

## Bentham's Panopticon

### An Incident in the Social History of Architecture

**Robin Evans**

*'A way of obtaining power, power of mind over mind, in a quantity hitherto without example.'*

Jeremy Bentham, sire of Utilitarianism and famous legislator manque, is rarely praised for his eccentric forays into the field of architecture. His numerous projects are usually seen as idiosyncracies in an otherwise rational life's work. Many architectural historians have never heard of the Panopticon principle of construction, while philosophers and penologists tend to pass over it with a scratch of the head or a raised eyebrow. It is therefore with a certain trepidation that I now put it forward as the most significant monument to a forgotten creed that linked human betterment with architecture above all else. For these projects seem to suggest that an ethical purpose can be set in motion by the workings of an aptly appointed work of architecture, implying that a well-designed institution could fulfil a moral role by the very functioning of its parts, and thus might be an extension of moral philosophy—not as language or symbol, as Pugin and Ruskin were later to hold—but as a catalytic agent inducing human goodness or reformation as part of a purely mechanical operation.

The Panopticon, or Inspection House, was devised by Jeremy Bentham in 1787. It was originally intended as a model for all kinds of institution in which the control of humans or even animals was considered important. It tends now to be associated only with prison architecture, but Bentham himself thought it could serve equally well for schools, hospitals, lazarettos, poor-plan buildings (i.e. accommodation for the destitute), houses of correction, lunatic asylums, orphanages, nurseries, institutions for the blind and deaf, homes for deserted young women, factories, and even a gigantic chicken coop.<sup>(1)</sup>

The idea originated from a structure designed by Samuel, Jeremy's younger brother, while he was reorganising the estates of the

Russian Prince Potemkin. This proto-panopticon was to have been a manufactory situated in the town of Kritchew, but the Turko-Russian war intervened, diverting Potemkin's attention from local to international affairs, and the project floundered.<sup>(2)</sup>

Jeremy had joined Samuel in Russia and from there, in 1787, he wrote a series of contrived 'letters' (a common device for arranging descriptive material for publication at that time) setting out in excruciating detail his ideas for the design of institutions on the Panopticon plan.

Briefly, the Panopticon or Inspection House was to be a well fenestrated cylindrical sheath lined with 4 or 6 stories of cells or rooms. These cells all faced into a large covered shaft of space within which there was a smaller cylindrical kiosk. This latter afforded a perfect view of every nook and crevice of every cell and was to serve as the lodgings for the governor or manager of the institution. Here we have the essential carcass of an encompassing environment that would enable one person to control a large number of subordinates. There were many refinements directed to this same end.

#### Light and Order

The qualities of light for example were used to enhance the powers of the mandarin-like overseer in his central lodge. In the earliest schemes all the daylight for the governors lodge entered through the windows of the outer cylinder. This light would illumine the cells and pass on into the lodge. Those confined in the cells would then be unable to see into the apartments of the lodge in much the same way as people outside in the street cannot see into a house window. To ensure this directional property Bentham proposed to erect a blind or curtain system around the apertures of the lodge and to provide screens within it to prevent the through passage of light. Nor was the efficacy of this pervasive surveillance to be compromised by the threatening equality of darkness.

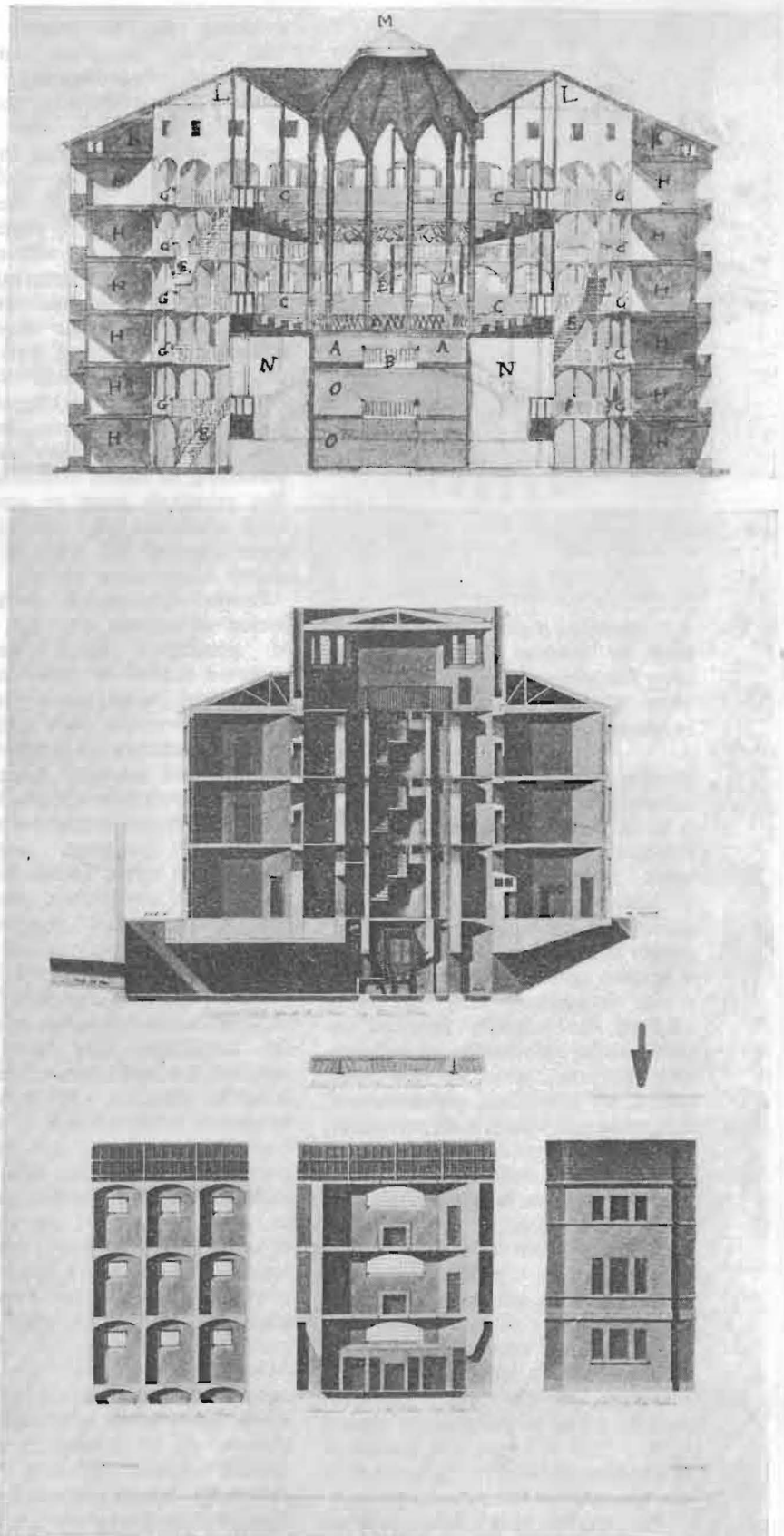




certainty, predictability and orderliness that, seems almost pathological when divested of its coeval associations, that could have induced Bentham to design the scheme as he did. And he was clearly proud of his achievement: 'Here may be observed . . . that scene of clockwork regularity which it would be easy to establish. . . . Certainty, promptitude and uniformity are the qualities which may here be distinguished in the extreme. Action scarcely follows thought quicker than execution might here be made to follow on command.'<sup>(9)</sup> With regard to his aesthetical vision of synchronised, smooth and methodically serried human activity, Bentham has on occasions been waylaid with charges of inhumanity, misanthropy, and singular lack of understanding of the workings of human nature,<sup>(10)</sup> while others have praised the traditional sense of British reasonableness and moderation in preventing the Panopticon plan from being adopted as a National Penitentiary (more of this later). This latter persuasion loses at least some of its force when it is realised that some 70 years or so later almost every controversial point put forward in *Panopticon* had been ingested by the authorities and had subsequently re-emerged as common practice in the building and organisation of gaols and penitentiaries, substantially influencing also the planning of workhouses, poor-houses, houses of correction and lunatic asylums.

Beccaria had observed, as early as 1764, in his overwhelmingly sad but lovely *Dei Delitti e delle Pene* that:

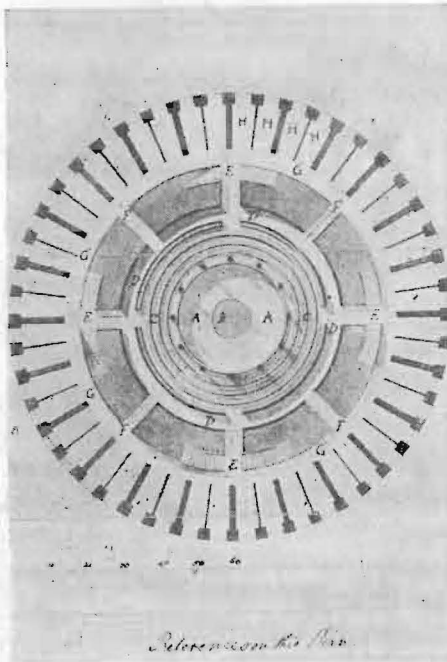
'It is a false idea of utility, that would give to a multitude of sensible beings, that symmetry and order, which inanimate matter is alone capable of receiving.'<sup>(11)</sup> But such reflections were not representative of an era when men dreamed of becoming the 'Newton of the moral sciences' as Charles Fourier thought himself or the 'Newton of legislation' as Bentham was styled. It would appear that the sublimity of the designs and order disclosed within natural phenomena and natural processes by Classical physical science allowed this similitude between the human and the inorganic to pass transparently into realms from which it has not yet been entirely exorcised. Bentham was prone to take the analogy to even



2. Top: Section of 4. The numerous iron communication stairs were still evident in this version.

3. Bottom: The Centre Section of the Pauper Lunatic Asylum near York, Watson & Pritchett, 1818. One of the earliest purpose designed institutions for the rehabilitation of lunatics.

ROBIN EVANS



4. Another, slightly earlier tinted, plan by Reveley for the Penitentiary Panopticon. Curiously, in none of these schemes was the 'Dead part' or administration section shown.

greater lengths than most of his contemporaries.

It is therefore curious that this same scheme should have even more frequently been described as philanthropic in intention, by critics and apologists both contemporary and modern. This view gains a certain credence, however, when it is recognised that the very idea of the publicly financed institution for reformatory or reclamatory purpose, was, at this time, almost by definition, philanthropic. But, even apart from such relativism, the evidence would seem to point to a more realistic definition of the word philanthropy in its historical context, rather than to the exclusion of Bentham from its mantle. Eighteenth century philanthropy has only passing consanguinity with current notions of humanism, and, in all things except his lack of religious zeal and perhaps the extremity of his logic, Bentham may be taken as being fairly typical of it.<sup>(12)</sup> It was just this matrix of philanthropic concern that generated the rationale of the prison system.

