

# FORTIFYING SISYPHUS, OR THE ARCHITECTURAL MACHINERY OF MODERN PUNISHMENT (1820-1870)

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This essay explores the rapid inversion of the architectural machinery of corrections, which, over a period of a few decades began extracting labour from the prisoner, rather than pain. This was linked to the belief, reinforced by many of the religions of the period, that there was a strong correlation between idleness (vagrancy) and crime. As the European prison became a more wholly functional system, closely geared to the march of industrial progress across Europe, an economy of labour emerged within it whose only objective was to undermine production and establish a new and pervasive architectural morality. The forces of progress and productivity, determined to infect the idle, secretly and ironically propagated this new technology of toil.

The gods had condemned Sisyphus to ceaselessly rolling a rock to the top of a mountain, whence the stone would fall back of its own weight. They had thought, with some reason, that there is no more dreadful punishment than futile and hopeless labour.

#### Albert Camus 1

In 1819 a crude timber and iron structure was built in the extensive courtvard of the recently completed Brixton prison. It was one of many similar structures that were being erected indiscriminately within prisons across England. It took the form of a long revolving cylinder, with steps around its circumference. The structure that housed the timber wheel was open on three sides, with a roof over and stone wall at the rear. The prisoner mounted the structure, grabbed a horizontal bar in front of them and made the cylinder revolve with their feet in a continual stepping motion. The massive wheel was geared to a sail that was located on the roof of the structure or, in some cases, in a tower beside. This sail could be adjusted to control the relative resistance of the wheel, and in this way regulate the effort required by the prisoners to keep it running. Michael Ignatieff reveals how "[u]sually the wheel was set to turn at between forty-eight and fifty steps a minute."2 Completely open to the rear, the structure dramatised the labour of the prisoner creating a kind of artificial stage within the interior of the prison environment. Even those who, for reasons of health, were unable to be put to work on the wheel had to acknowledge its presence as a physical and psychological aperture, unique to the modern prison.

The invention of the machine is generally attributed to the Englishman Samuel Cubitt who was the head of a large firm of building contractors. According to Michael Ignatieff, magistrates in Cubitt's native town of Ipswich "were at a loss to find a deterring form of hard labour for their prisoners."3 The design was a considerable improvement on the more traditional treadwheel where the workers stood inside the rotating structure. Cubitt's design allowed a more tiring upward, climbing motion, instead of horizontal, and reduced the size required by more than two-thirds. However the major innovation of Cubitt's design was that it could effectively organise the labour of the prisoner, without providing any outcome or sense of satisfaction. The faster the wheel moved, the less productive it became. Ignatieff observes that "[w]hile some were geared to grind corn or raise water, most did nothing more than grind the air."4 Patricia O' Brien describes how the function of the wheel, despite maintaining the illusion of progress, was aimed more at keeping prisoners occupied, than rendering them useful. While it was possible to harness the treadwheels towards simple tasks "on the whole they were certainly not intended for productive labour"5. Robin Evans describes it, more precisely as a "device for equalising, measuring, regulating and timing the performance of toil,"6 According to Evans, "the value of the wheel was not its industrial potential [...] but rather in its capacity to reduce the act of labour to an inescapable sequence of necessary movements."7 This is an important aspect of the wheels' function.

Contemporary pamphleteer Sydney Smith saw in the architectural machine the potential to "banish all the looms of Preston jail and substitute nothing but the treadwheel or the capstan, or some species of labour where the labourer could not see the results of his toil, where it was as monotonous, irksome and as dull as possible."<sup>a</sup> The Justices of the Peace charged with the job of maintaining and administering the prisons were equally salutary in their enthusiasm for the new addition. One Justice heralded the invention as "the most tiresome, distressing, exemplary punishment that has ever been contrived by human ingenuity."<sup>a</sup>

The structure, ingenious in its logic, can only be seen as an architectural embodiment of the punishment dealt out to Sisyphus several millennia earlier. By 1824 more than fifty prisons in England had adopted the mechanism<sup>10</sup> with a combined capacity of more than a thousand prisoners. It continued to be used prolifically across England well into the 1870s and beyond. Around half of the

150 thousand prisoners committed annually to English prisons were deemed fit for the treadwheel, treading and grinding uselessly for a minimum of six hours a day. Most institutions ran the wheel for ten hours a day, with prisoners alternating at twenty-minute intervals between work and rest. The number of prisoners who could be subjected to the device was limited only by the length of the wheel.

