HISTORIC STRUCTURES REPORT

the RICHARDSON OLMS TED COMPLEX  Buffalo, NY

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Goody Clancy

with

Simpson Gumpertz and Heger, Structural Engineers
Heritage Landscapes, Preservation Landscape Architects
James O’Gorman, Architectural Historian (H.H. Richardson Scholar)
Francis Kowsky, Architectural Historian (F.L. Olmsted & Buffalo Architecture Scholar)
Martin Wachadlo, Architectural Historian (Buffalo Architecture Scholar)
II. THE KIRKBRIDE PLAN

Not only is the Richardson-Olmsted Complex an important example of a nineteenth century ‘insane asylum’ in the United States, it is additionally based upon a specific typology known as the ‘Kirkbride Plan’ after its founder Dr. Thomas Kirkbride. The Kirkbride Plan is remarkable for being the first scientific architectural response to treatment of the mentally ill. Although it was reportedly used as a template at almost 70 hospitals by 1890, the Buffalo State Insane Asylum stands out as an important example of this type owing to the rigor with which it not only adhered to, but also improved upon the Plan stipulations. This section will lay out the basic parameters of what the ‘Kirkbride Plan’ entailed and assist in analyzing the Buffalo State Insane Asylum as a representative example.

Dr. Thomas Story Kirkbride (1809-1883) was arguably the single most important nineteenth-century psychiatrist when it came to matters of asylum design and layout (Fig. A.15). Born into a Quaker family in Morrisville, Pennsylvania, he began his medical career at the Friend's Asylum and went on to become the Superintendent at the newly established Pennsylvania Hospital for the Insane in 1840 (Bond 1947). In 1844, Kirkbride was a founding member of the Association of Medical Superintendents of American Institutions for the Insane (AMSASII) serving first as Secretary, then later as President from 1862 to 1870. Kirkbride promoted a standardized method of asylum construction and mental health treatment, popularly known as the ‘Kirkbride Plan’ and outlined in his influential work, “On the Construction, Organization, and General Arrangements of Hospitals for the Insane with Some Remarks on Insanity and Its Treatment” published in 1854, and again in 1880 (Figs. A.16 and A.17). In 1853, a second set of propositions, “On the Organization of Hospitals for the Insane,” was accepted and this defined the duties of the various officers and employees responsible for asylum administration.

His proposed model of construction, popularly known as the ‘Kirkbride Plan’ is also referred to as the ‘congregate plan’ or ‘linear plan’. It was extremely detailed in its scope and laid out a number of stipulations ranging from site selection, to building layout, room sizes, and window details, amongst other features for appropriate asylum construction. For a large part of the nineteenth century, it became the foremost manual for building new institutions for the mentally ill. Amidst the number of facilities that were based on this plan, the Buffalo State Insane Asylum was arguably “the first and only one in which the [proper architectural] principle was fully carried out.” (State Provision for the Insane 1872, 6). We will now proceed with a brief summary of Kirkbride’s stipulations along with a discussion of how they were reflected in the Buffalo Asylum.

One of the first stipulations of the Kirkbride Plan with regards to asylum construction, was about site location. “The asylum site...should always be located in the country, not within less than two miles of a town of considerable size...[and] within reasonable proximity to a railroad” (Kirkbride 1880, 37). He emphasized that while relative seclusion from the city was important in ensuring quiet, pastoral surroundings, ease of access to the city was also important for catering to patients and securing
supplies. An optimum balance between the two was thus aimed at. The Buffalo State Insane Asylum was located north of the city core of Buffalo, very close to the railroad. Although it was in an area that was expected to be well within city boundaries in a few years time, the requirement for a bucolic setting was satisfied since the site abutted a huge citywide park system.

Another Kirkbride stipulation was that the property had to be relatively large (at least 100 acres) to allow the patients sufficient privacy, a diversity of landscape experiences and the opportunity for healthy outdoor work. The plan also called for thoughtful landscape design of the grounds surrounding the buildings. ‘Pleasure grounds’ for patients of both sexes with a variety of interesting trees and shrubs, flowering plants, summer-houses, etc., were strongly advised. The Cultural Landscape Report for the Richardson-Olmsted Complex addresses in detail how these propositions regarding site and landscape were met at the Buffalo State Insane Asylum.

