

The Work Environment at the University of Stockholm: Report from a Work Environment Project in the South Building

by Jan Ahlin



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The author presents the background for Södra huset (the South Building) at the University of Stockholm in Frescati. He describes working conditions in the Departments of Social Work and Statistics, then discusses the connections between the organization of their floor plans and of the work in the departments. Using floor plans, the author shows how the organization of the plan in the departments and their classrooms can be improved with relatively small means within the constraints of the existing building structure.

Theme WORKSPACE DESIGN

THERE HAS LONG EXISTED A BELIEF that academics “have it so good”, that they represent a privileged group. The university work environment ought not therefore to be an urgent concern. This article presents examples of problems which refute that notion. First, there exists a great dissatisfaction among employees and students over the working conditions and environment in universities. Second, the work environment in universities in many cases fails to meet legislated regulations, prescriptions, and agreements. The purpose of this article is to illuminate some of the problems

in university work environments and to indicate how building form can contribute to those problems. I hope to inspire further architectural research into university work environments.

This article¹ is based on work done by the author and others between 1991 and 1994 as part of grant proposals to the Work Environment Fund, the Council for Building Research, and the Stockholm County Working Life Fund for research and development projects on improving the work environment of, primarily, the South Building, which is the University of Stockholm’s main building in Frescati. Programs were developed in close cooperation with a working committee and with departments in the university.

The University in Frescati and the South Building

Stockholm University was until 1960 a municipal university. The university wished to remain in downtown Stockholm and had even worked out a plan for acquiring the necessary space². In connection with the nationalization of the university in 1960, the National Board of Public Building required the university to move to a new location in Frescati, directly north of downtown Stockholm.

The government proposition for nationalization³ of the university gave guidelines for the planning of new facilities and, through the program for the Scandinavian architectural competition that followed, came to control the design of the buildings. One goal declared in the proposition was to “in practice break down the traditional university organization built upon distinct departments.” The disposition of the premises was to encourage “internal cooperation” across departmental lines and “external collaboration”. Auditoria, seminar rooms, laboratory space, and workshops were to be shared. In order to minimize construction costs and time, a simple design which would allow the use of “rational” building methods was prescribed.

The university itself was not allowed to participate in formulating the building planning guidelines for the competition program. During the competition, in 1960, the university came forth with some criticism, particularly of the dissolution of departments. A memorandum signed by five professors in the School of Humanities declared it to be an essential precondition for their teaching that human and material resources be assembled in effectively working subject departments. They considered it necessary to demand that individual departments should be the organizational units within which conditions could be created for solid yet flexible interdepartmental collaboration. They also maintained that the integration of research with the rest of the department and the goal of encouraging “teamwork”

across department lines would require individual departments to be physically consolidated. The memorandum states:

The isolation of individual researchers cannot be nullified by placing them in a giant building together with thousands of students and hundreds of other researchers, all of them isolated in their own ways, but rather by creating the conditions for truly collaborative work. These work groups can arise in a natural and informal way in a department working under favorable conditions.⁴

First place in the architectural competition went to the Danish architect Henning Larsen. The realization of the project, however, was based on the work of another man, the Swedish architect David Helldén, though he fundamentally reworked his original proposal. Parallel to the guidelines in the aforementioned government proposition, the propensity of the Board of Public Building for *structuralizing* and *building box thinking* profoundly influenced the eventual design.

Structuralizing meant that building components were divided into categories according to their life expectancy⁵. The *community-based* components, such as traffic arteries, streets, and heavy technical support systems, were said to have a life expectancy of hundreds of years. *Building-based* components, such as the building's structural framework and permanent installation runs, could be expected to last decades. Partition walls, furnishings, and electrical, climate, and sanitary systems were considered *activity-based* components whose durability could be measured in years. The theory of structuralizing held that the community-based and building-based components should be given a high degree of *generality*, while activity-based components were to have a high degree of *flexibility*, allowing them to be adapted easily to changing demands. “The *building box* ... was the popular name for a series of standards, recommendations, and directions ... developed for offices, laboratories, etc.”⁶



The University of Stockholm in Frescati. Vegetation and building additions designed by Ralph Erskine and others have softened the exterior environment around David Helldén's strictly geometric South Building from 1968–71. Photo: Jan Ahlin, 1995.

The separation of different functions into distinct zones by regional planners was seen by the Board of Public Building as a model for the planning of universities. Industrial buildings represented another inspiring prototype. One of the experts who set the tone at the Board of Public Building was Professor Nils Ahrbom. In a paper given at a conference on university environments arranged by the Board of Public Building in 1970, he stated that

Industrial buildings have long been structuralized into a group of changeable parts and a group of non-changeable parts because the activity in industrial buildings – production – must follow the fluctuations of the market and the economy. Only now does the time appear to have arrived in which these experiences of old may be applied to new construction for other purposes.⁷

Basically the same structuralizing and building box reasoning was used in the state administrative buildings built by the Board of Public Building in Stockholm at about that time: the Garrison block (built 1965–71), the South Building (1968–71), and the new police station (1971–75). The University of Stockholm began to move out to Frescati at the beginning of the 1970s. The South Building came to house the Humanities, Social Sciences, and Law Schools. Architect Carl Nyrén's Arrhenius Laboratory and associated buildings were built between 1972 and 1985 for the School of Mathematics and Natural Sciences⁸.