To clarify this close relation between philanthropy and the invention of the modern idea of the prison, a schematic outline of the prevailing situation is necessary. The convict was then a novelty. Prisons up until the later part of the century were places for persons

awaiting trial, while only debtors and minor misdemeanants were sentenced to confinement of any kind. The overwhelming proportion of criminal offences were without benefit of clergy, that is they were punishable by death, while fines, brandings etc. were the usual forms of secondary punishment. The very thought of enduring imprisonment as a regenerative, or protective, or even punitive device stems only from the seventeenth century.<sup>(13)</sup> During this period of what Foucault calls '*le grand refermement*' madmen, beggars, fools, paupers and debtors were set apart in an effort to curb the spreading of moral contaminations. But criminals were to receive no such attentions until the Enlightenment quelled the fury of the so called 'Sanguinary Laws'.

Prison architecture during this period of reform was in a state of gestation; there were no accepted models of either formal or operational arrangement—most of the improvements that had arisen were spin-off from the more advanced hospital and lazaretto design.<sup>(14)</sup> There was still little relation between the architectural forms devised and the social purposes they were supposed to serve. It was Bentham, more than any other, who gave this quintessential purposiveness to the design of prisons and similar institutions of control.<sup>(15)</sup>

Under the headings *Safe Custody*, *Reformation* and *Economy* he outlines the conditions that have to be satisfied by any prison plan if it is to be effective. Of these three necessary preconditions it was reformation that was the most intractable problem as well as the most crucial, and Bentham provided an answer—with all the trappings of empirical common sense and logical deduction he held that a physical system, the Panopticon structure, integrated with an administrative system, or 'Plan of Management' of the same, could automatically and inevitably reform those who were subjected to its rigours—as he claims in that oft quoted dictum of his: 'Morals reformed—health preserved—industry invigorated—instruction diffused—public burdens lightened . . . all by a simple idea in architecture!' <sup>(16)</sup>

The doctrine of unmitigated seclusion

How was this mechanism of moral regeneration to work? The two

main motive forces toward virtue were provided by the surveillance system outlined above in conjunction with the seclusion of individual prisoners, each in a single cell. In this they were to be kept for the entire duration of their confinement. Day, night, work, sleep, ablution, prayer, meals, in sickness and in health, everything performed, all passing in the same wedge of space four feet by thirteen feet by 8.5 feet high. There seem to have been various reasons for this choice of regimen, and in itself the idea was not novel. A moderately rigorous isolation was enforced on part of the population of the *Silentium*, or Rome House of Correction for young offenders, erected by order of Pope Clement XI in 1703. The emphasis in this institution had also been on personal reformation and it is clear that the notion of solitary confinement leading to penitence and purity of heart is religious in nature rather than rationalistic or mechanistic and that it stems from the early Christian Anchorite tradition.

The penitentiary arrangement bears some resemblance to the *Lavra* type monasteries that flourished in the Near East around the 5th Century, in which a body of monks kept themselves in complete isolation, usually in dispersed cave dwellings, coming together for prayer and ritual meals only.<sup>(17)</sup> The cells in the *Silentium* were provided with a primitive closet, while water, food and other necessities were supplied by the officers. In the middle of the century Jonas Hanway, an English religious writer, philanthropist, traveller and pamphleteer, wrote *Thoughts on a Plan for a Magdalen House* (1759) in which he outlines a comparable system of individual isolation for fallen women, and later noted the applicability of the system to prisons.<sup>(18)</sup> But although the Christian tide was strong, as such it could have had little direct influence on Jeremy Bentham, who was notoriously unmoved by metaphysical sentiments of any denomination, his approach being altogether more direct and physical.

In a manner of speaking, Bentham takes the soul out of the structure of Christian Penitence and then proceeds to make thorough good use of the carcass. Rationalistic penology here borrows the forms of its expression largely from the pietistic tradition.



It was one of the mainstays of Bentham's Utilitarian philosophy that any human act could be regarded as leading to a certain quantum of pleasure or pain, either with respect to an individual or mankind in general. He even devised an outline scheme for the quantification of this, calling it the *Felecfic Calculus*. Since it was clear to him that the pleasure of the social whole, rather than that of any particular individual, was the end of legislation, it seemed a self-evident corollary that any individual who acted against the interest or desires of the majority was acting in some sense immorally, and, by the same philosophic token, could only be restrained by a certain amount of pain or displeasure.

The *Felecfic Calculus* was the guide to the treatment of sins and infringements that had already been committed. But the Benthamian concern was equally with those trespasses and offences that were yet to be; the potential crimes of the future. So, much of his attention was directed towards forestalling wrongdoing by indirect means; towards obstructing the paths to depravity and vice (which to him were kinds of action—not psychological states).

Panopticon was designed to enforce the mathematics of pain and pleasure with respect to accomplished criminal acts, but was, at the same time, arranged to function so as to impede the implementation of further illicit transactions on the part of the convicted. Bentham's view of the malefactor, like that of many later penologists, was from above. He says: 'Delinquents are a peculiar race of beings, who require unremitted inspection. Their weakness consists in yielding to the seductions of the passing moment. . . Their minds are weak and disordered'.<sup>(19)</sup> So, instead of punishing 'the mischief of delinquency' with 'ineffectual punishments'<sup>(20)</sup> one tried to prevent the transgression from taking place at all. These careless misdemeanours could be controlled by eliminating all temptation; by separating the criminal from all the destabilising, random and intemperate events characteristic of the real world, and more particularly from the company of like-minded persons; by regulating every action, event and communication through the 'apparent omnipresence of the inspector . . . combined with the

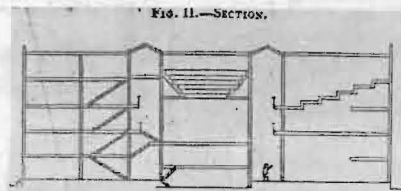


FIG. III.—GROUND PLAN.

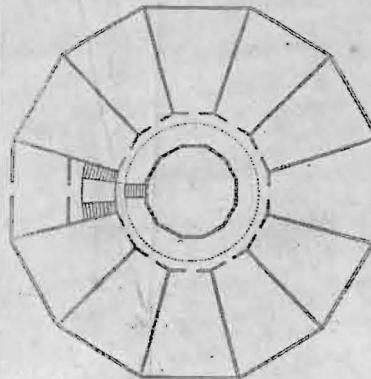


FIG. IV.—BED-STAGES for Single Persons.



FIG. V.—BED-STAGES for Married Couples; alternating with sets of Cribs for Children, four in a set.

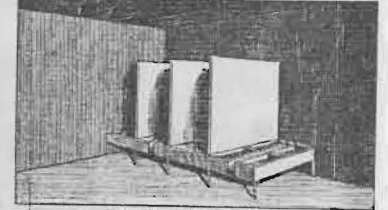
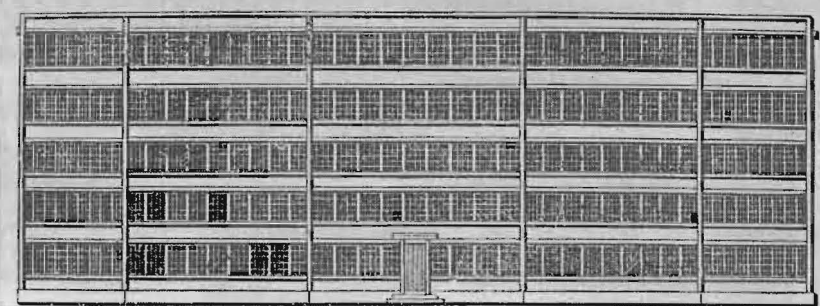
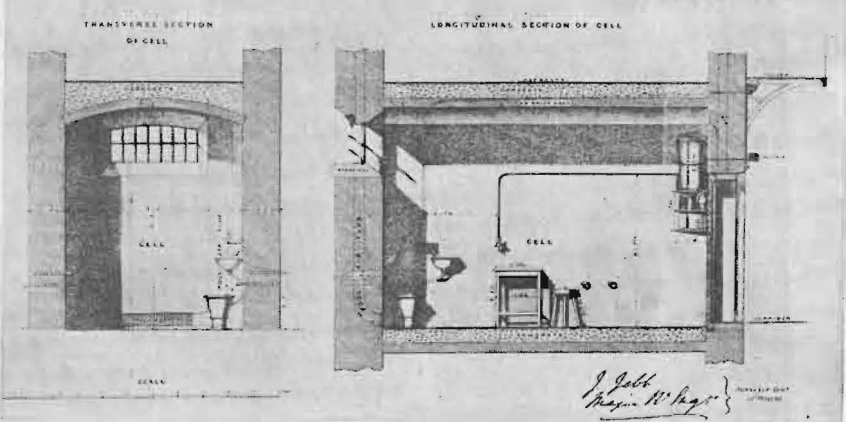


FIG. VI.—Cribs for Infants.



