

## Miscellanea

### Hospitals for health

JOHN WEEKS

Hospitals are members of a group of large buildings of recognisably communal importance. Others are, for example, schools, churches, and shopping centres. Hospitals, however, occupy a curious position. While they are highly prized by the communities they serve, they have a slightly menacing presence. In principle, no one wants to visit them (except to commiserate with a patient already there) let alone become a patient themselves. The contradiction in the attitude of the community becomes evident when, in spite of initial resistance, a person becomes a patient. Then he or she is thankful that hospital care is available, thankful to all the men and women who administer care, and often awed by the brush with high technology medicine. But we should not assume that architectural celebration of the high technology aspects of medicine will provide a reassuring environment in most people's perception.

In common terms a hospital should be "human." But what does the word mean? Hidden in the concept there are at least two major components, one organisational and one physical, and their relative contribution is not easy to assess. Organisationally a human hospital is one in which patients are treated as individuals; in which communications between staff and patients are friendly and open; where operational regimens are such that every member of staff can contribute fully without feeling that the organisation is getting in the way; and where human frailties are recognised with compassion and the individual is supported by the community. This remains an ideal, seldom wholly achieved. Physically a human hospital is small, architecturally familiar, nicely decorated, and made of brick with a lot of flowers and wood inside and lawns and trees outside. It has a pitched roof and ordinary sized windows.

Most new hospitals are not like this.

#### Characteristics of most new hospitals

There are some characteristics of new hospital buildings that seem particularly menacing. A major one is the evidence they display of a central directive intelligence at work. This is perfectly expressed in the smooth, cool, objective buildings we now design to house the expensive and complicated business of modern medicine. It is this very purposefulness that awes. Patients are made to feel well down in the hierarchy from the moment they commit their personal particulars to the computer, begin their series of mysterious waits for attention, and are directed down long, clean corridors to one of hundreds of identical doors. Clearly the organisation must know what it is doing, but the patient may not receive much reassurance on this point, and the building seems to be in league with the organisation. In presenting all spaces and all functions with the same detached economy, and all doors with dispassionate regularity, the building seems to underline the attitude of the organisation to the individual; he will be treated efficiently and fairly, but only the computer knows where he is.

How can the architect help the patient? The technical interests of the staff will have been well considered in the brief to the architect. Planning teams are crowded with doctors, nurses, and administrators supported by careful

studies of function and well described operational techniques. The patient is represented on the planning teams only by accident. Architects do their best—choosing materials, colour schemes, and light fittings with care—as they would in any building, but generally, on major matters, only technical arguments prevail.

Another of the dismaying characteristics of modern hospitals is that all the rooms seem to have been designed as if they were equal. They may have different equipment and furniture, but essentially the walls and the ceilings are the same, and all are pervaded with the same cool, bright, artificial light and have the same background hiss of air conditioning. Not only are all the rooms the same but the corridors that lead to them and the doorways that give entrance to them are undifferentiated. Yet a hospital's function is to provide many times over an occasion for an individual to minister to an individual; and for the patients each episode is unique.<sup>1</sup>

A hospital is a complex organisation, but if the physical shape of the building reinforces this complexity no one, neither staff nor patients, is helped in coming to terms with it, let alone understanding its operation. This is where the architect can help the patient, and where special skill is required to expose order behind the busy complexity and give shape and human dimensions to the organisation.

Most types of new building are recognisable for what they are, and architects work within familiar formulas; but hospitals seem to be so varied that no single image has emerged. Neither the office building nor the hotel is an appropriate image for a hospital. Something much more complex is required if it is to be adequate, so complex indeed that it is not a building at all.