The University of Stockholm comprises approximately 65 departments and 20 institutes. It is one of Sweden's largest workplaces if employees (3,500) and students (32,000) are included as prescribed by the Work Environment Act. The facilities are used intensively.



Thousands of students a day walk the main axis outside of the lecture rooms in the South Building. The potential for the environment to support the meeting of individuals in small groups before, during breaks, and after lectures was overlooked during the original planning. Photo: Jan Ahlin, 1995.

It's hardly a pleasure to bring foreign guests here. We try to approach the South Building from behind. But the illusion ends anyway when you come in, once the foreign guests discover the interior.

Lecturer in Political Science

The South Building's Disposition

The South Building is the university's main building in Frescati. It comprises six parallel rectangular buildings pointing north to south. The north ends are connected by an east-west oriented transverse building. While the southern parts of the rectangles are only 12 m thick,

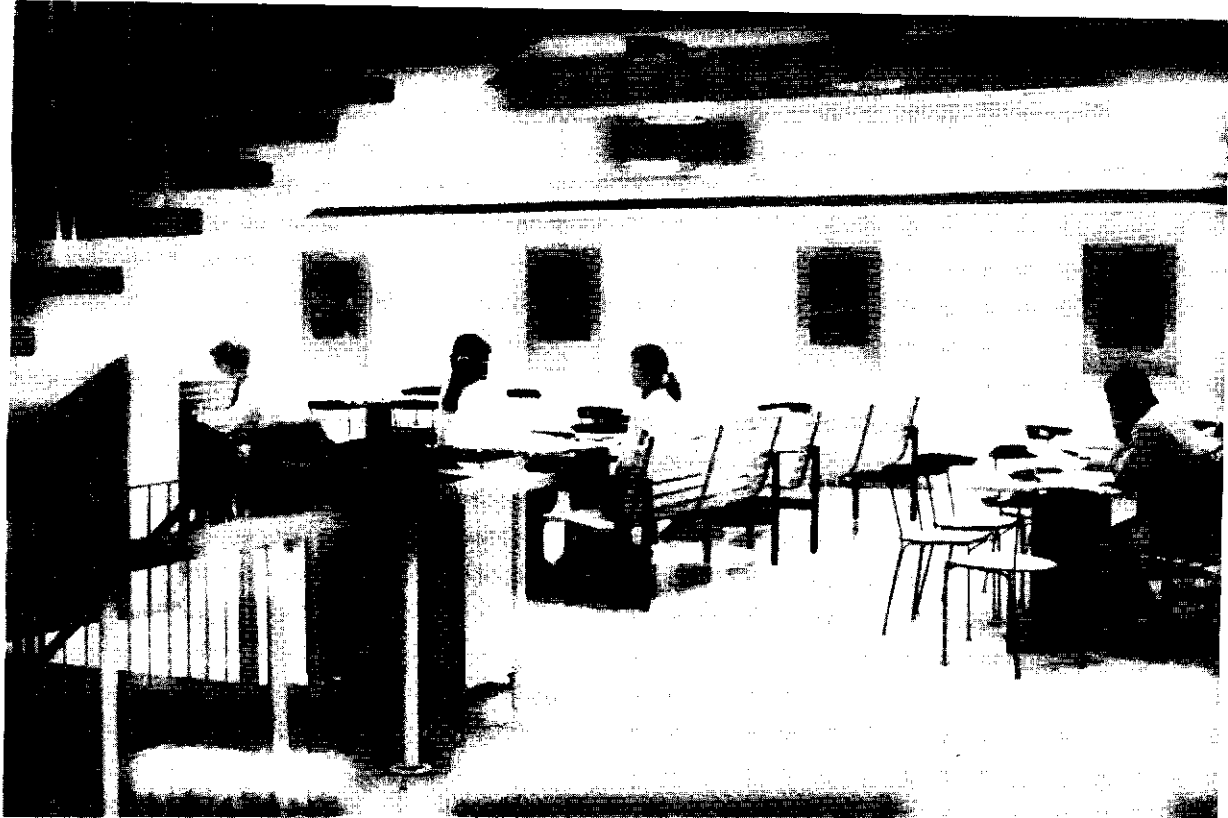
to the north they are 18 m thick. The principle means of vertical circulation is provided by an elevator core located in the transition between the wider and the narrower parts (see figures 1–3). Floors 2–4 in the rectangular buildings are occupied by seminar rooms. These rooms have an oblong rectangular floor plan and are entered in the front, by the lectern and blackboards. Floors 5–9 have a typically institutional layout with offices. In the thicker part of the building the offices are organized around two corridors with a dark core in the middle given to storage, a lounge, cloakroom, toilets, etc. The narrower part is organized around a lone double-loaded corridor. The connecting building holds the lecture rooms. One enters down at the podium before ascending to the rows of seating.

