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Students' Experience of University Space: An Exploratory Study

Andrew M. Cox
Sheffield University

The last decade has seen a wave of new building across British universities, so that it would appear that despite the virtualization discourses around higher education, space still matters in learning. Yet studies of student experience of the physical space of the university are rather lacking. This paper explores the response of one group of students to learning spaces, including virtual ones, preferences for the location of independent study, and feelings about departmental buildings. It explores how factors such as the scale of higher education and management efficiency tend to produce rather depersonalized and regimented environments that in turn are likely to produce surface engagement. Responses of hospitality, criticality, and solidarity are briefly explored.

Introduction

At Easter 2007 the University of Sheffield opened the Information Commons (IC) building, providing 24/7 access to study space for 1350 students, 500 PCs and 100,000 textbooks (Lewis, 2010). It has been heavily used from the day it opened. Sheffield is seeing a number of other major building projects, and this mirrors university campus building across the country in the last decades. The wave of building on campuses is likely to make teachers think harder about university space and how it shapes learning. As yet we lack any in-depth studies of how students use and respond to places like the IC and how new ideas about spatial organization shape their engagement in learning. Furthermore, direct evaluations of new spaces may neglect the wider picture, such as indirect effects on satisfaction with existing space.

The aim of the study reported in this paper, therefore, was to explore student engagement in learning through investigating aspects of their experience of space. The paper reviews relevant literature, especially around the notion of the learning commons, but also previous thinking about the hidden curriculum and symbolic aspects of the campus layout. The choice of the method for researching the topic, using in-depth interviews with photos of learning spaces as prompts, is described. The findings explore student and staff experience of learning spaces, where, when and how students conduct independent study and how they respond to the buildings of an academic department itself. The analysis shows how institutional structures shape space and are also made visible when we begin to look closely at our everyday environment.

Literature Review

During the last two decades there has been a revival of theoretical interest in physical space and built environment in universities (Temple, 2007; Temple & Barnett , 2007). This interest has been tied to a wave of new building, especially of new learning centers and libraries, but itself driven by competition for students and a growing ideology of student-centered learning. This has occurred despite the powerful discourses around the virtual university.

At the same time, at an intellectual level, authors have been calling for a spatial turn in the social sciences. Usher suggests that in modernist thinking time and history are privileged over space (Usher, 2002, p. 41; Paechter, 2004), and this seems to be reflected in educational theory. For although metaphors of space are very powerful in educational discourse, until recently the nature of the relationship between space and learning has not been greatly studied or theorized. Echoing a call for a spatial turn in the social sciences generally, a number of authors have called for space to be more fully theorized in the study of education (McGregor, 2003; Edwards and Usher, 2003). Gulson and Symes (2007) reflect on the nature and risks of the movement of ideas between disciplines in the context of the nature of education as a discipline. But, without there being a well defined field examining spatial questions in education, they conclude by pointing to clusters of literature exploring spatiality about school architecture, policy on equality, curriculum, literacy and, critical pedagogy.

The work of Lefebevre (1991), Soja (1989), and Massey (2005), in particular, are becoming increasingly influential in such work. Here space in education ceases to be seen as pre-given, as a bounded, discrete entity, or a backdrop for action, but rather is recognized as itself the outcome of an ongoing, contested, productive process, in which social and material factors, and local and global forces operate. A constructed space recursively molds social practice. The forces shaping the local in such processes include much wider social relations and networks than have previously been acknowledged. "Knowledge, power, space/place closely intertwine to frame our social practices,"

Wilson and Cervero (2003, p. 124) suggest. The relatively enduring patterns in spatiality, rather than reflecting necessary conditions or being essential or innocent, are to be seen as reflecting a pattern created by power relations (McGregor, 2004) yet they are constantly remade and potentially capable, therefore, of being reframed. The approach also recognizes that there are multiple experiences and narratives of any space (Thomson, 2007).