Another prison innovation, several decades later, embodies similar objectives to the treadwheel, but this time, confines the labour to the prisoners cell. The crank, which appeared in some cells at Pentonville, was a metal arm fixed to the wall of the cell that the prisoner turned repetitively." Attached to the arm was a counter that recorded the number of times the crank had turned. This mechanism allowed the guards to assess the relative productivity of the prisoner, and, if necessary manipulate it. Unlike the treadwheel, no attempt was made to make this labour productive. Its installation was to control the location and behaviour of the prisoner. Dominating the cell spatially, the large counter encroached upon the prisoner's personal space, blurring the distinction between work and life. The machine and the architecture conspire, marrying the body of the prisoner, with labour and the cell. The prisoner cannot escape the futility of his task.

Both structures are worthy of study as they embody, on various levels, several insights regarding the notion of *progress* in the early nineteenth century. They are also instrumental in articulating a new spatiality to the design of the prison which, rather than merely housing prisoners, engages them within its architecture. From the perspective of prison reformers, the virtue of these architectural devices was unlimited. They did not require a high degree of intelligence to operate or maintain. They could be established within almost any prison. They prevented the prisoner from being able to regulate his or her own labour. They could control the relative degree of punishment required, while at the same time distributing punishment to each prisoner equally. They prevented the prisoner from escape or from interchange with the other prisoners. They also provided the prisoner with exercise.

However the pragmatic advantages of the mechanism were vastly overshadowed by its perceived psychological effects-specifically, of forcing prisoners to do labour with little or no productive outcome. The treadwheel and the crank thus physically connected the prisoner with the architecture of the prison, literally inscribing the individual within the machinery of punishment. The same machinery, which in the course of a few decades had transformed the prison from a ramshackle, undistinguished receptacle to a tightly organised and highly regimented machine, was instrumental now in mechanising the prisoner himself. The architecture which, through major developments in technology and design, now dealt efficiently with waste, food, water, ventilation and surveillance within a large institution now regulated the body of the prisoner as an extension of this punitive apparatus. As the progress of the prison accelerated, the labour of the prisoner had become the antithesis of progress-the prisoner was made to labour, but his labour was fruitless.

The crank and the treadwheel were part of a much greater schema that dominated prison architecture throughout the nineteenth century and has been well documented by several authors. Foucault, and several after him,<sup>12</sup> have summarised this transformation as a movement from an assault on the *body* of the prisoner, to an assault on his soul (or from *pain* to *reform*). For Foucault, the divergence between the "punitive city" and "coercive institution" summarises this architectural nexus. Characteristics of the "punitive city" are extroverted. According to Foucault,

a functioning of penal power, distributed throughout the social space; present everywhere as scene, spectacle, sign, discourse; legible like an open book; operating by a permanent recodification of the mind of the citizens.<sup>13</sup>

On the other hand, the characteristics of the "coercive institution" are more calculated and discreet, necessitating

[a] compact functioning of the power to punish: a meticulous assumption of responsibility for the body and the time of the convict, a regulation of his movements and behaviour by a system of authority and knowledge; a concerted orthopaedy applied to convicts in order to reclaim them individually.<sup>14</sup>

For Foucault, the emergence of the prison marks the institutionalisation (or concealment) of the power to punish, usurping the crude and untidy techniques of the "punitive city". However this dialogue, conveniently depicted by Foucault between the punitive city and the "coercive institution" also embodies a "machinery" or "apparatus" which, as an arm of the architecture, enables the respective aims of the administrators to be fulfilled. The apparatus of the punitive city is the guillotine-public, precise and unambiguous. The apparatus of the coercive institution is the treadwheel or crank-silent, engaging and complete. The function of the machinery moves from intimidation and punishment to labour and segregation.<sup>15</sup>