PRISON CELL

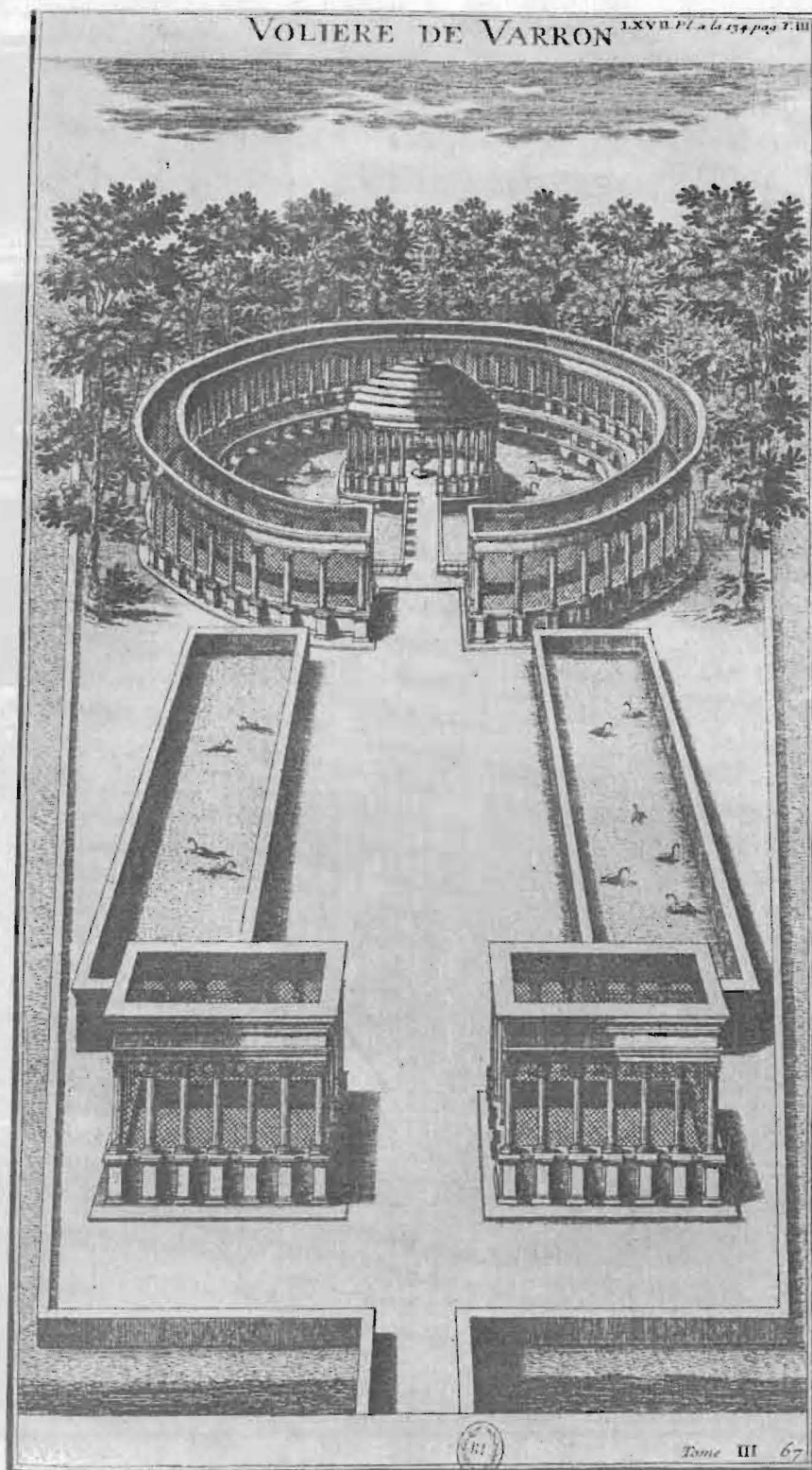


5. Top: Bed designs for a Poor-plan Manufactory by Samuel Bentham and Samuel Bunce (1797). The single beds were to be hauled up on pulleys to make way for more profitable pursuits during the day.

6. Centre: Pentonville 'Model Prison' cell (1840-42). Highly serviced for essentially the same reasons as the Panopticon, it included a thermo-ventilation plant which served each

cell with an adjustable warm-cool air supply, a trapped water closet, on tap cold water, gas lighting, triple glazing, and a bell system for service.

7. Bottom: Elevation of the Poor-plan Panopticon devised by Bentham and Bunce. This was the most uncompromising of the structural schemes, being almost uncannily predictive of later developments.



8. View of Varron's bird-house at Casinum. The circular part, or tholos, was lit through the netting of the aviary only (the original scheme seems to have been domed).

limited set of artefacts, the Panopticon was an attempt at the creation and manipulation of a total universe. An island of anti-entropic regeneration in a world of moral dissipation. It is worth noting that in the *Postscript to the Panopticon*, published some four years later than the original letters, Bentham abandoned unmitigated seclusion, putting up to four persons in one cell. This was partly because he thought that the original idea would be too expensive, in terms of construction, and partly on the advice of his reformist friend, John Howard (author of the famous *State of the Prisons*) who thought that such severity might endanger the mental health of those confined. His reservations were born out by later penitential experiments in the redemptive powers of solitary confinement such as the 'Cherry Hill' or Pennsylvania System developed in the 1820's, or the equally famed 'Pentonville' or Separate System of the 1840's, both of which seemed to be better adapted to unhooking the mind than to reinforcing moral sensitivity. <sup>(23)</sup>

#### The voice of command and the listening ear

There is a cavern beneath the theatre at Syracuse with peculiar acoustical qualities. It is said to have been used by Dionysius I as a dungeon. Its form was similar to that of an ear. All sounds emitted in it were transmitted to a small listening hole in the theatre cavea where Dionysius is said to have sat and idly amused himself by monitoring the conversations of his prisoners. The story is probably apocryphal.

Although in the Panopticon the most obvious communication controls were visual, much thought was also devoted to acoustics. A system of 'tin speaking-tubes' was devised, the functions of which were an acoustical analogue of the visual arrangements. In the 1787 scheme there was to be a separate tube for every cell. Each of these was to lead back to a listening station in the central lodge. 'By means of this implement, the slightest whisper of the one might be heard by the other, especially if he had proper notice to apply

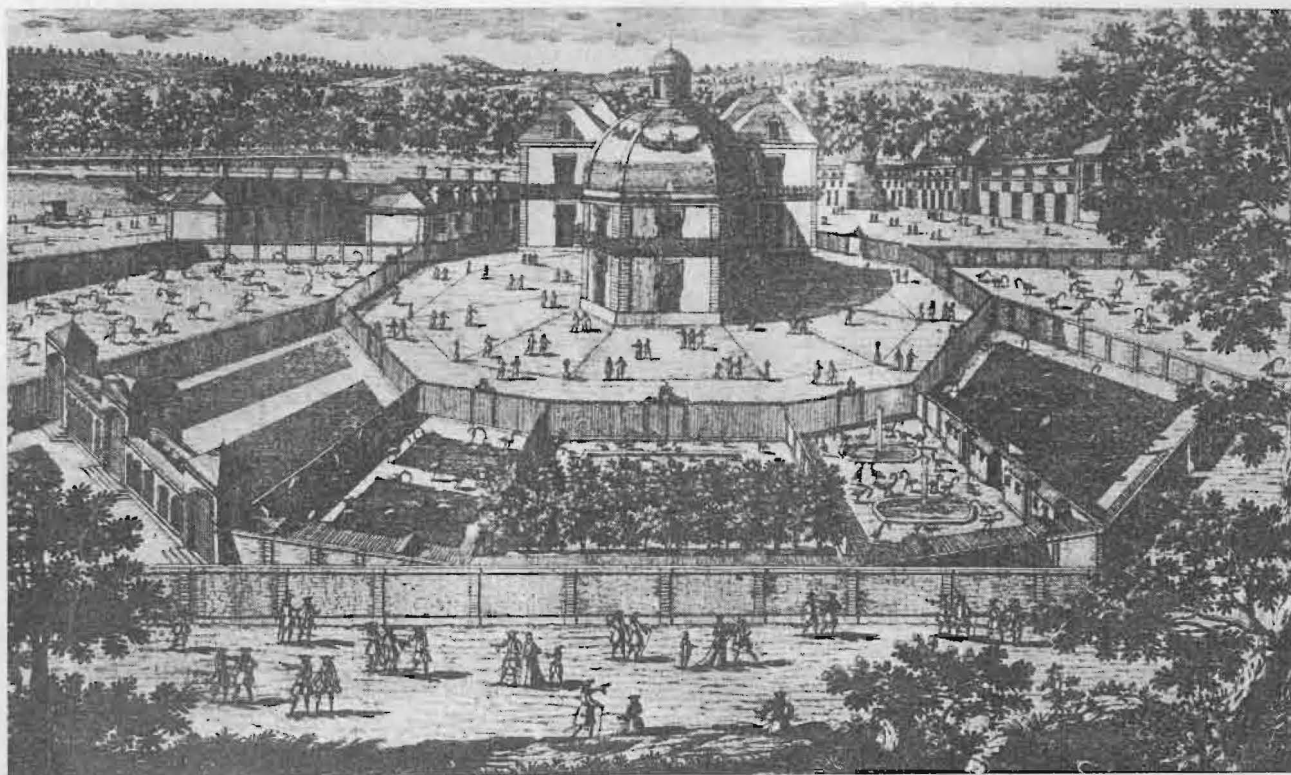
extreme facility of his real presence'.

<sup>(21)</sup> Any deviation in the behaviour of the offender was in this way easily corrected before it got out of hand. Bentham even designed the screens of the cell closets in such a way that masturbation was impossible to perform in private. <sup>(22)</sup>

The desire to 'prevent transgressing—save punishing' is characteris-

tic of a number of Bentham's schemes for administrative reform as well as his architectural designs. It was, for example, at the root of his project for producing an unforgeable bank-note, with the commendable end of preventing the hundreds of annual executions that took place for forgery offences. But, whereas the bank note problem was one of simply manipulating a





9. Top: View of Le Vau's menagerie for Louis XIV at Versailles, built in 1663. The villa in the centre was a guest pavilion, designed to give a panoramic and inclusive view of the animal parks.

10. Bottom: A View of the Kirkdale House of Correction of 1820. The curved terrace in the background is the cell block, the small rotunda in the centre is the chapel, while the governor's residence is on the right.