It's far too warm in the summer and far too cold in the winter. We can't open the windows because it sends the papers flying. Many of the windows lack handles for opening them. In my department we have one handle. It's something of a treasure. The window sills are plastic and don't allow us to put plants on them. The floors are cold. In the winter we have to wear felt slippers. And of course we'd really like to have some curtains.

Secretary

The Environmental Group at the University of Stockholm

By the beginning of the 1990s the South Building had become quite run down and needed renovating. Such a renovation was initiated by the Board of Public Building in 1991. When the building's users, that is the teachers, researchers, other employees and students who were working there, found out about the plans, it was also disclosed that the renovation efforts would be limited to restoring the environment to its original condition. Measures were to include repainting and adjusting the ventilation system. The users considered the measures insufficient. They formed an informal com-



The shortage of places for meetings, group work, and study is a huge problem for students in the South Building. All possible areas are used to these ends, as is this windowless space below the main stairs. Photo: Jan Ahlin, 1995.

mittee called the Environmental Group which met regularly to demand that the Board of Public Building take real action toward improving the work environment. The chairman of the Environmental Group, Thomas Lindstein, was head of the Department of Social Work. In the fall of 1991, the Environmental Group contacted the Department of Architecture at the Royal Institute of Technology (KTH) to discuss whether improvements to the environment of the South Building might serve as the object of a short design project for architecture students. The Environmental Group came in contact with Bengt Etzler and with this author, who were researchers and teachers in the Department of Architecture, and a cooperative effort was established.

Local environmental issues at the University of Stockholm have since that time been the object of two educational projects in the Archi-

itecture Department: a core curriculum course in the winter of 1991–92 and a continuing education course for architects and interior designers in the spring of 1992. These courses resulted in the disclosure of a multitude of problems in the work environment as well as proposals for reforming that environment.

The Environmental Group was active in awakening interest in and debate over issues concerning the work environment at the University of Stockholm. In the spring of 1992 they organized a Work Environment Day and an exhibition in which the ideas formed in the Department of Architecture, among others, were presented. In connection with the event, the student union devoted an issue of its journal, *Igitur*, to work environments, presenting the sketches for environmental changes⁹. In December, 1992, the university's Department of Information published a thought-provoking



The main corridor leading toward one of the elevators in the South Building. Neither the patterns on the floor nor the colored panels hanging from the ceiling can compensate for the absence of windows in providing a friendly atmosphere and the ability to orient oneself in these spaces. Photo: Jan Ahlin, 1995.

booklet and documentation in which, among other things, the proposals from the continuing education course were presented¹⁰. A second Work Environment Day was held in the spring of 1993 to discuss the work and study environment in the South Building.

The library has research cells without windows. I don't understand how people can do research in there. And still there's always a line to get one of those research cells.

Student

Problems in the Work Environment

At a seminar incorporating workers and students from the South Building with architecture students from KTH in December of 1991, the users presented their view of their own working conditions. A few of the users' testaments from

this seminar are reproduced in the boxes scattered throughout this paper.

The lack of floor space in the departments is quite troublesome. As a rule, offices meant for one or two are shared by several people. These conditions make concentrated, uninterrupted intellectual work nearly impossible, with the result that many researchers and teachers choose to do such work at home. The fact that some people work at home inhibits the formation of contacts and impoverishes the intellectual environment in the university.

The dimensions of the seminar rooms are not suited to the group sizes which are desirable for pedagogical purposes. The location of the entrance to each room, furthermore, causes disruptions from people coming and going during the course of a seminar. The lecture rooms have the same problem with disruptions due to the placement of their entrances. There

is generally a great lack of informal meeting places and study places for students throughout the entire South Building.

The work environment problems in the South Building are in part widespread, arising from fundamental design problems with the building. On the other hand, most of the problems stem from the failure to adapt the building to the varying nature and needs of the different departments. In order to get at the latter type of problem I intend to focus my attention on conditions in two departments which have been particularly active with their working environment.

There's a lack of departmental identity. The departments would like to have their own spaces. There aren't enough elevators for getting the students up into the departments. One goal might be a consolidated department combining areas for both teachers and students.

Professor of Statistics

The Department of Social Work

The College of Social Studies, previously under its own authority with its own administrative and educational tradition, has since 1977 been incorporated into the University of Stockholm. Activities in the department include the education and continuing education of social workers, a doctoral program, research, and the publishing of an international journal of social work.

The old administrative and educational tradition lives on, for better or worse; it provides identity and unity while inhibiting the department's new goals, which emphasize interdisciplinary work and the integration of research and education. The spatial organization of the department separates the sociologists, psychologists, economists, lawyers, statisticians, social methodologists, and social policy makers from one another. Teachers and researchers are similarly spatially separated, inhibiting collaboration.

The social studies core curriculum, originally based on traditional academic disciplines, has become thematically interdisciplinary. The middle portion of the curriculum focuses on theories and methods in social work, based on an extensive integration of education and research. The final phase of concentration courses also requires extensive involvement from researchers. All of this speaks for a new organization of the department's work and the space for that work.