Earlier, in *Madness and Civilisation*, Foucault demonstrated that work, when legitimised within an architectural system, can be used to control bodies, monitor their actions and prevent their escape. According to Foucault, *production*, in such a system is of secondary importance to the *labour* of the prisoner. As a result "[w]ork is deprived of any productive value; it is imposed only as a moral rule; a limitation of liberty, a submission to order, an engagement of responsibility"<sup>16</sup>. By controlling the labour of the prisoner, the penitentiary is capable of delineating effects well beyond the prisoner's detention. Foucault argued that

work possesses a constraining power superior to all forms of physical coercion, in that the regularity of the hours, the requirements of attention, the obligation to produce a result detach the sufferer from a liberty of mind that would be fatal and engage him in a system of responsibilities.<sup>17</sup>

Labour was to be physical, regimented and unrewarding. As Foucault writes "[a]Il exercises of the imagination must be excluded"18. This tendency of correctional reform, to deploy labour as a means of artificial control, has been well documented. Recent authors (of typically Marxist persuasion) have demonstrated convincing parallels between the architectural evolution of the prison and bourgeoisie institutions such as the factory. Amongst these Rusche and Kirchheimer® and Mellossi and Pavarini® are the foremost examples. Within this scholarship, the strategies of capitalism are clearly defined. Firstly, the separation of prisoners, in many cases only those who refused to work (vagrants), from his or her means of production. This necessitated teaching the ethic of work, but still preventing any achievable outcome. If the prisoner gained too many useful skills, they may be able to translate their labour into production on release, at the risk of achieving economic autonomy. The real strategy was to provide a class of prisoners who, on release, would be absorbed naturally into the factory system. In this sense, Melossi and Pavarini are right when they conclude that "[t]he prison workhouse was not a true and proper place of production; it was a place for teaching the discipline of production."21 Secondly, and equally importantly, the individual must be isolated, unable to form any connection with the other prisoners around-akin to what Sartre later termed seriality (where individuals united by a common praxis are unable to, or prevented from, forming a group). This prevents the individuals from ever understanding their collective worth. To achieve this requires division, either physical or perceived (psychological).

The treadwheel and the crank proved successful in the institutional prison as they were able to achieve both labour and segregation through architectural means. Whilst committed to a task, however futile, the prisoner was effectively restrained both physically and psychologically, and prevented from interaction with other prisoners. The apparatus thus rendered the prisoners docile and malleable-a state in which the moral imperative of labour could be instilled. The guillotine had become a clumsy element of government which, whilst trying to legitimise the power of the State, had secretly undermined it. The beauty of the treadmill or the crank was that they not only spared the life of the prisoner, but managed to exert an influence over it long after the prisoner had been released. In many instances, like the Maidstone County Gaol, the treadwheels were positioned at the periphery of the institution often opposite, or adjacent to, the entry point. The message, articulated through architecture, is that concentrated and diligent labour is the only barrier to the outside world. This was a Capitalist machine, geared to the production of a docile proletariat.

Through these developments in architecture and machinery, the "punitive city", by institutionalising its unproductive elements, would thus be transformed into the "productive city". As part of this new Capitalist morality that, in many respects, usurped the traditional Christian values, a new work ethic invaded Europe. Over a period of a few centuries this morality of labour incarcerated the idle, vagrant and unproductive in the same way that the inquisition had sifted out atheists, witches and other individuals whose existence was contrary to the doctrine of the state. Enlightenment authors like Diderot were dismayed at the number of poor and lazy young men which proliferated the streets of Paris. Diderot tried to remind the people that there were still "uncultivated lands to clear, colonies to populate, factories to sustain, public works to continue."2 There was a powerful association throughout the period between idleness and crime. The general belief was that those who were gainfully employed were too preoccupied with their work for any kind of moral deviation. It was the idle who were the new scapegoats of the eighteenth century penal system.

This morality had been instrumental in the Seventeenth Century in the establishment of the House of Correction and all of its variations across Europe (the *rasp-huis*, the *Bridewell* etc.). The basis was to target the idle, vagrant and unproductive and put them to work involuntarily in makeshift workhouses. Foucault detects, as early a 1750, an urge to build a "house that would, in a sense, provide a useful pedagogy of work for those who had proved to be resistant to it."<sup>28</sup> However, examples can be traced much earlier and are widespread across England and Holland from the Seventeenth Century onwards.