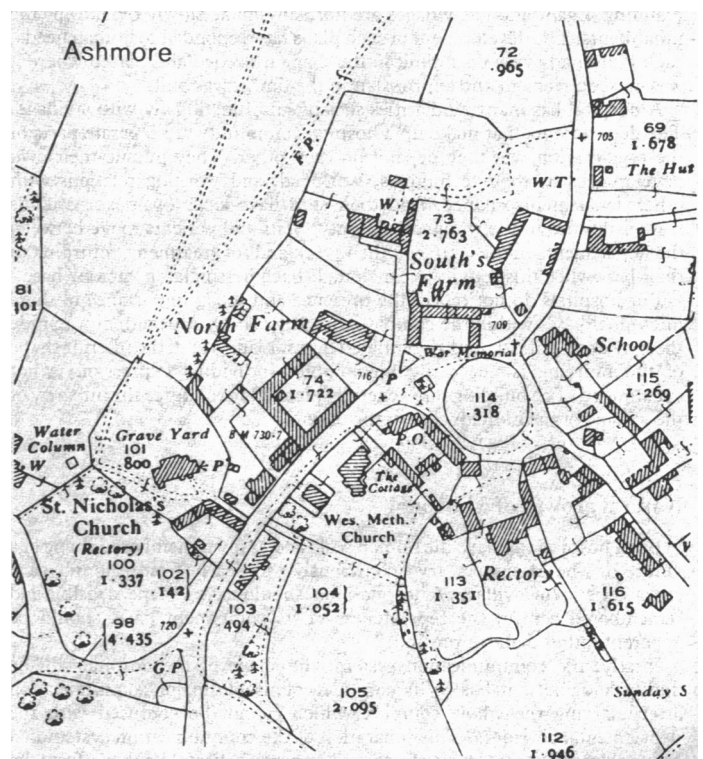


FIG 1—Village in north Dorset, England.

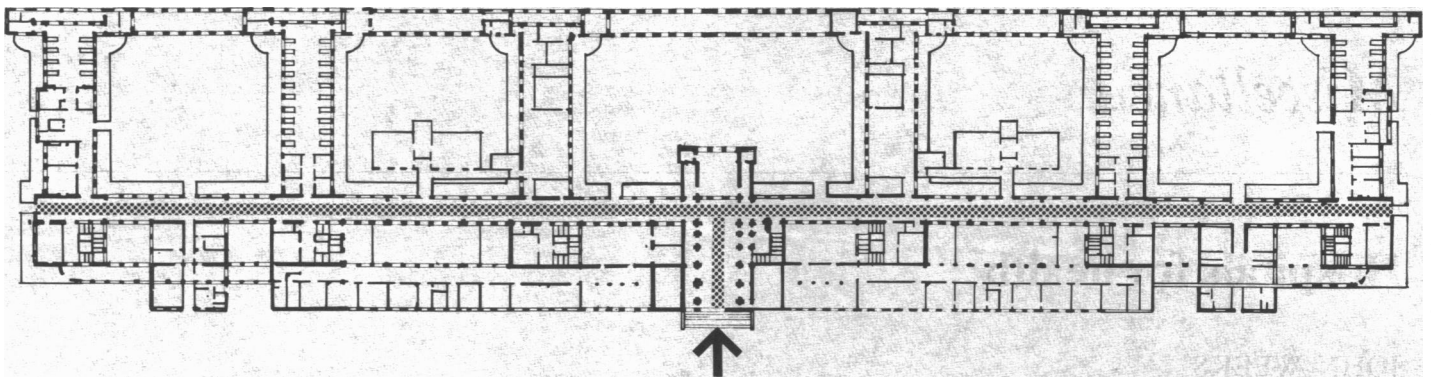


FIG 2—St Thomas's Hospital, London, 1871.

### Hospitals as villages

The most useful analogue is the village. Like hospitals, villages are extremely complex social organisations, slowly but continuously changing, with a resident population as well as participating visitors. They work at many different levels from personal to communal interest, and many activities overlap. While villages are distinct and individual, they share certain physical characteristics. Each clusters around some geographical incident, the historic origin of the village such as a trade crossroads, or a narrow part of a river where it was easy to make a bridge. Sometimes sites were chosen because they were easy to defend; in flat countryside villages are often planned loosely; where land is valuable or difficult to build on they are tightly planned; they always take a shape that relates directly to the local form of the land. Consequently villages are different in each geographical area of the world, even though they fulfil similar social needs.

In villages all the buildings are different. Over the years many will have been altered or replaced, but throughout these changes the overall shape of the village has remained recognisable, always related to the line of the high street or the central public space (fig 1). These public spaces together with the church, the pub, and the shop are the key to the map of the village, which everyone is able to carry in his head without conscious effort. Consequently, everyone living in or visiting a village is able to orientate themselves, understand directions, and remember their way through it because the shape is clear and the distinctive characteristics of every part provide signs. The whole complex is human in scale; every part can be visited on foot. Historically, few decisions about the plan will have been made by a central planning organisation as villages are normally made slowly by and for the inhabitants. The development of such plans has responded to human needs, each building having been built in the shape it needed and placed where it was most convenient and appropriate at the time it was built.