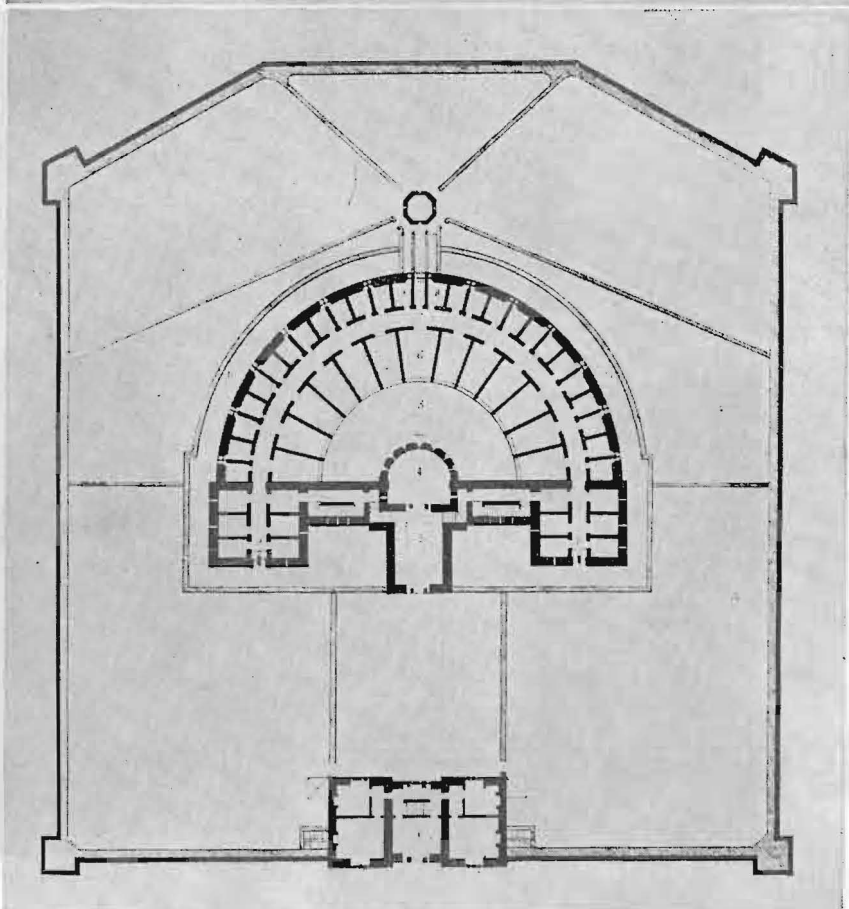
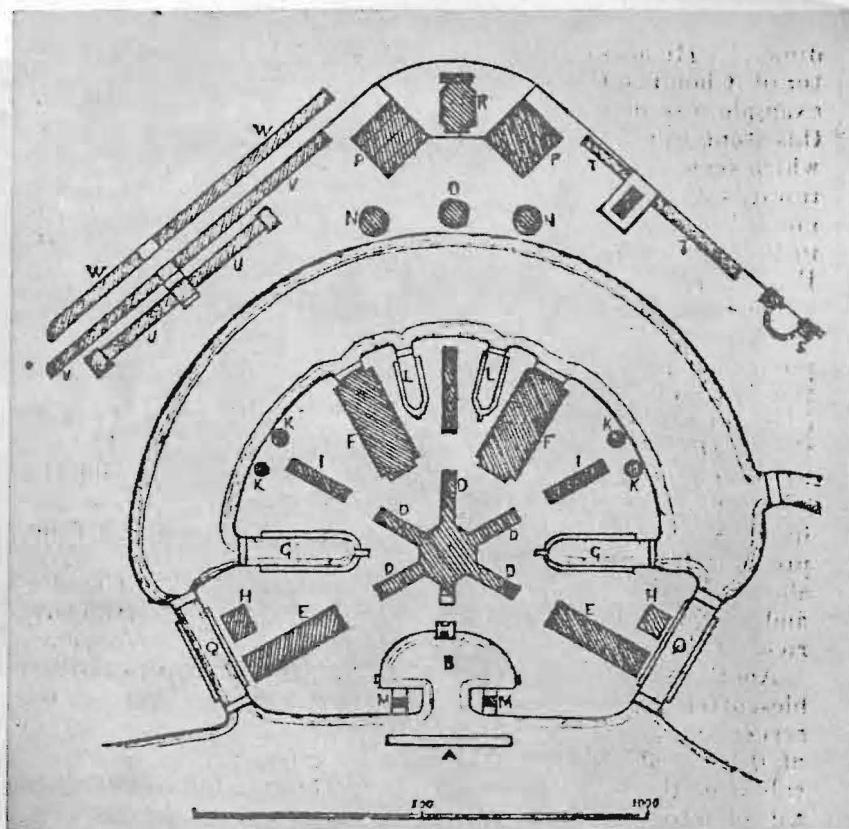
ROBIN EVANS

his ear to the tube.' (24) These were to be accompanied by a bell system to draw the attention of the convict for instruction or command. The individual tubes need only be the diameter of a pea-shooter according to Bentham. The idea seems to have come from a certain Mr. Merlin, who had installed a domestic speaking-tube system complete with ancillary attention callers (a series of hand operated pointer dials) in his own residence. To try out the device Samuel built a set in the Bentham house in Queen's Square Place. (25) The Panopticon use was typically uncompromising, but, as with unmitigated seclusion, the idea was later discarded as impractical by Jeremy, possibly because there was no way of preventing the convicts having the reciprocal privilege of listening in to the central lodge. (Fig 2) The system was reversible and therefore out of character with the purpose of a building that was to produce a milieu encouraging an unimpeded flow of centripetal information but which would simultaneously provide an almost totally refractory medium to communication in a centrifugal direction: an artificial anisotropy that dominated detail design of Panopticon. In later schemes the central station is provided instead with a set of loud-hailers, through which the governor could direct the inmates, while the tubes remained as a staff intercom. between the governor and his officers on duty in the observation galleries. (26)

#### The well-serviced cell

We pass now to one of the most curious and least explored aspects of early prison architecture in general, and of the Panopticon in particular; the incorporation of integrated servicing systems into the building fabric.

Clearly, if one intends to keep a large body of people in a large number of isolated cellular compartments, then either one supplies the necessities of life by providing numerous servants to fetch and carry—which in itself gives numberless opportunities for 'trafficking and impropriety' or one installs mechanical systems for the same purposes within the cells. Bentham argued that the latter was anyway the less expensive, and therefore included in his specification for the cell design a crude, untrapped



11. Top: Block plan of Samuel's Sheerness Dockyards scheme, 1812. A hub and spoke design.

12. Bottom: Plan of the Edinburgh Bridewell of 1794. Similar to the Bentham Panopticon in form but lacking its operational sophistication and rationality. It is clear that Robert Adam, the designer, was inspired by the latter's publication.



water closet with a cast iron seat the effluents from which were to discharge into a closed sewer. For washing and drinking there was to be a continuous supply of cold water, served by an annular cistern in the roof, the water being pumped into this manually. (Fig. 23) In order to make use of the cramped space allotted to each prisoner, the beds were to fold away or, as in the 1797 Poor Plan project (Fig. 5) were to wind up to ceiling level on pulleys, so that looms, work-benches and such like could be profitably used during the day.

The heating arrangements made use of convection currents and were fully intergrated with the ventilation. The air entered the building at one point through an inlet duct. Passing through a heated chamber it was dispersed internally through a radial set of conduits. A ring of ventilating stacks around the circumference then drew this hot air up through the building in such a way that every cell was assured of a balanced heat. (Fig. 23) For economy part of the heated air was to be recirculated. The basic principle was that adopted much later by Dr. Reid in the celebrated thermo-ventilation plant at the House of Commons in London (1837). Bentham, however, did not make a great deal of its

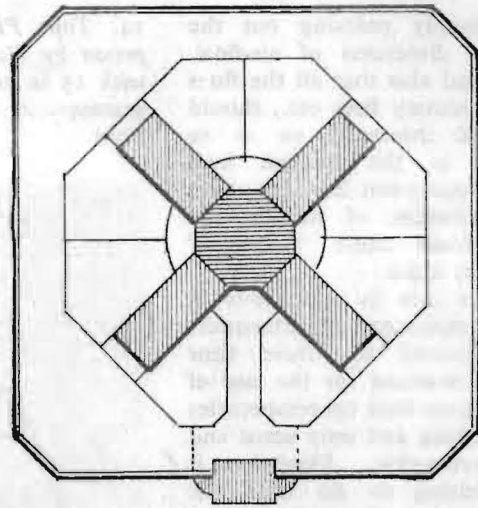
13. *English reformed prisons. (Redrawn from 'Remarks from the Form and Construction of Prisons'.*

(a). *Ipswich County Gaol, by William Blackburn 'Architect to half the County Gaols in the country'. Started in 1786, the central part of it was furnished with observation windows to the yards, but not to the day rooms or cells.*

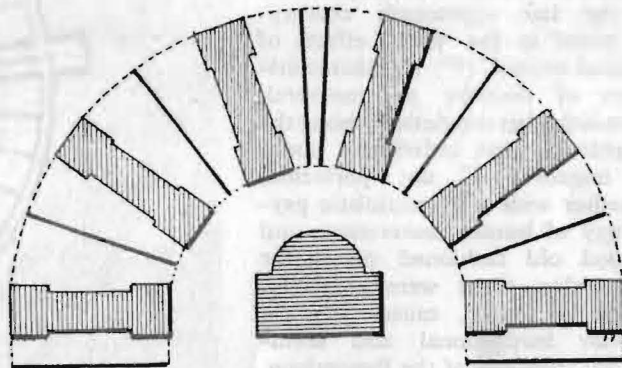
(b). *The Borough Gaol at Liverpool, also by Blackburn. Fundamentally similar to his design for the National Penitentiary of 1779. The exercise yards were more or less invisible from the central administrative building, owing to the small gaps between the radial blocks.*

(c). *The Kirkdale House of Correction of 1820. Ostensibly on the Panopticon principle it was in fact a devolved, mutilated and simplified version of it.*

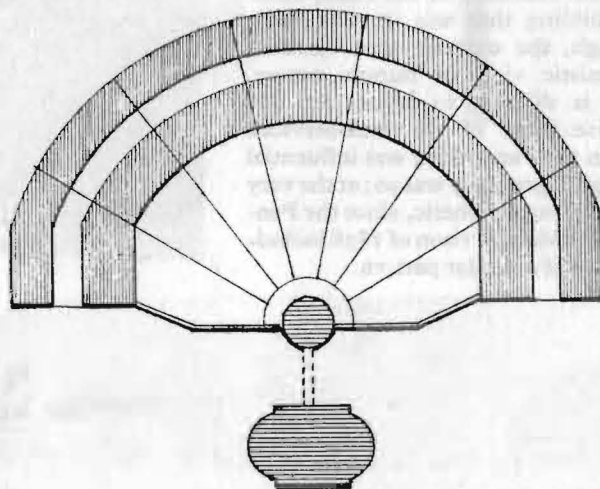
(d). *The small Female Prison at Lancaster Castle, erected in 1821. It is the closest proximation to a Panopticon built in Britain, although in it there was no annular space, no one-way visual screens, nor any advanced service installations.*