The intention of the House of Correction was unambiguous: it sought to establish a liking for work, thus dispelling laziness. These workhouses, largely the product of the new middle class that had emerged after the dissolution of feudal landholdings, not only provided a cheap and previously unutilised labour force, but also, through competition, helped to drive down wages. Most importantly however, it also cleared the streets of the unproductive, establishing within the city a culture of work. Such a culture was firmly entrenched within the austere religions of the Eighteenth century, such as Calvinism in Holland. Work was frequently cited as a path to spiritual well-being and nourishment. Buildings like Fontana's San Michele Young Men's Prison in Rome, effectively blurred the boundaries of religion and work. The layout of the building sought to unify religious life, work and sleep under a large vaulted space. Robin Evans writes that it "was as if a cloister had been crammed into the interior of a church, the aisles filled with ranges of cells, and the whole then sandwiched into a factory."24 At the end of the vaulted hall there was a nave, binding labour with the proximity of god and symbolically communicating the divine (though forced) nature of the work being done. The door of the prison, as reported by Howard, announced its intention: "That they who, when idle, were injurious, when instructed might be useful to the state."∞

Work was also increasingly encouraged, in the late Eighteenth Century, for its curative effects in reforming prisoners. Cesare Beccaria advocated labour and discipline as the new techniques of correction intended to *redeem*, rather than *punish*, the prisoner. This impulse is embodied in the frontispiece to the third edition of Beccaria's work *On Crimes and Punishments* that appeared in 1765.<sup>∞</sup> The image shows the figure of Justice (Minerva) looking backward with disgust at an executioner who presents her with the severed heads of transgressors. Simultaneously she demonstrates approval in the other direction at the instruments of labour-hoes, saws, hammers and other devices. Work, regardless of its nature, was to become the new instrument of the penal institution, entombed within a new machinery of enlightened architectural values.

This was echoed in the words of reformers like Brissot, who saw the action of labour as somehow spiritual, analogous to working directly on the soul of the prisoner. Brissot thought prisoners should be involved in "cutting stones, polishing marble, grinding colours"<sup>27</sup> as though they were "[p]olishing and honing an otherwise irregular soul."<sup>28</sup> Other authors, such as Thomas Dekker, also drew the analogy between the correction of a prisoner and the act of making. There was traditionally a moral value associated with the act of work, and a curative effect. Dekker wrote that "[a]s iron on the anvil they are laid, not to take blows alone, but to be made and fashioned into some more charitable cause."<sup>29</sup>

Such a culture of work was already well established in the imagination of the architects of the period. The proliferation of a continental work-ethic coincided with the release of Denis Diderot's widely influential Encyclopedie between 1762 and 1777. This epic work effectively eulogised the rituals of labour. A large part of the work was devoted to the painstaking documentation of trades, manufacturing processes, craft practices, machines and implements, conducted in written entries and lavishly illustrated diagrams. The diagrams, all hand-etched, followed a strict format, developed systematically throughout the several volumes of plates. A typical page depicted a large square room, in one-point perspective with the various machinery required for the particular trade arranged sequentially throughout the space. Below this was an analytical breakdown of the necessary materials, tools and procedures. The upper drawing, communicating the operation of the machinery, conveys an atmosphere of industry. The walls of the space are punctured sparingly with windows; simple benches adorn some of the walls. The space is otherwise remarkably free of detail, given over entirely to the requirements of the machinery and its operation. People are illustrated operating the machinery throughout the various stages of production. All of the people in the image are assigned to a particular task. Everyone has a function. As well as this, there is a strong spatial aspect to the drawings. The spaces, like the people, are tailored to the requirements and function of the machine. According to Anthony Vidler,

[w]hat was presented was entirely consistent with both a concern for every aspect of production and its rationalisation, and with the incorporation of this concern into architecture; that is, the precise calculation of a space, geometrically and compositionally, for the processes, machines, and labourers it sheltered [...]. Each metier had its space, at once an extension and completion of its machines and activities and a kind of machine on its own terms.<sup>30</sup>

The Spartan communication of machinery in Diderot's *Encyclopedie*, merged artistry and economy establishing a new bond between the worker, the machine and the space around the worker. This triangular relationship became immediately influential. The centre perspective of the single room, punctuated by narrow openings and dominated spatially by the presence of obtuse machinery was widely used, particularly in the depiction of prison cells in the period after 1770. Here architects and reformers, inspired by the imagery of the *Encyclopedie*, sought a unity, between work, the individual and the room that enclosed them. Machinery becomes a central element in the composition, representing not just a place to work but an important *symbol* of work. The machinery now dominated the cell spatially and symbolically as part of the transformative redemption of the prisoner.