A hospital has many similarities socially and functionally with a village. The departments that make up a hospital community are separate parts of the organisation, yet they depend on each other. They pursue their own development as their techniques, workload, and working relations with other departments change. And their staff have local loyalties as well as responsibilities to the whole community. Staff and patients move between the departments in the course of their work and for treatment, returning to their base when this activity is concluded. Each person has a "home" base.

But hospitals do not reflect the presence and social importance of these individual bases within the complex with any clarity. Most attempt to hide them away in a bland, undifferentiated interior landscape; the interior shape of the building is not easily memorable. Individual expression is not encouraged. The buildings are generally planned to reinforce the integrity of the whole not the individuality of the parts.

### Natural growth of a hospital

But a hospital can have the human scale and easily remembered shape of a village if the designers try, consciously, to learn from the physical characteristics of a village. A hospital, too, should have a shape, a visible and remembered centre; the separateness of its component parts should be apparent rather than suppressed.

Firstly, the communication system: the shape of the hospital will be understandable if it has as its core a recognisable major communication artery serving the whole complex, which cannot be confused with the departmental corridors. This separation of the communication system in a hospital into different levels of use is an important discipline that affects the plan in a decisive way. The major corridor system is the shape of the building

so far as visitors can see; it is the public domain. The main corridors in a hospital work like the high street in a village: they do not have to be straight but they should be recognisable as major arteries wherever they go. They should have a specific architectural quality, they should exploit their street function, and they need to have memorable incidents for punctuation. An example of this is the great main corridor in the old St Thomas's Hospital in London, and there are many such examples in the nineteenth century hospitals in most cities in the world. At St Thomas's this main corridor was immensely long but punctuated and measured by the entrances to the pavilions and, as its centre point, by an arcaded entrance hall and a splendid statue of Queen Victoria. This corridor is not only a great distributing space but also a unifying one, something between architecture and town planning (fig 2).

Secondly, the components of the hospital community: the departments of a hospital are like the houses in a village, each one to some extent a private domain. Each has a front door for public access and its own internal communication system. The contact between the main street and the private, inner system is a front door, as it is to each of the buildings in a village. This door can play an important part in identifying the department; it needs some kind of celebration (fig 3). The entrance door to a department should be approached through a "pause" space, which serves as a transition from the public to the private domain. This is analogous to the approach path and the porch of a house. It serves to reinforce the individuality of the entrance and also its place in the communication system.

Thirdly, the centre: villages usually develop outwards from a centre and are approached through the outer, low density edges. Hospitals, on the other hand, have a formal arrival point or several arrival points, and the corridor system penetrates diagnostic departments that are at once complicated and densely planned. The problem for the visitor is to map this area and remember where the front door is. For automatic mapping straight corridor systems work well, the entrance remaining always visible at one end; glass walls to the corridors are helpful because they enable progress through the complex to be measured and give the visitor clues about his position within it (fig 4). No amount of colour coding is a substitute. The centre of a hospital complex is the major corridor system; it is a linear centre and not a single event. Public utilities such as the cafe, flower shop, library, and bank punctuate the system. If there are works of sculpture, like Queen Victoria at St Thomas's, they should have a recognisable back and front. Revolving kinetic sculpture may be enjoyed by architects but does not help visitors and patients to orientate themselves.

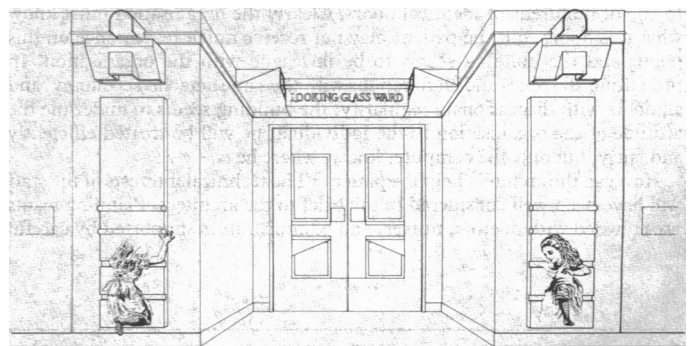


FIG 3—Entrance to paediatric ward: doorways to each ward in this hospital have different architectural treatment and design.





FIG 4—York General Hospital: main corridors have glass walls and overlook landscaped courts.

A major characteristic that hospitals share with villages is the persistence of change. Villages develop continuously, each building being changed and sometimes replaced by another as the passing of time affects the social and economic structure. In a hospital too all functions change continually through its life. In the development of villages these changes to individual buildings produce the living, continually changing detail in the village and reinforce the identity of individual buildings.