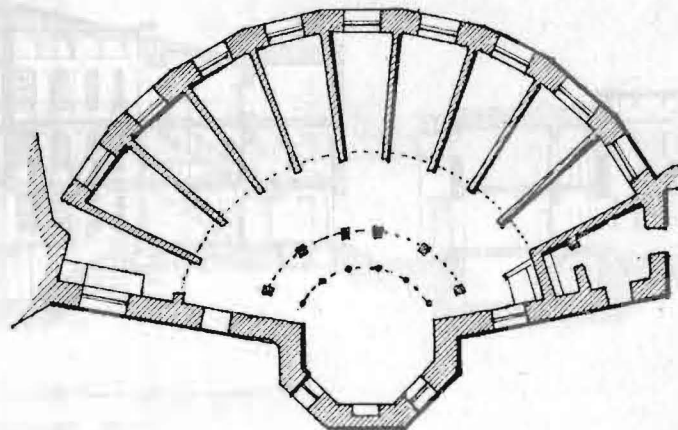
A



B



C



D

ROEIN EVANS

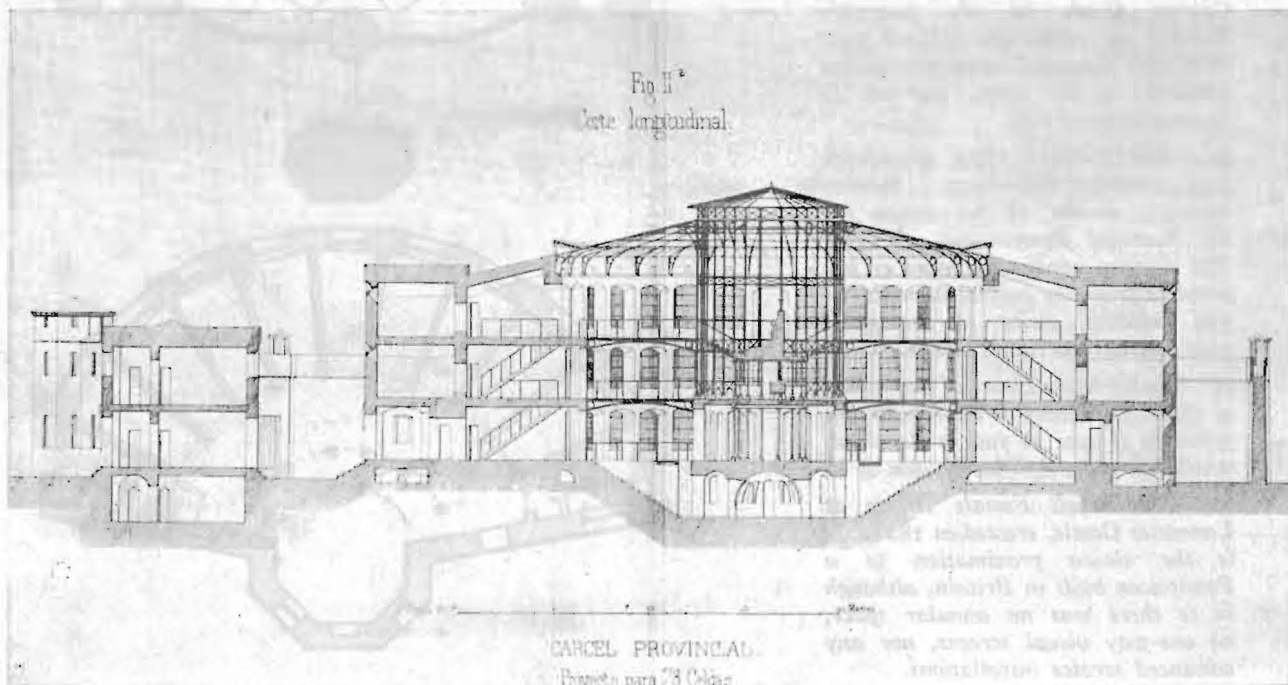
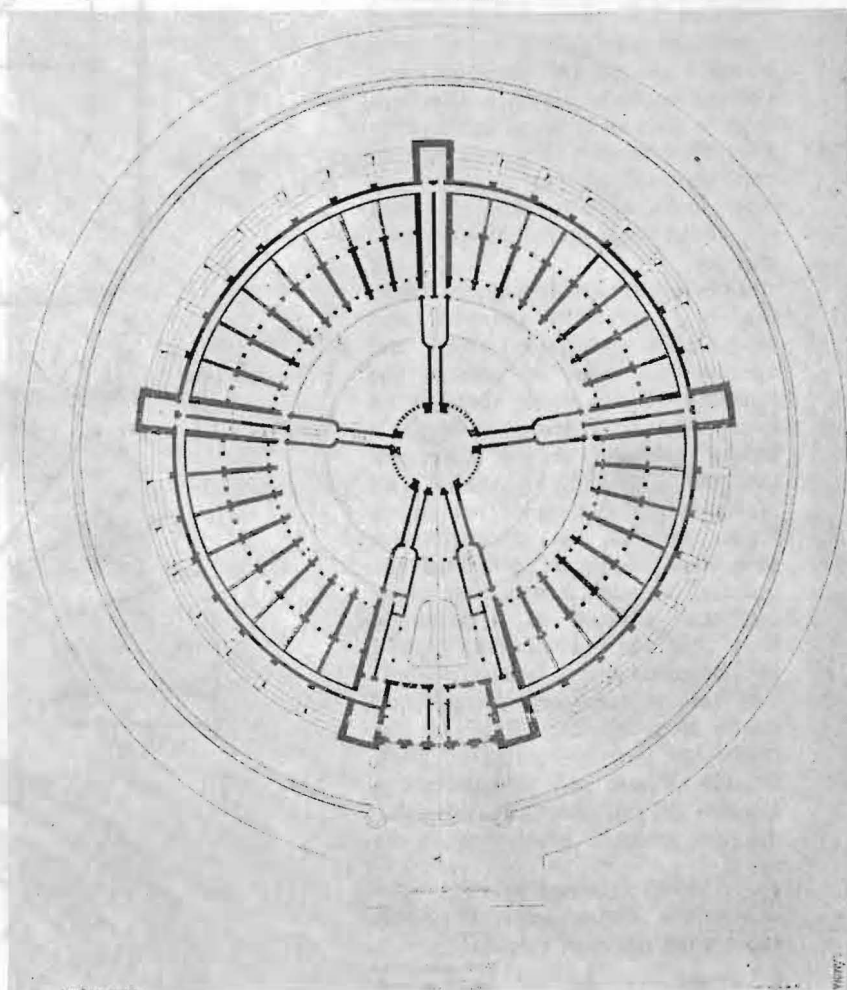
novelty, simply pointing out the consequent directions of air-flow. He suggested also that all the flues from the culinary fires etc., should be situated internally so as to contribute to the general heat input. At one point he even seems to have thought of heating the building from these 'necessary' heat sources alone.

It strikes one as anomalous at first that systems and appurtenances so sophisticated for their time should be destined for the use of those for whom their contemporaries had little liking and only scant and reserved sympathy. Doubtless it was something to do with the common ideological predispositions of the late eighteenth century: the belief in the 'moral effects of physical causes',<sup>(27)</sup> the characterisation of disorder as unnatural, an unshakeable conviction among the enlightened that individuals could be improved—if not perfected. Together with a deterministic psychology of human motivations and a good old fashioned desire for civil order; these were sufficient, if not necessary, causes for the peculiar institutional and architectural character of the Panopticon. A building that was, paradoxically enough, the outcrop of a basically optimistic view of human nature.

It is difficult to argue that the precise form of the well-serviced cell in the Panopticon was influential though it probably was so; at the very least it was prophetic, since the Pentonville Model Prison of 1838 included cells of a similar pattern.

14. Top: Plan of a Departmental prison by Harou Romain, published with 15 in the *Instruction et Programme*. A rare 'Byzantine' Panopticon.

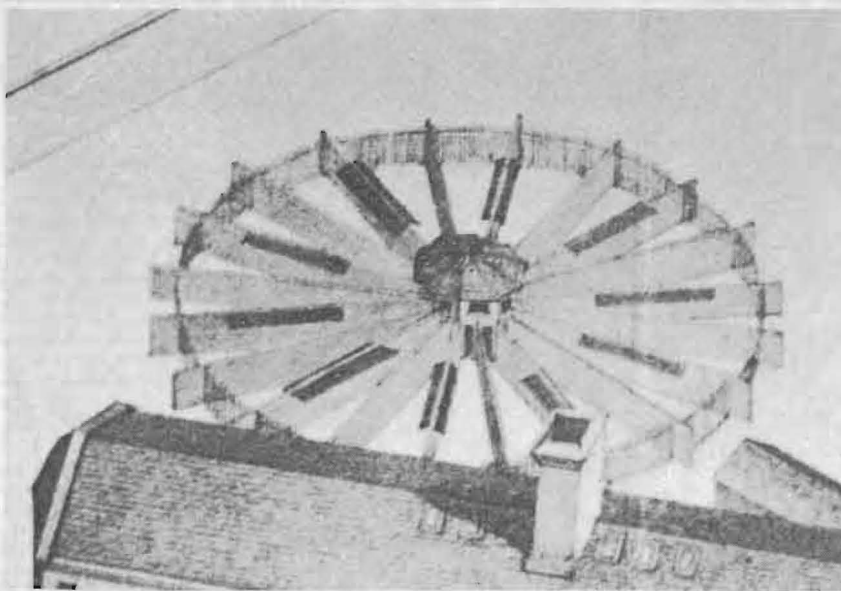
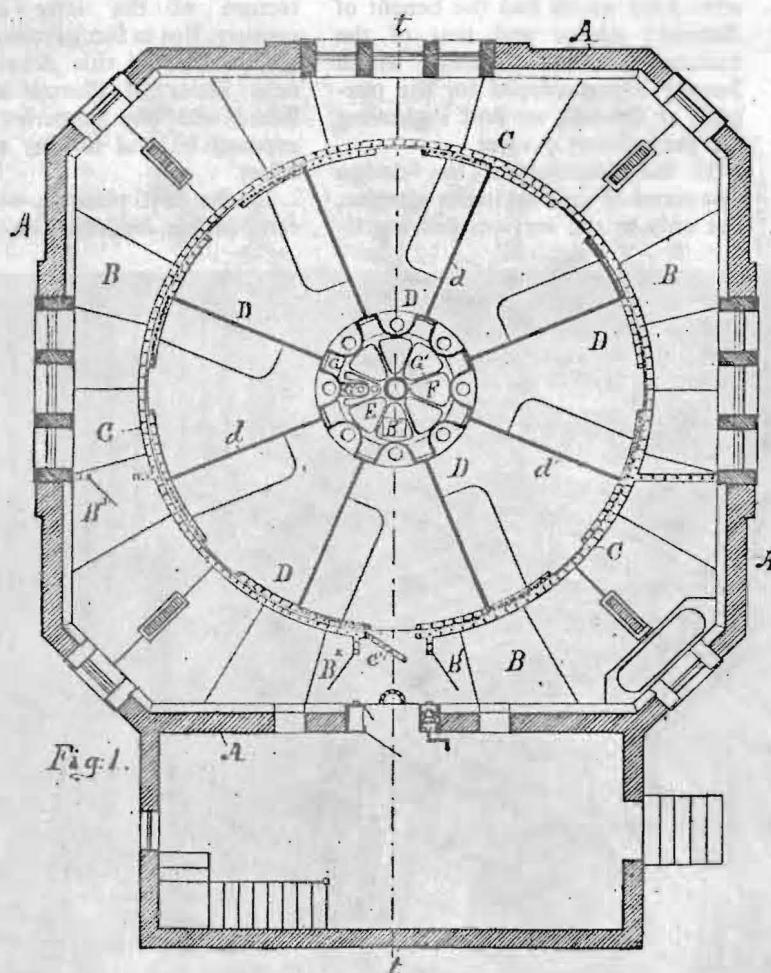
15. Section of one of Abel Blouet's 'Projets de Prisons Departementales', published by the French *Ministere de l'Interieur* in 1841. Also a very close copy of the Penitentiary Panopticon.





