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OPEN PLANNING FOR HIGHER EDUCATION
The Architectural Problem

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The buildings on the main site of Leeds Polytechnic are relatively new and parts of them have been completed very recently. The architects were Yorke, Rosenberg and Mardall. The initial design by F.R.S. Yorke has been considerably modified in the eighteen years since the first plan was made. Like most post-war buildings for colleges of technology it consists essentially of a main slab block with a central corridor on each floor and a number of more or less separate units linked to the main block.

It is unfortunate but characteristic of our time that just as some of these buildings are completed they find themselves put to purposes for which they were not really designed. There have been many changes in teaching methods in the last few years; but what makes some of them especially inappropriate is that they now house new Polytechnics, in which the amalgamation of a number of formerly separate colleges creates a new set of conditions. When they were designed it may have been assumed that the functions inside them would not be significantly different from those of a school; now some of them house activities that are more like those of a University. But in any case they were due for some changes.

The innovations and revolutions in the planning of primary and secondary schools of the last fifteen years have not been matched in the higher education sector, where the re-examination of functional programmes has only just begun. In particular two basic assumptions made about these buildings are no longer valid. One was that most teaching would be carried out in classes of 24 or a little more, using the standard classroom techniques of chalk and talk throughout the day. The other was that, as in most schools, the academic staff did not need rooms for themselves. The result is that over the years some of the standard classrooms have been taken over as "staff workrooms"; in them are groups of staff of five or six or more - one such room in Leeds has thirteen.

There is no obvious way to answer these problems. While it is possible to throw a few classrooms into one by removing internal walls there is a limit to the number of students who can see and hear a lecturer in a room with a flat floor and a relatively low ceiling height; and the ceiling height makes raked lecture-theatre seating impossible for more than a small number. The staff workrooms are even more intractable. If they are divided into smaller rooms with a smaller number of staff in each, there can be a serious waste of space; the central corridor becomes a barrier

and the depth of the block leads either to vacant spaces or rows of internal rooms with no ventilation.

The internal adaptations on the first and third floors of the main slab block were an attempt to solve some of these problems. The first floor contains most of the management and administration of the Polytechnic. At one end is the main administration office. The finance section has a group of rooms at the other end of the corridor. Between them is a suite adapted for the director, two assistant directors and the chief administrative officer. Each of them has a room and their secretaries share an irregular space that links the room and is treated as a miniature landscaped office.

The main landscaped administration office presented no special problems other than those normally encountered in adapting an existing building. The slab block has an internal overall width of 18 m. once the central corridor has been removed, a little less than is recommended for a landscaped office. The floor to ceiling height is 3.1 m. The area is 213 m^2.

The space is interrupted by a large service duct that runs the full height of the building and by the telephone exchange for the building, which from being a room on the corridor has become an enclosed island within the office. The floor has been carpeted from wall to wall, with a tufted carpet of nylon pile on a heavy quilted woollen underlay. The ceiling was replaced by 19 mm sheets of Perfoslot with sound absorption coefficients that range from 0.55 to 0.80. The furniture is from the Carson range, the chairs from the New Equipment range and the screens are Lucas acoustic screens.

In general the new layout is popular, possibly as much because of the contrast in standard between the new office and the conditions that had obtained previously as because of any inherent liking by the staff for burolandschaft planning. The faults are those that were expected. The most disturbing noise comes from telephones and typewriters. Otherwise the principal criticisms are of the ventilation, which is inadequate, and of the static electricity that builds up because of the low relative humidity and the use of a nylon carpet.

The main experiment was, however, in the creation of a burolandschaft teaching department on the third floor. The same basic themes were used as for the office - a green carpet, white walls and ceiling, matt black columns. The swivel chairs are green, the polypropylene stackable chairs are flame coloured, the desks and tables are natural wood. The acoustic screens first supplied were the same Luca screens used in the administration office.

The department that volunteered to be the victim of this experiment was the Contemporary Studies Department (previously known as General Studies). It has a notable esprit de corps, which does not mean that its members of staff agree about anything but that they are profoundly involved in the course they offer and work as a team or a series of teams. They teach mainly in tutorial groups and make frequent use of audio visual aids - ordinary projectors, overhead projectors, tape recorders, record players and so on. There are fifteen members of staff, including the Head of Department, and at any one time there may be up to 150 students attending tutorials with them.

A floor was given to the department and opened up with the exception of one corner, where two separate rooms were retained, one for lectures that involve the showing of slides, the other for private tutorials. The Head of Department did not insist on a separate room for himself; that is worth mentioning because the heads of units are notorious for exempting themselves from the open areas. Its area, broken only by the central columns as in the administrative office, is approximately 370 m^2.

The basis of the initial plan was that each member of staff would have a work place, made up of certain standard units (rather as in the case of the BDP office). These included a desk, a swivel chair, a storage unit containing shelves or files, a number of stackable chairs and a screen or two which could be moved to give a measure of privacy. Not surprisingly, within a few days some of the staff began to erect barricades around themselves, collecting as many of the screens as possible; and since the screens were black the room began to look gloomy and defensive. But after a period of some difficulty the layout was modified and the department began to function more happily.

As in the administration office many of the disadvantages were predictable. The telephones are irritating, the ventilation is again inadequate; the acoustical conditions are described in the second part of this article and are, therefore, ignored here.

The experiment is still at an early stage and there may be more changes of mind and plan before a final form is achieved. But certain lessons have already emerged. The main problems for a teacher and a student are privacy and noise. In both respects it became clear after a while that the light movable screens were not adequate. Screens of different kinds were borrowed, the most significant being some heavier screens, solid down to the floor, designed by the City Architect's Department and installed in some of the new open-planned primary schools in the city. They are 1.7 m high, are lined with hardboard on both sides and can be bolted together. These have been tried; they are more successful and a screen based on them is likely to become the standard unit.

On the other hand, some of the staff, having experienced a powerful sense of community engendered by the open floor with the inadequate and easily movable screens, are not anxious to subdivide the space with more solid units. The problem is no longer how to achieve enough privacy and silence in a landscaped office for tutorials to take place and members of staff to do private work; it has become how to achieve the right degree of privacy and the right level of noise.

The solution suggested by Mr. Fearn's studies is a combination of two kinds of screen and two kinds of layout. The heavier screens will be used to create six or seven fairly defined spaces for use by tutorials of different sizes; they can be moved to suit changing needs, but not too often - they are likely to be fairly heavy. Furthermore, the screens will have reasonably reflective surfaces so that classes will hear their teachers and fellow students more easily; the effect of the acoustic screens was to induce everyone to shout for fear of not being heard.

The remaining areas will contain the staff work places, with plants and the lighter screens randomly placed. The floor will thus have something of the character of a forest with clearings. The academic staff will be found in the overgrown and thicker parts of the forest; the students, when in groups of more than two, will be ushered into the clearings. And that may provide an answer to a question that has increasingly been asked. Accidentally the plants which form part of any burolandschaft space have not yet arrived. They will be introduced shortly. Their absence has prompted the question whether they are necessary at all. They will now have at least a logical position.