Changes in educational goals and a new pedagogy influence the sizes of classes. The old division into classes of approximately 35 students have been abandoned in favor of three different class sizes: 8, 24, and 105 students. The existing oblong rooms, inconvenient for groups of 35, are even less suited for the new sizes. A series of completely new room sizes must be established. There is a particular need for 8 person rooms. An expanded commitment of resources to social studies means that this size group will be more and more common in the future – particularly in methodology, a core subject in the College of Social Studies. Groups of 24 afford discussion between the students and their teacher if the space has the correct form.

The classrooms are long and narrow, with the result that some students sit for hours with their heads turned almost 90 degrees. The main problem for teachers is presumably the rooms' poor acoustics, which cause them to strain their voices hour after hour. In addition, the ventilation of the offices and classrooms is inadequate.

The new curriculum involves more work with computers. All of the students are required to write papers, most of which are based on the manipulation of quantitative data. Appropriate computer rooms must be created.

The College of Social Studies tries to encourage interpersonal relations in each classroom by working in small groups, but encounters between classes, and especially between students in different years, are far too rare. The school also lacks points of contact between faculty and

students. Such contacts are mutually beneficial on a personal level and contribute to improving the quality of the education.

The College of Social Studies runs an extensive continuing education program for professionals active in the field. Course participants are recruited from among highly positioned public servants and policy makers, politicians, professional social workers, and others. Many of these are accustomed to educational environments of an entirely different class than the College can offer. The inadequacy of their facilities thus inhibits the College of Social Studies in its efforts to recruit from their target groups for continuing education courses.

All the doctoral candidates and a significant number of the employees in the College of Social Studies have been active as social workers. If their professional experiences are to benefit the core curriculum students, there must be meeting places and opportunities for informal conversation. In the present situation, the students cannot even differentiate those who study or work in the department from outsiders. Thousands of people pass by one another in impersonal corridors without meeting.

The teachers in the department face strong demands from many sides. Among other responsibilities, they are expected to compose and carry out teaching plans and examinations, participate in the long-term development of educational programs and pedagogical strategies, produce teaching materials, and assume responsibility for the happiness of the students and for their accumulation of knowledge. In addition, they must stay up-to-date on scientific developments in their field and carry out their own research. There is never enough time, and the work situation is considered stressful by many. Peer support becomes essential to counteract the negative consequences of such a work situation. As evidenced by a study undertaken by the occupational health unit of the University of Stockholm, the teachers seek expanded opportunities for contact with their colleagues

in order to benefit from the experiences of others, create new opportunities for collaboration, and so forth. The present facilities do more to hinder than encourage social contacts.

Beginning Spring Term 1994, the school offers a master's program with a large proportion of elective courses and research. The establishment of this program has brought with it new demands on the department's organization and its spatial configuration.

The researchers are especially vulnerable. Their work is commonly limited by the temporal and financial constraints of a grant, and they often do not know how long they will be able to support themselves. They easily become isolated from those who teach, and are themselves far too seldom involved in teaching. As a result, the education does not benefit from their knowledge, and they cannot begin teaching when their research grants run out because they lack teaching experience. In the College of Social Studies, core curricular studies and research are even physically separated. A new layout is needed to increase the opportunities for the integration of people from different disciplines and various work roles.

The seminar rooms are too long and narrow. It's hard to teach in a train car. Social considerations have not been taken into account. There are no natural gathering places where students from different levels can meet. We only meet classmates in our own course. It's a disadvantage for the learning process. There's no sense of community here. Nothing positive. You don't stick around a minute more than necessary.

Student

The Department of Statistics

The Department of Statistics's library is divided up into three tiny rooms. These are dark due to fact that bookshelves block the light from both windows and fixtures. There is not enough

room for a computer for literature searches. A new departmental library is therefore needed.

A new computer room adjacent to the rest of the department is needed, with room for at least fifteen computers. At present, the department uses a room for this purpose in another part of the building, and the lack of proximity causes problems. Though the door to the room is electronically locked, the departmental employees need to be near the room for supervision. The present arrangement is also impractical in that one must walk a great distance to pick up print-outs. The new computer room should be spacious and airy. For teaching purposes, there should be room for three people at each station. An additional computer site would help relieve the general press for computers in the university. In addition, the doctoral students need their own room to allow them a sense of group identity and of belonging to the department. This might conceivably be combined with the new computer room.

The department does some business providing statistical help to clients from governmental authorities and private companies. The conference room is generally used for this purpose, but a conflict arises when the room is being used for teaching. In addition, students writing papers in other subjects often want help with their statistics. This consulting is something the department would like to develop, since it provides a welcome broadening of the scope of work done by teachers. To that end, space is needed in which to meet with clients. The existing meeting room holds only half of the employees; a new meeting room is needed with space for the entire department. This room could also provide a meeting place for students who have completed the core curriculum year, giving them a sense of belonging to the department.