A hospital can be designed with the departments treated as separate parcels of real estate. Then individual departments may be changed, extended, or replaced independently, and the passing of time will leave its mark on the hospital in the same way as it does on a village. Changes, if allowed to show themselves as individual actions rather than being suppressed, introduce local differences within the system and help to dilute the image of the central organisation. But, as in a village, it is important that the main street system retains its identity. Even though everything else changes it should hold the hospital complex together.

### History of hospital planning

Does the history of hospital planning support the thesis that hospitals behave more like villages than buildings? From the middle of the nineteenth century hospitals began to be built on the pavilion plan, and there are many surviving examples. Each building with beds for patients—and until the twentieth century hospitals were made up largely of beds—was separate and served by a wide corridor. This corridor, usually straight, clearly defined the shape of the hospital. Where they have survived such hospitals often retain their human scale, even when they are quite large, and even now they have often retained their original major circulation pattern. As the diagnostic and treatment departments have increased in number and complexity new buildings have been built in the spaces between the pavilions and on the periphery, and the interiors have often been completely renewed.

As a reaction to this ad hoc additive development, compactly planned hospitals have been built in this century, providing all the facilities required for modern high technology medicine in a “properly” integrated way.

Unfortunately, much was lost in the change to compact buildings. A major loss was the ability to change and enlarge individual departments without losing the original logic of the plan. Eventually additions have had to be made as separate buildings outside the system because departments inside the compact building form could not grow without taking space from their neighbours. The result has been that the new buildings have become, or are becoming, as muddled and crowded as were the old ones. The old hospitals started as villages but have become doubtfully hygienic slums as their density has increased. The new hospitals start at a high density and reach the same stage more quickly.

A major loss in the compact hospitals is that of comprehensibility. The public corridors are complex, sign posting is a problem (coloured lines on the floor are a desperate attempt to help people find their way), and as all doors are much the same, no point in the corridors is more important than any other. The buildings are trackless.

In 1964 the suggestion was made that a return to the low density street and pavilion system would allow hospitals the potential to grow and change organically, this potential being built into their plan, the starting point for the architectural concept.<sup>2</sup> The street would regain its original function—as the physical connection and key to the map of the whole hospital—and change and expansion in the hospital would be outward from the street, without distorting its shape and function. The plans of Northwick Park Hospital, London, and York General Hospital in the 1960s pioneered this new format.

### The nucleus system

In the past 10 years a return to the street and pavilion has been motivated in the United Kingdom by the need to build cheaply and design built in flexibility. The street and pavilion planning system known as “nucleus” is now the basis for many new hospitals and all the new planning guidance being issued by the Department of Health and Social Security. The nucleus hospital plan is again more like that of a village, and the opportunity can be taken to introduce humanising elements into these hospitals.

Nucleus departments are housed in identical buildings on either side of a street long enough to serve the number of departments required in the first stage but which can be extended. It is a planning not a building system, and so each hospital is different in make up. But while each may be different, and different too in its architectural manner, each hospital plan has the same idea at its core. Except that it simplifies the planning process, there is little reason for using identical buildings for the departments. Each could take its own form, with possibilities of local extensions, without violating the planning principle. Indeed, as the system develops in successive examples many departments are beginning to take their own shape. The nucleus system has the potential to allow hospitals to be designed as villages; only the lingering image of hospitals as simple buildings interferes with the realisation.

### How do we learn from the past to plan for the future?

Existing hospitals exhibit all the stages from an original open cluster of buildings to a confusion of successive additions. Although many have been on their sites for 100 years or more, they may have doubled in size; they will have largely kept pace with developing technology and continued to provide excellent service, but many can only survive in the future through renewal. In renewing them we should not sweep aside the whole of their history with a single grand action, for history shows that this will not remove the threat of future obsolescence. Buildings should be replaced in stages so that the whole complex is continually renewed; but each stage must contribute to the reconstruction of a centre, the creation of an understandable interior landscape, and the achievement again of a hospital that is friendly to all its users.

Hospitals do not need a borrowed image. What we see is what they are. They are in truth like villages, though sometimes so overgrown that they have become more like Manhattan; but we can learn a great deal about how to design them from the urban geographers.

### References

- 1 Hoare J, Weeks J. Designing and living in a hospital: an enormous house. *The Royal Society of Arts Journal*. 1979 July.
- 2 Weeks J. Indeterminate architecture. *Transactions of the Bartlett Society II*. London: University College, 1964.