With regards to architectural form, the Kirkbride Plan addressed, amongst other aspects, the height, plan layout, exterior and interior materials that should be used. To ensure that the architect did not override these rules in the final design, Kirkbride proposed that all architectural plans be submitted to, reviewed and approved by some physician or physicians, who had had charge of a similar organization. Indicating that the plan should favor adherence over innovation, Kirkbride stated that “instead of attempting something entirely new, the object should rather be to profit by the experience of the past.” (Kirkbride 1880, 46). Preferring austerity over decoration in building design, he declared that “all extravaganza in the way of ornamentation should be avoided” (Kirkbride 1880, 47). The Buffalo State Insane Asylum adhered well to these guidelines in having Dr. John P. Gray of the Utica Asylum being constantly involved in the design of the institution along with chief architect, H. H. Richardson. Also, the building elevations were designed by Richardson in a rather ‘austere’ style with minimal decorative detailing.

Integral to the Kirkbride Plan was the need to classify patients by type and degree of affliction. The architectural form which best incorporated these ideas was determined to compose of a central building with wings on each side arranged en
and the 'echelon' or in a staggered form. The center building was to be the most prominent structure housing administrative offices, a chapel and residences for the officers. The wings were to house patients of both sexes and be so arranged as to have at least eight distinct classes of patients on each side - each class occupying a separate ward (i.e. separate floor). The degree of patient illness increased with distance from the center - the quietest patients were housed adjacent to the Administration Building, while the most disturbed occupied the outermost wards. Also each successive building were to recede in height with the central building being the tallest.

The layout for the Buffalo State Insane Asylum, while essentially based on this format, improved upon it in certain ways that make the Asylum distinct and unique from its predecessors. Each ward building at Buffalo was set back from its neighbor by an entire building width, thus ensuring unfettered views, light and ventilation. Moreover, each ward building was connected to its neighbor by means of quarter-circle curved corridors that appear concave when viewed from the south of the building - these not only ensured better segregation but their unusual shape also discouraged use as surplus patient space during overcrowding. This was very desirable at a time when most asylums were beginning to realize that overcrowding was the biggest impediment to their smooth functioning. This arrangement also dissuaded asylum attendants “from going readily from ward to ward, increasing their efficiency” (AR 1872, 16).

Despite the majority of old and feeble patients among the mentally ill, the Kirkbride Plan called for multi-story buildings always with a basement. The higher stories were deemed desirable due to “being more airy, having greater privacy, and more extended views of the neighboring country” (Kirkbride 1880, 56). The basement was crucial for housing mechanical and heating systems and also under the Administration Building, the kitchen for the whole institution. This location for the kitchen was deemed desirable with regards to ease of supervision and supply of materials. Dumbwaiters were planned to transport the food up from the kitchens directly to the dining rooms. A railroad was to be laid down through all the basements for efficient distribution of food and supplies to all wards. At the Buffalo State Insane Asylum, most of the above suggestions were met, except that kitchens were planned as separate out-buildings, one each for the male and female wards. They were placed to the rear of the complex and connected to the main building by a covered corridor at basement level. This system afforded even better ventilation and fireproofing to the buildings.

Apart from the kitchen, Kirkbride called for other utility buildings like the boilers for generating steam, the laundry and bakery, to be housed in detached structures at least 100’ from the ward cluster. An additional railroad (connected to the basement system) was used to convey clothing etc., to and from the laundry. Out-buildings for tending to farmlands, usually attached to every asylum, were also proposed to be laid out in a separate cluster, some distance away from the patients’ grounds. At a minimum, these were to include a barn, carriage stable, piggery, ice house, and mechanics shops. The Buffalo State Insane Asylum closely followed this pattern. Its abundant grounds enabled construction of various outbuildings and their careful placement. The boilers, bakery

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1 The term 'echelon' is derived from the French word 'échelle' meaning ladder. The name was later adopted by the birdwatching community to describe the familiar V-shaped formations of flights of geese and migratory birds, thus explaining the popular reference to the Kirkbride plan as a 'V-shaped formation of geese'.
and laundry were placed in a cluster 150’ to the rear, while the farm buildings were located further still at a distance of almost 300’, from the Administration Building.

In terms of materials for exterior facade, the Kirkbridge Plan called for the use of stone or brick. In the case of stone, an inner lining of brick with an air cavity in between, was proposed for all external walls to provide insulation and allow drying of structural members. At Buffalo State Insane Asylum though, the air cavity between wythes was added only in the case of brick wards, not in stone - where the external walls are composite (solid, with no cavity).

Interestingly, the Kirkbridge Plan did address the issue of porches or verandas that were to be later added to the south facades of the Buffalo State Insane Asylum. It was felt that such metal porches “could not be used with safety by the patients, unless made so as almost to resemble extensive cages.” Instead, the issue of ventilation was tackled by “good thick walls, with airspace in between them” for forced passage of outside air in the interior space (Kirkbridge 1880, 71). Therefore, the brick corridor walls were to be wide enough (18” thick) to allow incorporation of hollow passages or flues for heat and fresh air to be circulated from the basement up to each ward floor (see Fig. A.18). At Buffalo, all corridor walls have two types of shafts - for hot air and fresh air, spaced such that there is a dedicated one for each room catering to all stories (Fig.A.19).

