nineteenth century; a time when economic viability became reliant on the health of the general populace.13

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Observation, notation and records taking which make it possible to follow the development of individuals over time. These developments were not only restricted to biological issues within a hospital but extended to other domains such as demographics, wealth distribution, age, or entertainment interests. For example, the medical record is the conceptual equivalent to a telemarketing bureau, or sports-betting centre. All of these programs require the close monitoring of information for the purpose of shaping or optimising certain forms of human behaviour that have an economic impact.

Adaptations of the panoptic plan are not uncommon but, as scholar Rosa Ainley points out, they are ‘frequently written about but possibly never built.’ Indeed, apart from the Edinburgh Bridewell prison of 1791, no other ‘pure’ panopticon has ever been constructed. Significantly, Markus suggests that over time the panoptic plan has gradually transformed the hospital interior from looking towards the central altar to being observed from the centre. This is as much external as it is internal. However whereas the core of the library was frequently a void, the core of the archive is conceptually similar to that of the prison. For this reason, the central lift access to the archives is symbolic of the factory inspector or prison guard: it surveys and controls the bodies that the archive represents. The platform-lift (which forms the ‘core of the tower’), allows access to only one level at a time. The visible movement and changing position of the lift indicates there is an active inspector, but where he or she is at any one time is impossible to determine.

One of the first tactical decisions in the design process, which parcels Foucault’s reading of the clinic, is to separate the protractive observation functions of the reactive archive. This reinforces the conventional design practice of separating the medical archive from the hospital. The act of sited the archives in a different space supports Foucault’s observation that ‘the centre of initiative, organisation and control for politics should not be located only in the apparatuses of the state.’ Thus, the panoptic archive stands outside the institutional building as a monument to the health of the community, but also, from a bio-political perspective, as a guard tower for the subjugation of the working class.

The adaptation of bio-power that is embodied in the shift of surveillance from the human body onto the information it produces, sees the interior of the panopticon transformed into a library of economic information. This change potentially provokes a new tension between the altruistic storage of knowledge and its use for political purposes. Markus notes that ‘domed central spaces are important metaphors for universal knowledge’ and were often employed for libraries of theology and jurisprudence. The dome accentuates introspective attention, focusing the visitor on the information alone. In contrast, the archive, with its panoptic interior, may have a similar plan, but its field of influence is as much external as it is internal. However whereas the core of the library was frequently a void, the core of the archive is conceptually similar to that of the prison. For this reason, the central lift access to the archives is symbolic of the factory inspector or prison guard: it surveys and controls the bodies that the archive represents. The platform-lift (which forms the ‘core of the tower’), allows access to only one level at a time. The visible movement and changing position of the lift indicates there is an active inspector, but where he or she is at any one time is impossible to determine.

TESTING THE PANOPTICON: PAPER VS. DIGITAL

For an archive with paper records, the centralised depository solves many problems associated with the efficiency and quality of the medical records that are stored. Today, this is not uncommon. As a result, the panoptic archive stands outside the institutional building as a monument to the health of the community, but also, from a bio-political perspective, as a guard tower for the subjugation of the working class.
and the increasing mobility of patients, medical records have become dislocated in both narrative and geography. Gertzog asserts that the medical record should not be a collection of data which [is] both physically and conceptually fragmented8 and it is imperative to design a medical records system that provides a structural framework for continuity and comprehensiveness of care.10 Paper records are regarded as less prone to fragmentation and more likely to evoke a rich record of the context in which the records were produced, leading to the increased utility of the record. For the concept design, the panoptic diagram responds to Gertzog’s argument by providing a systemised architectural layout for organising information, with the space of the inspector becoming the all-important secure access. In a paper archive, security is enabled and maintained by the panoptic qualities of the plan diagram, through its provision of physical architectural features that allow control and observation. Secure access is then only allowed to personnel who legitimately require a record and its information. Thus, for the storage of paper records, the interior focal point of power is given over to the medical archivist or practitioner and this power is reinforced by spatial and formal means (Figure 2).

However, Gertzog’s argument about the value of paper records was written in the 1970s, and despite being relevant today, contemporary digital databases have eliminated the need for an explicit architectural core within a records system. New digital structures operate through passwords that regulate access to information banks.11 Hard-drives are not secured by physical surveillance but password protection and firewalls. As philosopher Sven-Olov Wallenstein writes, ‘the centralising function (the panopticon tower with its unidirectional visibility) has today been fragmented into a multiplicity of flexible monitoring instances, and a structure of universal modulation has replaced the disciplinary role’.12 In other words, the panopticon, as a spatial means of control, is in danger of becoming redundant.

If then, paper storage is replaced by digital means, the power previously invested in the core space of the guard tower or inspection house is undermined by the digital network. The presence of a virtual network sees the power relations of Bentham’s panoptic diagram shift, with each office cell becoming an equal unit of power within the network and with access to all information. In response to this change, the concept design suggests that the core lift remains the primary access not only to the paper records, but also to the hard-drives, reinforcing the symbolic power of the inspector – even though they are more likely to be computer technicians than archivists (Fig 3).