There's no good place for students working in groups to be. They have to sit on "park benches" – not exactly free from distractions. We often work in groups.

Student

Remodeling Proposals

In the design process for the original building, the architect embraced the characteristics common to different departments and ignored those which make each department unique. The Departments of Social Work and Statistics exemplify the differences. Social Work offers a coherent professional education in which the schooling of students in a particular professional identity is an essential ingredient. Statistics, on the other hand, is a "support subject", a few credits of which are required in many different courses of education. It is a temporary subject for a great number of students who devote relatively little time to it, very few people going through the full course to become professional statisticians.

The interior designer Ingrid Lindén had once participated in the previously mentioned continuing education course at KTH. At the request of the Departments of Social Work and Statistics, she developed a proposal aimed at, within the framework of the existing structure, better adapting the floor plan arrangements to the particular needs and character of each department.

The facilities of the two departments are today almost identical (see figures 1 and 3). The corridors are so narrow that they can only be used as *circulation space*. Two people conversing in a corridor present a hindrance to passers by. The circulation space of the departments is reached directly from the elevators with no intermediary entry door. As a result, the doors to the offices must as a rule remain closed and locked – especially if the room's occupant is away. This leads to a lack of contact among those working in the department. There are two principle types of offices: the most common are 3-module rooms (the width of which is three 1.20 m modules), but these are interspersed with a few 2-module rooms. Earlier studies and research have demonstrated that varying the size of offices makes relocation difficult, since the activities from larger rooms do not automatically fit into smaller rooms

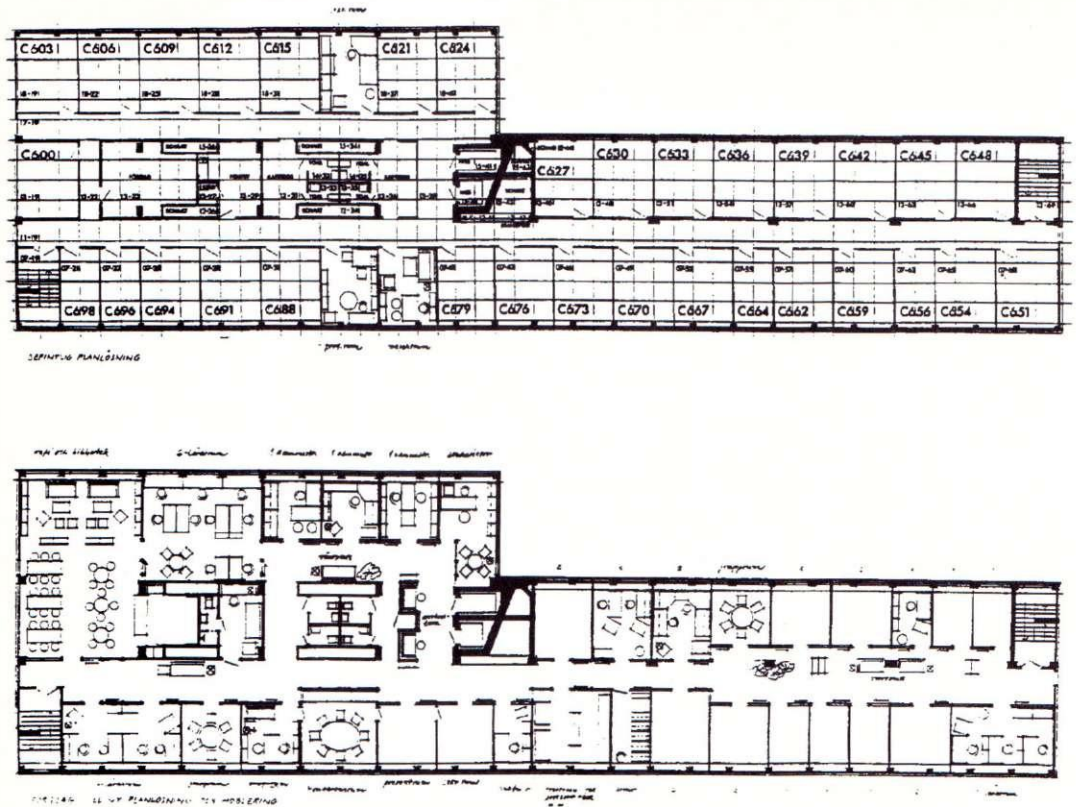


Figure 1. South Building, Level C6: part of the area occupied by the Department of Social Work, University of Stockholm. Above, the existing plan in 1993; below, the remodeling proposal by the interior designer Ingrid Lindén. The proposal shows the environment adapted to the needs of the department. The corridors have been widened to make room for extra work stations and storage. A library and cafeteria have been added to provide a social gathering point.

without remodeling¹¹. Schemes with offices of various sizes therefore tend to lead to more conflicts between an organization and its facilities than schemes with same-sized *uniform rooms* which are all interchangeable with one another.