The use of tin or slate was recommended for all building roofs. It was suggested that roofs have a steep pitch and the cornice “should project boldly over the walls for their protection and to give a free passage for the water falling on the building” (Kirkbridge 1880, 64). This important stipulation was duly acknowledged by the architect H.H. Richardson in his design for the Buffalo asylum unfortunately it was changed by the building contractor to internal downspouts in the built design, leading to eventual leaking, saturation and deterioration of the masonry.

In terms of interior planning, the Kirkbridge Plan went into great detail to describe the various functions that should form part of each ward - “…[E]ach ward should have in it a parlor, or possibly an alcove as a substitute, a dining room with a dumb waiter connected with it, and a speaking tube or telephone leading to the kitchen or some other central part of the basement story, a corridor, single lodging rooms for patients, an associated dormitory for not less than four beds, communicating with an attendant’s chamber, one or two rooms of sufficient size for a patient with a special attendant, a clothes room, a bath room, a wash and sink room, and two or more water closets” (Kirkbridge 1880, 55). He also specified the sizes of particular spaces - for example, the

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**Fig A.18 Longitudinal section of a patient ward, as illustrated in the second edition of Kirkbridge’s book**

Image courtesy www.books.google.com

Note the passage of forced air circulation through building

**Fig A.19 Detail of a typical floor plan, Buffalo State Insane Asylum, showing shafts in the internal corridor wall for forced air circulation**

Image courtesy Houghton Library-Harvard University, H.H. Richardson Drawing Archives, Catalogue BLA A4
ward corridors were to be at least 12’ wide. Optimum size for the patient rooms was determined to be 11’ deep by 9’ wide to allow placement of a single bed and dissuade increase in capacity. In every long corridor, there was to be an alcove, preferably in the middle, 10 to 14’ wide and terminating in a projecting bay window. A quick comparison of these requirements with Buffalo State Insane Asylum clearly indicates that not only were they meticulously followed, but rather exceeded in most cases.

An important aspect of the interior layout as described in the Kirkbride Plan was the use of double-loaded corridors with patient rooms on either side – single loaded corridors were advised only in the case of wards for most disturbed patients. Although their benefits in terms of increased light and ventilation were well-known, single-loaded corridors were not prescribed since they were more expensive and made the building cluster excessively long. However, at the Buffalo State Insane Asylum, single-loaded corridors were incorporated in all the ward buildings. This gave rise to the spacious light-filled ‘day-rooms’ that are a distinctive feature of this Asylum.

The Kirkbride Plan greatly emphasized the quality of indoor sound, light and air. To allow adequate light and ventilation, it laid out minimum sizes of window openings and stipulated that habitable spaces should have room heights ranging from 12 to 16 feet. The floors of all patients’ rooms, without any exception, were to be made of well-seasoned wood, and unless arched below, be counter-ceiled to prevent the transmission of sound. Also seemingly minute details such as door and window hardware, grilles, guards etc., were also addressed. The Buffalo State Insane Asylum generally adhered to these guidelines as evidenced in its lofty ceilings, wooden floor and door/window details.

Foremost importance was placed on fireproofing the buildings. Yet, instead of making the entire structure fireproof, it was felt more economical to have certain critical parts made positively fireproof. These included the passages from the kitchens, bakery, and boiler rooms as well as connections between different ward buildings themselves. Kirkbride proposed that these building connectors “should be arched, their side walls should run up from the cellar to the roof, and they should have stone floors, and iron doors on one side, that can be closed whenever desired” (Kirkbride 1880, 64). Similarly, for purposes of fireproofing, staircases were proposed to be of iron or stone and were to be so arranged as not to be exposed in any ward. The use of wood for staircase construction was recommended only in the Administration building. It is remarkable how closely the Buffalo State Insane Asylum adhered to Kirkbride’s guidelines in these matters - all the curved connectors between wards could be closed off with iron doors in the event of fire, and staircases throughout, except in the central building, were made of stone, metal and brick.

The Kirkbride Plan is notable for the amount of detail and depth with which it addresses various facets of asylum construction and organization. Here, Kirkbride seamlessly applied his knowledge and experience within the medical field to define spatial and architectural parameters. The plan attempted to create an environment for treating the mentally ill, where every feature, right down to the smallest detail, was tailor-made to the perceived comfort and convenience of the patients. It is no wonder then, that for a large part of the nineteenth century, this model became the most widely used template for asylum design, and while a number of great architects designed these Kirkbride hospitals, they never strayed too far from the basic typology.