16. Top: Plan of Brown & Haugh's patented Rotary Prison of 1881; an inverted Panopticon. The cells cluster round a rotating pivot in the centre, which also acts as a ventilation and service stack. There is only one door to the 8 cells—a human filing cabinet.

17. Bottom: The exercise yards at Pentonville, 1838, were thoughtfully contrived on Benthamian lines. In each segment was placed a tread mill. The guards were enclosed in the centre part, more or less concealed from the convicts.



These were technically very advanced in the art of environmental control, and formed the zenith of nineteenth century prison services, despite their early date.

#### Panopticonic precursors

Examples of the many being arranged to view the one—the theatre principle—are predictably common, but examples of the reverse or Panopticon kind are much more rare. Bentham himself cited the Ranelagh pleasure dome in Chelsea, built in 1742, as a precursor to Panopticon and architecturally it was in some ways akin, but its purposes and functions were very different indeed—it just did not work in the same way. The upper part of a certain conservatory in Hackney is also given by him as an 'Architectural similitude', but again the connection is purely formal.

Operationally the closest approximations to Bentham's principle are to be found in certain building types developed for aviaries and menageries. It might be thought significant that his convict plan was paralleled most closely in the architecture of zoos, not simply because of the analogy implied between the human and animal, but rather because it highlights the importance attached to observation as an end in itself in prison architecture at this time. (28)

Before the Panopticon the idea of continuous inspection in prisons was evident only in germinal form. On'y in the Ghent *Maison de Force* (1772-3) and the three penal establishments built by William Blackburn at Liverpool in 1779, Ipswich in 1786 and Northleach, Gloucs., in 1785 was there any emphasis on the administrative control of the inmates, and in all these designs it was as much a matter of convenience and ease of access as of anything else, since the visual control was limited to views of the yards and courts—not of the night cells or of the day rooms where the inmates spent a vast proportion of their time. It was the prevention of escape rather than the imposition of an unceasing surveillance that was the architectural aim of these plans. So that although there are a number of plausible formal progenitors of Bentham's Panopticon the meaning and implications of the radiating plan were altered quite radically by this novel insertion of the principle of constant





the standards of the time (since fires were common in such institutions and were frequently disastrous). Secondly the interior structure is entirely of iron, the plan being the first to propose its large scale use in this way. There is a typically suave and novel use of tubular iron supports for the galleries and roof which were to be fabricated by using the standard contemporary rainwater pipe.<sup>(30)</sup> The columns thus erected were to double up as exhaust flues from the fires and, inevitably, as rainwater down-pipes from the roof—'articles for which it might otherwise be not altogether easy, in a building of so peculiar construction to find a convenient place'.<sup>(31)</sup> In an unusually lyrical passage, written later in life, he describes the overall impression given by the building thus: 'Glass was the sole material of which the boundary all round was composed, with the exception of the aggregate of the iron bars and the leadings necessary for the embeddings of the panes of glass... In the history written by I-forget-what illustrious Frenchman, under the unpretending title of *Fairy Tales*, one of the occurrences is the imprisonment of the heroine in a place, the boundaries of which were composed throughout of one solid mass of glass. Of this archetype the Panopticon was as near a similitude as the limited power of human art could admit it'.<sup>(32)</sup> As can be seen from the elevation of the 1797 Poor Plan Building, this is not too exaggerated an image. This structure, at a glance, could be mistaken for the Sheerness Boat Store, erected some sixty years later and designed by G.T. Greene—famous for its cast-iron exposed structural members and its continuous horizontal fenestration—both of which are equally evident in the Bentham building.

Also to be of iron were the cell gates, the circular observation galleries, the galleries for the cells, staircases, balustrading and causeways between the lodge and the cells. Starting off with the somewhat Piranesian notion of a 'multitude of flying staircases of open ironwork'.<sup>(33)</sup> [Fig 4] Bentham later rejects this in favour of four narrow connecting bridges between the centre part and the periphery. 'Out went, accordingly, the storeys of the intermediate area. Space took the place of matter, from the bottom of the building to the top'. Iron was

specified in these parts mainly because of its inherently slim proportions, preventing the creation of 'blind spots' between the observer and the observed. In his own words: 'airiness, lightness, economy and increased security are the evident results of this simple economy'.<sup>(34)</sup>

It is strange that Bentham, despite his avowed antipathy towards anything that went beyond the bounds of delineated purpose, was not entirely unmoved by the aesthetics of things. His delight in the spatial configurations of the inner part of the rotunda, and in the transparency of glass make him seem rather untypical in this matter. There is a collection of unpublished papers in University College London in which he describes the interior of a projected inn, to be associated with a set of Panopticons, and intended for the use of visitors to these (for all these institutions were to be open to public inspection). Bentham also intended to live in it. It was to be filled with a variety of curious visual distractions for its residents. Endless *trompe l'oeil* vistas created by carefully disposed mirrors. 'Electrically' driven mobiles of coloured glass panels lit from behind and dynamite fountain displays of coloured waters and many other strange contrivances.<sup>(35)</sup> A meeting, maybe, of the more sensational aspects of Baroque visual engineering with the modern concern with the dissipation of solid matter into ephemeral energy.

'Position, not form' was Bentham's terse statement regarding his criteria of design. One feels that it applies as equally to his ideas of beauty as to his concept of functional organisation.

#### Trials and tribulations

No Panopticon building was ever erected by Jeremy and only one, 'flectingly,' under the direction of Samuel. There were, however, many projects, ranging from hasty sketches to almost consummated schemes, that fill the years between 1788 and 1816. There is space for only a few of these to be mentioned here.

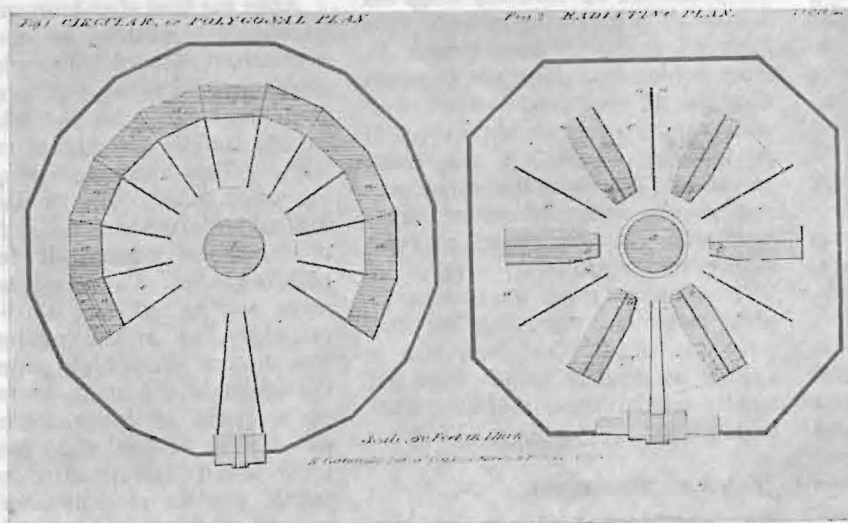
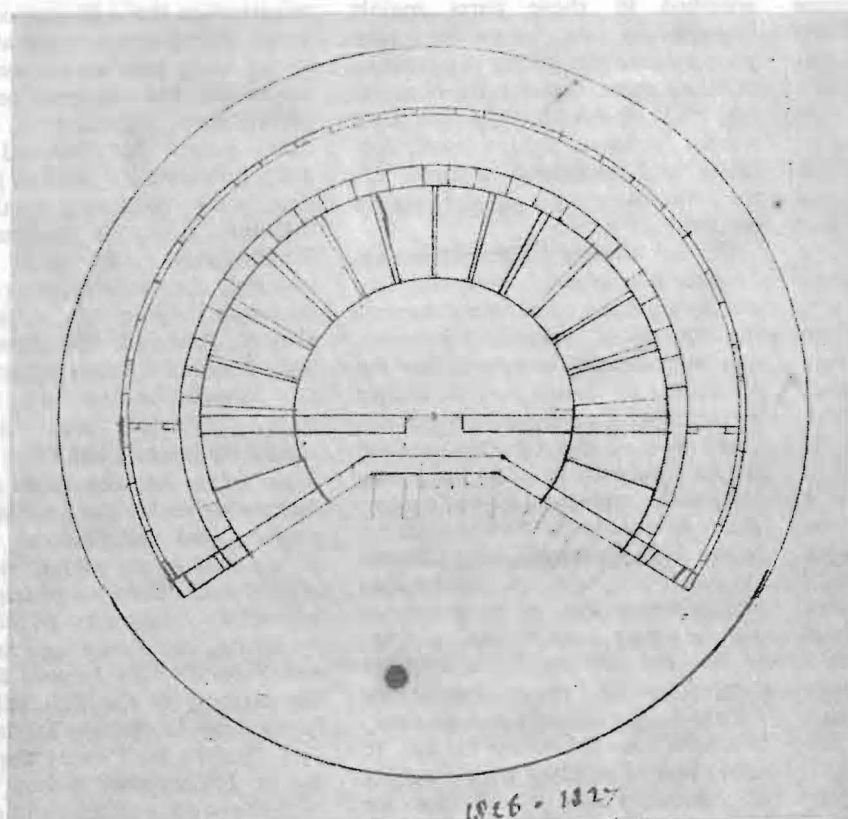
The National Penitentiaries that were supposed to follow on the heels of the Blackstone and Eden Bill of 1779, and about which Jeremy wrote his *View of the Hard Labour Bill*, never materialised. In 1794 Bentham managed, after two years of unashamed self-advertisement, to convince the ad-

ministration that a Panopticon would serve this purpose admirably, and in the same year an act was passed permitting the construction of the penitentiary, including all the cardinal points put forward in his 1791 publication. Suffice it to say that after acquiring, with some difficulty, a site at Millbank, near Westminster, and after having ordered the greater part of the ironwork, some of which was already delivered, the Government back-peddled. Representations for the completion of the contract were conducted with unceasing vigour by Jeremy, but to no avail.