Ingrid Lindén has shown how the floor plan of the Department of Social Work can be adapted to their unique needs. The offices have been made shallower, thereby widening the corridors, which then can be utilized for extra workspace and extra storage of materials shared by the whole department. The walls between the offices and corridors are replaced with glass partitions and the kind of sliding doors common in *combination offices*. This creates a degree of contact between the work stations in the offices and the broadened corridors, while limiting the acoustical

disturbance to offices. A combined coffee room and library is intended as a social gathering point. In addition, group rooms, conference rooms and lecture rooms are proposed.

Lindén also shows possible changes to the floors with seminar rooms (see figure 2). These rooms are redimensioned to fit the class sizes needed for teaching and to improve their proportions. Meeting places are created by widening the corridors, thus providing for informal social contact before, after, and on breaks during seminars and lectures.

Lindén proposes improvements to the Department of Statistics as well (see figure 3). Here, too, the offices have been made shallower and the corridors widened to provide extra work and storage space, and the walls between them exchanged for glass partitions and sliding

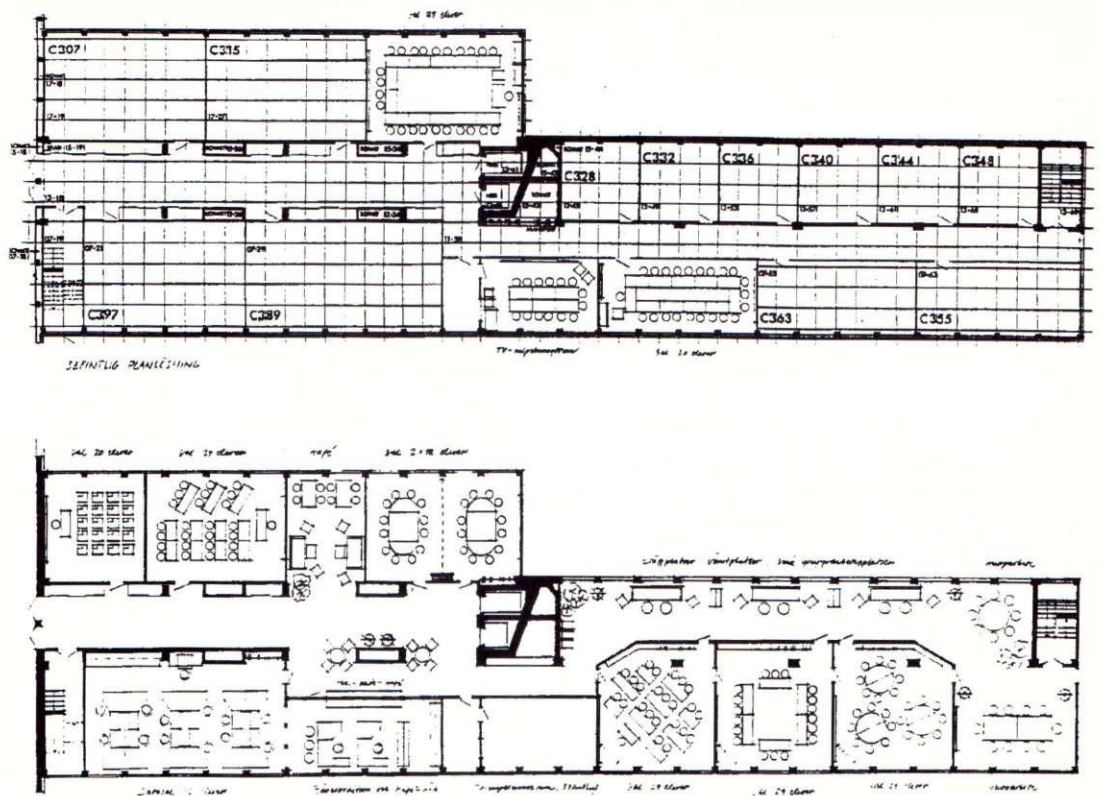


Figure 2. South Building, Level C3: part of the teaching facilities occupied by the Department of Social Work at the University of Stockholm. Above, the existing floor plan in 1993; below, Ingrid Lindén's remodeling proposal. The existing plan is noteworthy for its seminar rooms, with dimensions unsuited to the group sizes desired by teachers and impractical proportions and entrances, and for the lack of informal meeting space for students. The proposal shows how these problems might be solved.

doors. A proposed cafeteria with meeting places can become a new gathering point. The new library has study places and an open relationship to the corridor. A new computer room has been proposed adjacent to the department, as well as a study space for doctoral students.

These sketches demonstrate possibilities and limitations. It would be possible to divide the space in a way more conducive to department activities. The opportunities are greater in the thicker portion of the building. Achieving a well defined and coherent space for each department is more difficult due above all to the configuration of the vertical circulation cores. The proposed changes can be entirely accomplished by changes to activity-based components, without affecting the community- and building-based components.

Lindén's sketches were developed for applications to the Stockholm County Working Life Fund, and were intended to show the kinds of improvements that could be made to the work environment in the South Building. The applications called for work groups comprising teachers, researchers, other employees, and students to be formed in each department to plan in detail their own work environment. The projects were never realized due in part to the fact that the Working Life Fund could not fund design work.