The visible position of the lift is still a sign of the care invested in securing the data, but the nature of the care has changed. Despite being relevant today, contemporary digital databases have eliminated the need for an explicit architectural layout for organising information, with the space of the inspector becoming the all-important secure access. In a paper archive, security is enabled and maintained by the panoptic diagram, through its provision of physical architectural features that allow control and observation. Secure access is then only allowed to personnel who legitimately require a record and its information. Thus, for the storage of paper records, the interior focal point of power is given over to the medical archivist or practitioner and this power is reinforced by spatial and formal means (Figure 2).

CONTEMPORARY PANOPTICISM AND BIO-INFORMATICS

Although Foucault never directly addressed contemporary technical developments in any detail, his later work, which was less emphatically spatial, retained an interest in panopticism.13 In design theory there is widespread recognition, often traced to the works of Paul Virilio14, that the city has become increasingly virtual through the proliferation of closed circuit television (CCTV) networks and other forms of electronic surveillance.15 As Ainley writes, ‘CCTV is an electronic panopticon, albeit one without a spectacle, and this is increasingly installed in public spaces’.16 Computer

technology heralds a new implicit surveillance of space. As Wallenstein writes, this creates a crisis for the design wherein:

[The old disciplinary functions that moved people from one closed segment of space to another – from the school to the factory, from the factory to the hospital, the prison and so forth – have entered into a state of crisis, replaced by new, smooth functions. Control is exerted over open spaces; it locates an element in an open environment, for example, an electronic bracelet worn by a prisoner; which provides or denies access to a given segment of space at a certain point in time.17]

Thus, while the power relations implicit in panopticism are still prevalent, Wallenstein stresses that ‘the diagram should not be identified with any particular form’.18 Unlike the former disciplinary matrix of the panopticon, new structures operate through electronic regulation. Therefore, the all-seeing eye of the dispersed CCTV camera has replaced the centralised tower in the panopticon. However inspectors are still required; they are just spatially distributed like the CCTV cameras. The panoptic, architecturally-defined guard tower has been replaced by the control room; an often left-over space, lined with monitors and replete with cables. Despite the spatial differences, one consistent feature is the lack of awareness of whether a cell, or monitor, is actually being watched. As Ainley points out, ‘this is not lost on television and film writers who provide endless examples of crimes undetected by sleeping or absent security staff,19 and in the same vein these scripted interiors are characteristically anonymous, hidden behind a wall of flickering screens.’
While for the storage of paper records, the panoptic layout provides a systematic physical means of ordering records (Figure 3), digital information storage relies on a barcode to ‘locate’ data and thus spatial alphabetic ordering is redundant. A name — representative of an individual history, ethnicity, and gender — is replaced with a digital barcode, and while that barcode is numerically unique, it is otherwise a sterile representation of the individual. The northern façade (Figure 4) of the archives serves to express this new notion of the individual, through modulation of a ‘barcode’ form of the façade. The façade poetically celebrates an infinite number of individuals as the sun moves throughout the course of a day, generating a constantly changing barcode sequence in the shadows it casts across the office floors (Figure 5). A further active use of light is employed in the central tower of the archive, with the roof above the lift shaft creating an oculus similar to that of the Pantheon. In antithesis to the tower light of the classic panopticon prison (to distort visibility for prisoners), the light from above serves to abundantly demonstrate the power of the inspector (Figure 6). This inspector, in the form of a medical archivist or practitioner, represents an implicit form of sovereign power that is able to exercise his or her influence over a population through the information that they have access to.

**CONCLUSION**

The political economy is no longer reliant on modes of material production, but on the collation, ordering and management of information. One possible by-product of this change is that architecture is no longer required to manage the productive potential of the populace through spatial configuration. Wallenstein reinforces this notion when he observes that this change is a fundamental mutation of capitalism, whereby the enclosed factory has been replaced by a service economy characterized by its dispersal. The disappearance of the factory as the model of production in advanced capitalist societies is reflected in similar transformations of other spaces. In other words, much of the space produced by medical archive designers now functions solely for the storage of information, rather than to house the body. By implication, creating an interior to support a political economy is becoming increasingly difficult as systems of power move into the digital realm of information capital. Foucault writes that Bentham dreamt of transforming into a network of mechanisms that would be everywhere and always alert, running through society without interruption in space or time. The new virtual panopticism achieves this goal, chal]
rather it is one of many possible ways of considering the design of a space that is attuned to an economic rather than a humanist program. It might also be argued that while the rise of bio-politics presents challenges for landscape designers and architects, it is the interior that is most complicit in the economics of production. Regardless of whether the contemporary design is for a medical archive, a telemarketing firm or a census office—all building types where bodily information is the primary capital—the interior is the new locus or production.

NOTES

7. Stuart Elden, ‘Plague, Panopticon, Police,’ Surveillance and Society 1, 3 (2003), 240.
14. Foucault, The Birth of Social Medicine, 19-42.
27. Foucault, Politics of Health in the Eighteenth Century, 274.
33. Wallenstein, Biopolitics and the Emergence of Modern Architecture,
37. Wallenstein, Biopolitics and the Emergence of Modern Architecture.
38. Wallenstein, Biopolitics and the Emergence of Modern Architecture.
41. Foucault, Discipline and Punish, 409.