In 1814 he obtained £23,000 compensation for his troubles. The project, plus the personal services of its author as gaoler, was also offered to the French and Irish. The *Assemblée Nationale* published a pamphlet, the *Panoptique*, in 1791, and Parnell's Government financed the printing of the first edition of *Panopticon* in Britain in the same year, but in both cases the desire for a Benthamian prison waned with the passage of time and nothing came of it.<sup>(36)</sup>

After the final abandonment of the penitentiary scheme, an octagonal, centralised, school-house plan was developed (1816) to put into effect Bentham's ideas on the education of 'the middle and higher ranks in life'. This scheme, too, was abortive, mainly due to the legal difficulties attendant on the siting of it at the bottom of Jeremy's private garden. The formal arrangement was to reinforce a tri-partite hierarchy, as in the penitentiary. The master on a high pedestal in the centre of the affair, surrounded by a circle of lower lecterns in which were situated eight monitors, while eight associated classes of pupils, one for each monitor, were arrayed in rising segmental, fanning banks of desks and benches. The instructional principle was borrowed from the already well-known Bell monitorial system—the master being responsible for overall control and the tutelage of the monitors, the monitors being set to work on the task of instructing the younger or duller children.<sup>(37)</sup>

Children were in some senses, very appropriate material for Bentham's experimentations, since they were at once malleable and in need of physical control—open to the influence of systematic institutionalisation, while also being capable of apparently random acts of mis-



19 Above. Another late scheme dated 1826-7 showing a semi-circular Panopticon with administration accommodation taking up the wing segments on either side. (Bentham Mss. U.C.L.) Similar to Robert Adam's Edinburgh Bridewell design.

20. Below. An illustration by George Holford, a prominent early 19th century prison reformer, showing the 2 model forms of prison architecture. The 'Inspection principle' was much vaunted by Holford, but the panoptical form was either misconstrued or ignored. Favoured were the more conventional terrace or block designs.

chief or violence. A Nursery Panopticon, or *Paedotrophium* is described in some unpublished papers dated 1794.<sup>(38)</sup> It was to be yet another circular building situated in the centre of a semi-circle of cottages. The cottages were for fallen women, the central nursery being for their illegitimate offspring and having a nodal inspectress's lodge for the usual surveillance purposes. In connection with this nursery, a special trapdoor bed with a soil tray beneath was designed to serve as a cot. It was disposed in such a way as to prevent the sleeping

child's faeces and urine from fouling the bedding. The whole settlement was designated the '*Sotimion* or *Timosterion* for the preservation of female delicacy' and was to be adjacent to a Panopticon penitentiary (presumably the National Penitentiary). The capital for this venture was to be raised by loans on interest, and the preserved young ladies were to work in the prison butchery to pay back the incurred debt.<sup>(39)</sup>

Another curio in Jeremy's oeuvre is the *Ptenotrophium*, a semi-circular Panopticon on a rotating base, for the profitable raising of various species of fowl orientation could be adjusted at will, in order to combat adverse weathers. The informing idea was to provide optimum conditions for physical growth in a small space and to prevent the usual corollaries of overcrowding-fighting among the birds.<sup>(40)</sup>

It was the fate of the Panopticon to be very influential, but influential in obscured and devious ways. Many institutions proclaimed as Panopticoid were not really so; for example, Latrobe's Virginia State Prison of 1797-1800, or the Western Penitentiary of Pennsylvania, built by Strickland in 1820. These being formed of long terraces arranged round circular or semi-circular courts, were reminiscent of the Circus at Bath, rather than the completely enclosed, Pantheon-like Panopticon.

A variation of this deviant type, also associated with the Panopticon principle, was the design finally chosen for the English National Penitentiary and built at Millbank (designed by William Williams in 1812). It is indicative though, that the second National Penitentiary, the Model Prison at Pentonville of 1838-40, was far more Benthamian in conception than the first. The system of surveillance, the well serviced-cell, the one way communications system, the solitary seclusion of the prisoners, the logic used to justify the regimen were all redolent of his influence.<sup>(Fig6)</sup><sup>(41)</sup>

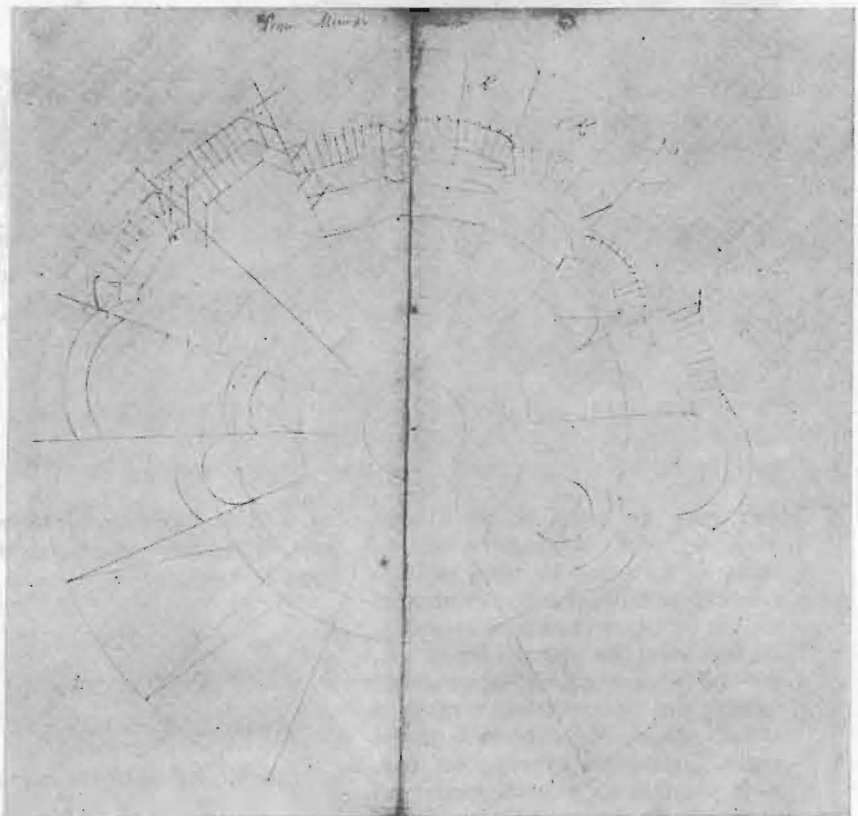
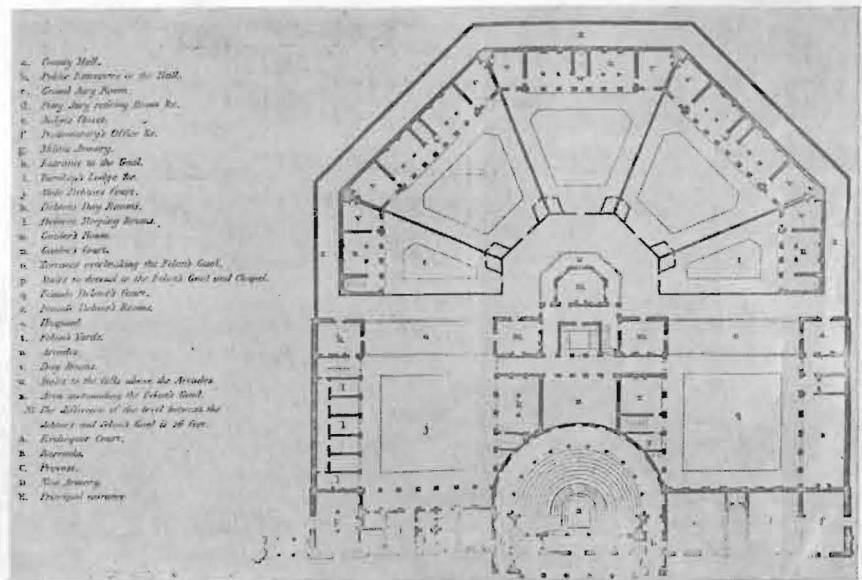
There were also a number of prisons built directly on the architectural model of Panopticon. Robert Adam's Edinburgh Bridewell (1794) (Fig.12) and the Female Prison at Lancaster Castle (1821) (Fig.13d) were probably the first. Some smaller Irish County Gaols, and a few of the Departmental Prisons built in France after the 'Projet de Loi' of 1841 (Fig. 15)<sup>(42)</sup> followed. Never



theless, it was not until the 20th century that larger institutions were constructed on the plan, possibly due to the fact that advances in constructional and environmental technology had, by this time, made it more plausible to emulate the scale of the original speculations. Even in these though, the idea was considerably simplified, missing the wholistic attention paid to detail in the original. The Dutch Prison at Breda (1902), Statesville Prison at Joliet, USA (1926-35), and the penal colony on the Isla da Pinos, near Cuba (1932) are the best known modern examples. It is a touching tribute to the buoyancy of human nature, and to its inconstancy in the attribution of significance, that the last mentioned example, now derelict, is being used by a group of young dissident Cubans as the scene for an anarchist commune.

The architecture of moral purpose

It was the operational purposeness of the Inspection House idea that made it, in Gertrude Himmelfarbe's words, 'the existential realisation of philosophic radicalism'.<sup>(43)</sup> It was more than just functional, in the normal sense of the word, as this implies that it served, or was in response to the needs of those for whom it was conceived. The Panopticon was instead thought of as influencing, rather than influenced by its inhabitants; it was introduced as an agent for the betterment of mankind. Its purpose was to effect this improvement through a combined system of social norms and physical controls. Although the details of the regimen, the operation and the rationale of Bentham's projects provide a number of interesting themes, as I hope to have shown, binding these, hardly beneath the surface of his outpourings on the subject, is a forceful notion of a more general nature—an idea in close relation to the Utilitarian spirit, but unrecognised often in its exponents, since it exists in the interregnum between the apparently self-evident and ultimately cognisable morality of utility on the one hand, and the more imponderable imperatives of a species of ethical idealism on the other. Bentham perceived that an operative set of artifacts, stripped of meaning in the symbolic sense could nevertheless be transmitters of human intention: could be as essentially meaningful as any more