The environment here bears the mark of its time. Expressions from that time include "cultural worker" and "student factory".
Research student

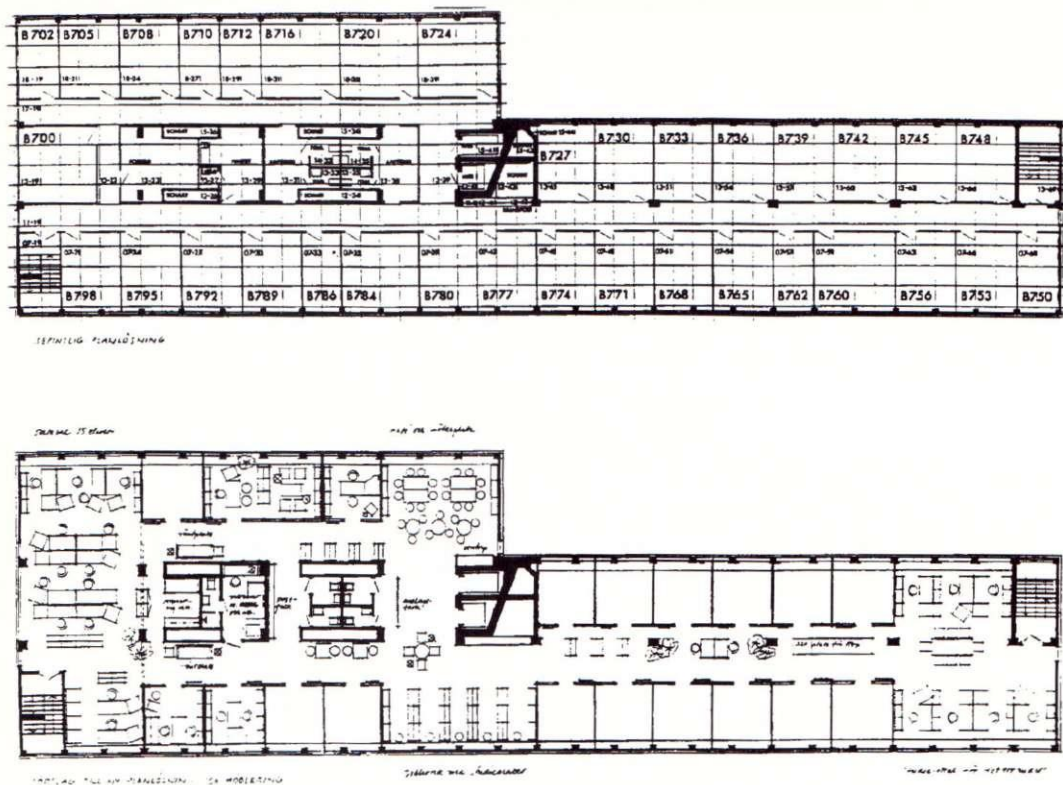


Figure 3. South Building, Level B7: area occupied by the Department of Statistics at the University of Stockholm. Above, the existing floor plan in 1993; below, a remodeling proposal by Ingrid Lindén. The proposal shows the environment adapted to the needs of the department. Additions include a computer room and study space for doctoral students, a library, and a cafeteria and meeting place.

Conclusions

From the evidence I have presented one can draw the conclusion that the work environment in these departments has major shortcomings. The problems are *physical* as well as *psychological*. The employees and students perceive the shortcomings in their environment and report on them. We find further deficiencies if we confront the working conditions here with applicable laws and standards, primarily *the Work Environment Act (AML)*, *the Higher Education Act (HL)*, and *the Act on Security of Employment (LAS)* and their accompanying prescriptions, agreements, and explanatory instructions (proposition texts). Let us begin with AML. Neither the classrooms nor the offices can be said to be adapted to human physical or psychological considerations. Poor

sight lines in the seminar rooms induce the risk of injury due to unnatural sitting positions and make it difficult to see the blackboards and projection screen. In addition, the rooms' poor acoustics cause difficulties in hearing and strained voices among seminar leaders. The ventilation of the lecture rooms and seminar rooms is inadequate. Shortage of office space, requiring several people to share the same room, makes undisturbed work impossible. The continuing specialization of work responsibilities separates teachers from researchers and denies these groups the variation, social contact, and collaboration in their work which are prescribed by law. Opportunities for personal and professional development are not being exploited either. Measures recommended by the *ordinance concerning monitoring of the work*

*environment*¹² such as the variation and broadening of responsibilities, intended to enrich occupational content, have seldom come to fruition.

HL's stipulations that university education shall rest on scientific grounds and that the business of the university should be conducted in such a way as to insure close ties between research and education are inadequately fulfilled. The uniformity of responsibility established by the *Reform of Teaching Posts in Higher Education* of 1986 has hardly encouraged the university to regroup its employees between tasks to coincide with changes in the distribution of funding and work load. The conditions of employment in the university are hardly standardized, the necessity of which the government emphasizes¹³. The university takes too little responsibility for the skills development of a large number of its employees. The importance of skills development is outlined, for example, in the government proposition on research of 1989–90 and in the *Agreement on Employment Security*¹⁴.