It is possible to trace the evolution of the cell along the lines of Diderot's work. In England, as incarceration became increasingly accepted as the primary mode of punishment, a rhetoric of the prison cell, depicted in one-point perspective, began to emerge. Within this rhetoric, there is a clear relationship between the machinery of work, the cell and the prisoner, all spatially entwined. A perspective from a pamphlet by Henry Hunt from 1821 depicts a cell with a narrow square opening as the only punctuation in the three walls shown. Three machines are shown, each somehow constraining a prisoner. To the left is a bench, chained to the wall and floor. The prisoner that lies on it is connected with a steel strap around his waist. His arms and feet are restrained by chains. The middle apparatus is similar in design to the stocks. The prisoner is seated, chained to the chair with his feet locked in position by timber planks. The final apparatus, much simpler than the other two, simply chains the feet and hands of the prisoner to the floor. In each scenario, the machinery littered throughout the barren cell successfully binds the prisoner to the architecture. The warden, the fourth person in the image, stands with a whip in the centre of the cell. The language of machinery is one of punishment and constraint. The notion of labour is absent from the image.

As Foucault's "coercive institution" begins to emerge, the process of labour slowly overshadows the techniques of constraint. It is no longer necessary to physically restrain the prisoner, if the *labour* of the prisoner can be effectively controlled. Large machines symbolising the processes of work now dominate the interior of the cell. An image of Pentonville from the 1840s, again in one-point perspective shows the overpowering nature of the apparatus of labour. Here a large timber loom fills over half the cell. The size of the machinery reinforces the manufacturing process rather than the product. A hammock is visible in the foreground of the image, dwarfed by the apparatus behind. At all times the prisoner is reminded of the work that awaits them. As in the *Encyclopedie*, the relationship between individual, machine and labour is articulated through architecture.

A third image, depicting the Surrey House of Correction, demonstrates the final evolution of the machinery. Here the process of labour consumes production itself. The crank now locates the prisoner in the cell. Where the loom represented a clear outcome for the prisoners toil, the crank now consumes labour, disappearing behind the stone wall with no possible outcome or reward. The apparatus of production is replaced by the counting machine, supported by a single Doric column. Like the loom, the machine dominates the space of the cell, impinging on the prisoners sleeping quarters. It celebrates futility rather than production. The psychology of the cell has reached its final stage. The architecture commutes labour without reward.

Like the crank, the apparatus of work is similarly enlarged gradually in the treadwheel. The sails above the wheel came to signify powerfully the futility embodied in the prisoners labour. If the wheel itself didn't sufficiently monumentalise the cruel labour of the prisoners, the sails, geared to control the resistance of the wheel, announced at an urban level the futility of the structure. In some instances, these became architectural monuments in their own right, like at Gloucester County Gaol, where the wheel is dwarfed by a complex arrangement of wheels, chains and cogs. The sail structure, despite its architectural qualities, was simplified over time. One solution was to place two wheels back to back. Here the only productive outcome of the labour of the prisoner, is to increase the labour required of his counterpart.

The other major development in the architecture of the treadwheel was the process of segregation. Whilst this wasn't a problem in the isolated cells of Pentonville, the treadwheel made prisoners more susceptible to corruption by those either side. Design saw the gradual evolution of partitions separating prisoners. At Coldbaths prison, the double storey structure contained booths separated by partitions which were numbered like stalls at a cattleyard. The prisoners were now physically embodied within the machine,

unable to see sideways or behind, and totally committed to their task. This arrangement effectively allowed a team of people to commit their efforts to a single task without any risk of forming a group. This is because, if prisoners could be connected through labour they would be given a dangerous sense of their collective worth. In the 1830s John Mance designed a segregated structure which effectively combined the principles of the crank and the treadwheel into a single structure. Installed within the grounds of Petworth House of Correction, the machine closely approximates the model of a mini-society celebrated by Marx and later Foucault; an architecture which monumentalises segregation and labour.