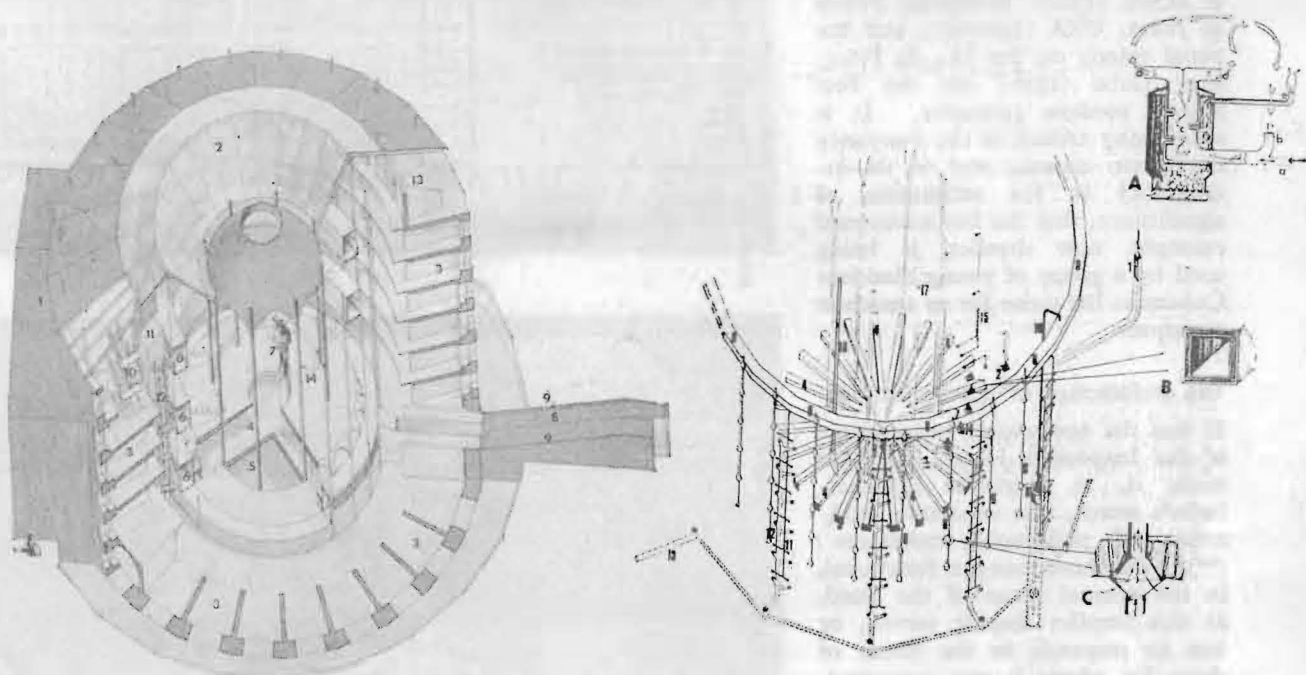


metaphysical system of language.

The Panopticon projects, by encouraging certain kinds of response and curtailing certain kinds of action, made it possible to contrive a universe whose limits were those of the mind of its creator. It was a construction whose dictates were not those foisted on the world at large by the vagaries of history or nature, but which stood as an enclave of a novel morality that was under the suzerainty of reason alone. The universe thus generated

21. Top: Thomas Harrison's Chester county gaol of 1787. An almost exact replica of Blackburn's Northleach, Bridewell.

22. Bottom: Jeremy Bentham's sketch for a gigantic Panopticon, post 1824. He had not lost interest in the thing even at this late date. Each of the 16 segments would appear to be a panopticon in its own right. (From the Bentham MS in University College, London).



can only be seen as, in a way, visionary (as uncharacteristic a term as this may be used in connection with Bentham) unrestrained as it is by either chance or necessity. In this view the Panopticon stands, not as an emanation of practical utility, but as a gesture towards a social world of a certain moral tenor. Bentham presupposes that it is possible to generate preferred human responses through the mute agency of the 'useful' object, also that these responsive actions could themselves be the threshold of fulfilment and happiness for mankind. The Panopticons were probably the most severe, coherent, and telling essay in this mode: Purgatorial chambers through which industrial civilisation was to be assured of a satisfactory teleology; in which the promise of heaven on Earth, the dream of the Enlightenment, was given a truly mechanistic interpretation.

23. Sectioned axonometric showing the services and environmental controls of 1791 Panopticon

1. Fresh air inlet.
2. Recirculated air inlet.
3. Modified Franklin heating stove.
4. Radial hot air ducts conveying heat towards the cells.
5. Grated hot/fresh air outlets.
6. Ventilation stacks serving every cell, draw the heated air from 5 into the inhabited parts.
7. Valve outlet to ventilation stacks prevents ingress of cold air.
8. Annular cistern for fresh water.
9. Well and manual pump.

10. Cold water supply from well to cistern.

11. Cold water supply stacks from cistern to each cell.

12. Soil stacks and closet in each cell.

13. Closed sewer.

14. Loud-hailers arrayed round the Inspector's lodge for commands to the prisoners.

15. Tin speaking-tube system from the Inspector's lodge to the inspection galleries (unspecified number).

16. Structural iron rainwater pipe passing into a storage tank for fire-fighting at sub-basement level.

17. Structural iron flues to stove.



## References

1. The bulk of these are known from the unpublished Bentham Manuscripts at University College, London.
2. See 'Panopticon or Inspection Principle in Dockyards & Manufactories' by Maria Sophia Bentham, *Civil Engineer & Architects' Journal* 1853. Vol. XIV, pp. 453-5.
3. There is no adequate illustration of this, the published picture being erroneous in several respects and sketchy.
4. *Panopticon*, Letter II.
5. *Ibid.*, Letter V.
6. Bowring (ed.) *The Works of Jeremy Bentham*, Vol. XI p. 96.
7. *Panopticon* Letter I.
8. *Panopticon Postscript* Part I. (Bowring vol. IV, p. 83) and University College MSs, Portfolio XIX, paper 24.
9. *Postscript* Part I, Bowring, IV, p. 85.
10. See, for example, G. Himmelfarbe, 'The Haunted House of Jeremy Bentham', in *Ideas in History*, eds. Herr & Parker 1965, & N. Hans, 'Bentham & the Utilitarians', in *Pioneers of English Education*. ed. A. Judges, 1952.
11. Cesare Beccaria, *On Crimes & Punishments*, English ed. Trans. 1767. p. 162.
12. For a study of this subject see: *English Philanthropy: 1660-1960*. David Owen. Harvard 1964. Parts 1 & 2.
13. Michel Foucault; *Historie de la Folie a l'Age Classique*, Paris 1961.
14. For examples of this see John Jebb, *Thoughts on the Construction & Polity of Prisons*, London, 1786, and Howard's *State of the Prisons*, both of which concern themselves primarily with matters of health and sanitation.
15. All the same, there seem to be three other contenders for this honour; John Howard, whose architectural works were of an ephemeral significance, William Blackburn, whose work, though ingenious, and influential at the time, was a reflection of accepted ideas on the nature of prisons, and lastly, John Haviland, designer of the Philadelphia East Penitentiary, for whom see: N. B. Johnson, 'John Haviland' in *Pioneers of Criminology*, ed. Mannheim, 1961.
16. It is the opening passage of *Panopticon*.
17. The reasoning behind this was similar as well; the Anchorite's desire was to escape moral contamination. The decisive difference was of course in the matter of consent.
18. In *Solitude & Imprisonment with Proper Profitable Labour*, London, 1776, and *Distributive Justice & Mercy*, London 1781.
19. *The Rationale of Punishment*, London, 1830 (original MSs 1775) book V, ch. 2, p. 365.
20. UC MSs Portfolio CXIXa, paper 78.
21. *Panopticon*, Letter X.
22. *Ibid.*, Letter II.
23. Whether this was the case or not seems to have been the crucial issue of penal philosophy from around 1830-60. In defence of separation see, for example, John T. Burt, *The Results of the System of Separate Confinement*, London, 1852. In condemnation of it see Charles Dickens' *American Notes* ch. 7.
24. *Panopticon*, Letter I.
25. See Maria Sophia Bentham, 'Memoire of the late Brigadier General Sir Samuel Bentham,' in *Papers & Practical Illustrations of Public Works*, London 1856.
26. *Postscript*, Bowring vol. IV, p. 85.
27. An interesting example of this, in which the penological implications are discussed, is Benjamin Rush's *An Inquiry into the Influence of Physical Causes Upon the Moral Faculty* Philadelphia 1785.
28. This was written before I discovered a plan for a Bridewell at Northleach which was conceived and built by William Blackburn in 1785, now stored in the Gloves. C. R. Office, though closely modelled on the Ghent *Maison de Force*, includes a central governors lodge with bays facing onto each courtyard and also gives a panoramic view of all the cells. 1 year later in 1787, an almost identical plan was used for the county prison at Chester built by Thomas Harrison. Even this, however, is only a step *en route* to the total surveillance of Panopticon.
29. G. Geis on Jeremy Bentham in *Pioneers of Criminology*, ed. Mannheim, 1961.
30. *Postscript*, Bowring vol. IV, p. 98.
31. *Ibid.*
32. Bowring, vol. XI, pp. 104-5.
33. *Postscript* Bowring, vol. IV, p. 70.
34. *Ibid.*
35. University College MSs. Portfolio CVIib., papers 104-5.
36. Bentham himself wrote an account of the attempts to build in *History of the War between Jeremy Bentham and George III by one of the Belligerents*. Unpublished, it remains in the British Museum Bentham MSs.
37. The history of the school and its architecture can be found in the *Place Papers Collection*, Vol. 60, in the British Museum.
38. This was probably the same as the *Nothotrophium*, for the 'Innocent offspring of clandestine love'.
39. UC MSs Portfolio CVIib, Folder 21 & Portfolio CXXXIII, folder I.
40. UC MSs Portfolio CVIib Folder 20. Dated 1794.
41. The best description of Pentonville, from the architectural angle, is the *Report of the Surveyor General of Prisons on the Construction, Ventilation & Details of Pentonville Prison*. London 1844.
42. A number of Panopticon prisons are illustrated in *Instruction et Programme pour Maisons d'Arret* from the Ministere de l' Interieur, Paris, 1841.
43. Himmelfarbe, Op. Cit. p. 233.

## Acknowledgements

Apart from the noted works acknowledged is given to the following sources:

Thomas A. Markus: 'The Pattern of the Law' *Architectural Review*, Vol. 116 Oct. 1954 p. 251-6. This is, incidentally, the only recent outline of the development of prison architecture in the 18th and early 19th centuries.

Aldous Huxley: *Prisons* London, Faber & Faber. A juxtapositioning of the Benthamian Prison with the 'metaphysical' prisons of Piranesi. James Mill: 'Prisons & Prison Discipline'. *Encyclopaedia Britannica Supplement* to 4th ed. VI, 385. 1824. Graham Wallas: 'Bentham as Political Inventor', *Contemporary Review*, Vol. 129, March 1926, pp. 308-19.

Leon Radzinowicz: *Ideology & Crime* London, Heinemann, 1966. A short history of the genesis & directions of criminological thought. Gustave Loisel: *Histoire des Menageries de l'Antiquite a Nos Jours* 3 vols, Paris 1912. For sections on the aviaries of Lucullus & Varo and for Le Vau's Versailles Menagery.

This article appeared in a slightly different form in Italian in the journal *Controspazio*, Oct. 1970.