The legislation on the work environment and working conditions is often of a general nature. As a rule, it fails to stipulate sanctions for transgressions of the law. LAS is extremely difficult to enforce in universities. As a result, legislation cannot be relied upon as the sole instrument for achieving improvements in the environment and conditions for work in the universities. However, legislation can help indirectly by providing a standard of reference and a kind of endorsement of the improvements proposed, as indicated by Professor Gunnela Westlander during the Work Environment Day at the University of Stockholm in 1992. She asserted that

When one plans to request money and in general pursue issues related to development and environmental improvements, it's good to be able to point to legislative language which indicates that one is on the right track.¹⁵

The greatest mistake in the planning of the University of Stockholm's South Building was the attempt to dismantle the traditional departmental structure for the purpose, however potentially promising, of encouraging collaboration between teachers and researchers of different departments and with society outside of the university. The concrete physical consequence has been the absence of any clear spatial delineation of the various departments. There is an almost total lack of space shared by the whole department which would complement the individual work rooms. These individual rooms open directly onto *public* circulation space, often requiring their doors to remain closed and locked in order to diminish the risk of disturbance and theft.

A shared environment is essential if teachers and researchers are to develop a sense of camaraderie and departmental identity. Such camaraderie and group identity is likely a prerequisite for, rather than a hindrance to, meaningful collaboration between different departments. This view is now supported by the National government. *The Higher Education Commission*, established 1989, discusses in its report of 1992 *the expedient* and *the good department*. The commission considers "expedient" to mean convenient from an administrative point of view, recommending a certain minimum size. The "good" department is considered to be that in which people can come together in solidarity around somewhat homogeneous tasks, and the commission recommends to that end a maximum size. The Higher Education Commission does not exactly quantify the size of departments: this must be determined independently for each individual case. Concerning the balance between the expedient and the good department, the commission draws the following conclusion:

*For our part, we are completely convinced that in the final analysis the factors which favor the "good" department should weigh most heavily.*¹⁶

The commission notes the importance of the facilities in supporting the activities of the department:

Cohesive and well delineated premises are essential to the department's identity and accord. We also wish to assert that students of the core curriculum are entitled to work-space in the department. They should not be directed to separate educational buildings or library reading rooms inside or outside of the university for reasons of supposed increases in efficiency.¹⁷

The South Building was planned in the 1960s without user influence or studies of the activities to be housed therein. The poor adaptation of the building to its users is not, however, a consequence of the application of the structuralizing of the Board of Public Building and building box thinking. The sketches presented in this article demonstrate that, within the given structure of the buildings, it would be possible to achieve a relatively extensive adaptation of the environment to the departments' demands and needs solely through changes to the buildings' *activity-based* components. According to the rhetoric of the Board of Public Building from the time they advocated structuralizing, these activity-based components were intended to be changed every few years as required by changes in activities.

Throughout Sweden today, universities and colleges are building. In an article on the university and the city, Claes Caldenby points to important differences between the situation today and the conditions during the "record years" around 1970:

The Swedish model of uniformity is splintering into several variations of organization, property management, and location in the city. Meanwhile, architecture seems to have become increasingly important, even as a means of competition between colleges.

We can no longer speak of a *single* model for either the city- or the campus-based university. It has become more difficult to get a clear overview of what is happening; not even the local organization Akademiska Hus (Academic Buildings) can offer such an "atlas". The situation calls for local field studies rather than centralized field marshaling.¹⁸

The research method which seems to be most appropriate to improving the work environment in universities and colleges is case studies. These case studies should be directed to both universities and colleges as a whole and to individual departments. The departments are of course the smallest social units which make up universities and colleges. Only through studies of individual cases can researchers uncover the complexity and variety of contingencies and the unique conditions in each workplace. The primary result of case studies is knowledge that is tailored to local actors, thus stimulating action. I believe that it is important to involve local actors to give them an awareness of their own university's or department's unique conditions and needs. This awareness then can be the basis for a facilities planning program through Akademiska Hus or other property owners. Our universities and colleges are certainly worth such an investment—especially in light of the emphasis given nowadays to education and research in preparation for the *information society* we must inevitably become if we are to maintain our competitiveness and our standard of living.

Notes

1. The article is a reworking of a lecture given by the author at Chalmers University of Technology on 9 November, 1994, for those responsible for the work environment in the university.
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4. Quoted after Bedoire and Thullberg (1978).
5. *Flexibelt byggande*, 1970. (Byggnadsstyrelsen.) KBS rapport 64. Stockholm.
6. Eriksson, Olof, 1994, *Byggbeställare i brytningstid. Bostadssektorn och statligt byggande under miljonprogramsperioden*. (Byggnadsstyrelsen.) T20:1994. Stockholm.
7. *Flexibelt byggande* (1970).
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9. *Igitur* 2/1982. (Stockholms Universitets Studentkår.) Stockholm.
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