The model of the crank and the treadwheel flourished well into the second half of the Nineteenth Century. In 1863 a committee of Lords was appointed to examine labour in the prison system, reinforcing the virtues of futile labour. The committee were critical of some of the "more productive" tasks that had been grouped under the banner "hard labour" maintaining that only the treadwheel and the crank were worthy of the category. According to Randall McGowen, the committee found that "the sentence should not be undercut in any fashion that would console the prisoner with the thought that he was doing something useful."<sup>31</sup> Increasingly however, as reports were compiled into the operation of the treadwheel, the object of study became not the nature or amount of work done, but the state and health of the prisoners and their relative obedience. By immersion in a process of futile production, the prisoners had become the product themselves.

When considered in this way, the relationship between architecture and the machine, provides important insights into themes of production and progress in the Nineteenth Century. Whilst machines of genuine productivity were rapidly industrialising the British economy and the culture of progress and development swept Europe, inside the bowels of the "coercive institution" this machinery of futility was slowly but deliberately being constructed. As the machinery of the prison became more precise and articulated, the mechanics of labour within came to represent its antithesis. Like Sisyphus with the stone, the machinery of punishment provides only the *illusion* of progress amidst a landscape of production. As Dostoevsky puts it, "to crush a man utterly, one need only give him work of a completely useless nature."

#### PROGRESS/SAHANZ 03

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- 2 Michael Ignatieff, A Just Measure of Pain: The Penilentiary in the Industrial Revolution, 1750-1850, New York: Pantheon Books, 1978, p.177.
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- 5 Patricia O'Brien, 'The Prison on the Continent: Europe, 1865-1965,' in Norval Morris and David J. Rothman (eds), The Oxford History of the Prison, Oxford: Oxford University Press, 1995, p. 88.
- 6 Robin Evans, The Fabrication of Virtue: English Prison Architecture, 1750-1840, Cambridge: The Cambridge University Press, 1982, p.297.
- 7 Evans, The Fabrication of Virtue, p.297.
- 8 Sydney Smith, quoted in Ignatieff, A Just Measure of Pain, p.177.
- 9 Quoted in Ignatieff, A Just Measure of Pain, p.177.
- 10 See: Randall MacGowen, "The Well Ordered Prison: England, 1780-1865," in Norval Morris and David J. Rothman (eds) *The Oxford History of the Prison*, Oxford: Oxford University Press, 1995, p. 88.
- 11 See: Thomas A Markus, "Can History be a Guide to the Design of Prisons?," in Iona Spens (ed), The Architecture of Incarceration, London: Academy Editions, 1994, p. 14.
- 12 Robin Middleton, "Sickness, Madness and Crime as the Grounds of Form [Part One]," AA Files 24 (Autumn 1992), pp. 24-25.
- 13 Michel Foucault, Discipline and Punish: The Birth of the Prison, trans. Alan Sheridan, London: Penguin, 1991, p 129-130.
- 14 Foucault, Discipline and Punish, p 130.
- 15 The study of the machinery of punishment is relatively neglected in the architectural scholarship that exists. An example is Norman Johnston's recent work Forms of Constraint: A History of Prison Architecture which, despite priding itself on its focus on pragmatic rather than theoretical aspects of prison reform, fails to even mention the treadwheel or crank and their respective influence within the Nineteenth Century prison. See: Norman Johnston, *Forms of Constraint: A History of Prison Architecture*, Urbana: Illinois Institute of Chicago, 2000.
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- 17 Foucault, Madness and Civilisation, p. 247.
- 18 Foucault, Madness and Civilisation, p. 248.
- 19 See: George Rusche and Otto Kircheimer, Punishment and Social Structure, trans. M.I Finkelstein, New York: Russell and Russell, 1968.
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- 23 Foucault, Discipline and Punish, p 121.
- 24 Evans, The Fabrication of Virtue, p.60
- 25 John Howard, The State of the Prisons, London: J.M Dent and Sons, 1929, 94 [originally published in 1777].
- 26 Cesare Beccaria, On Crimes and Punishments, trans. Henry Paolucci, New York: Bobbs Merrill, 1963.
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- 29 Thomas Dekker, quoted in Evans, The Fabrication of Virtue, p.48.
- 30 Vidler, The Writing on the Walis, p.70.
- 31 MacGowen, "The Well Ordered Prison: England, 1780-1865," p. 88.