The 1990s and 2000s saw an increasing investment in campus infrastructure and much exciting experimentation with new learning space design. A report for Scottish Funding Council (Marmot Associates, 2006) proposes a context for changing thinking about learning space. The 1990s saw a significant shift in thinking towards student-centered notions, it argues. This may have been driven by shifts in the demand from the economy, from a focus on factual knowledge and certain skills, to "critical thought, clarity of expression and complex decision making" (Marmot Associates, 2006, p. 20). We might also think that it reflected competition for students and diversification of the student population. Lecture based teaching methods have become unfashionable, while the report suggests significant evidence for the importance of learning through reflection, doing, and conversation (Marmot Associates, 2006). This implies more complex learning space provision, a move away from reliance on lecture theatres and towards use of a range of learning spaces to accommodate different learning styles or activities.

In thinking about the requirements of active learning, Chism (2006) proposes that learning space needs flexibility, comfort, sensory stimulation, technology support, and decenteredness. She sees a key driver to be changing student expectations and study patterns. From this perspective existing infrastructure is likely to seem outdated. In their recent study of one university campus, Jessop and Smith (2007, 2008) point to the way that classroom layouts affirm a teacher centric, transmissive micro-design, lacking a true student focus or the flexibility to support a flow of activities from "listening to collaborating to writing or working independently" (2008, p. 5). On sheer practical grounds the itinerant lecturer in his or her short teaching sessions simply does not have time to change the micro-design of rooms for a single session.

Much discussion about how learning space design should be changed has been developed around the notions of the Information Commons and the Learning Commons. Historically, the aim of the book-centered library, the paradigm increasingly dominant in the twentieth century (Bennett, 2009), was to amass and organize a huge collection of printed books and journals. The *virtual library* concept implied having a purely electronic collection, leaving little role for library buildings. Even the later *hybrid library* concept (Rusbridge, 1999) was likely to be realized as a building filled with serried ranks of computers. Some commentators continued to argue that digitization had its limits and the library had a role as a place (Crawford, 1999) and now, partly because of technical change, such as computer network wireless access, the ranks of computers can be allowed to fade more into the background. New thinking about library space re-imagines it as a place for collaborative learning, a social and meeting space, a type of "third place" (Harris, 2003), the center of a community.

It was during the late 1990s that a concept of the information commons emerged in the USA (Spencer, 2006; MacWhinnie, 2003). This was a period of substantial investment in new building. Although actual building patterns from 1995 to 2002 in the USA were often driven by quite traditional thinking (the need to house growing print collections was a key driver) (Bennett 2003), a radical reconceptualization of the library space emerged. The new information commons are often centrally-located campus showpieces, especially for the implementation of the most advanced technology. In the UK the prototype is the Saltire Centre at Glasgow Caledonian University, opened in 2006 (Watson, 2007). Its key features are: "[a] spectrum of spaces" (Watson, 2007, p. 257) for group work as well as quiet areas for reading; multiple services within the library, with books but also computers and merging of support services; plus student services, close or within the library, as well as social spaces and coffee shops. Flexibility of design for future reuse is also prominent in thinking. The Saltire Centre is a large dramatic building and a hub of activity.

These types of space are "wildly popular" with students (Spencer, 2006, p. 242). Yet they have not been without their critics. Jamieson (2009), while welcoming the changes, notes the ultimate risks of concentrating too many functions for too many people in one place, as well as the potential impact on other parts of campus. He also notes the irony of extending organization to informal learning in a context of also talking about students needing to take control over their own learning. Although they report considerable satisfaction, even excitement with new learning spaces, Spicer and Hancock (2008) also have a residual skepticism about the new library building, a view shared by some of the social actors they studied. They see these redesigns as a deliberate remolding of the visual aesthetics of the library to reference the imagery and use of space in business, and as having continuity with adjustments of the public sector to free market ideology. The specific motifs of this rebuilding/rebranding are blurring of spatial use and boundary crossing and fantasy. These combine to

undermine the old library space and make it into a space of consumption.

Such questions are developed furthest by Bennett (2005, 2006, 2009). He argues for a step beyond the Information Commons to the Learning Commons. One issue with the IC is librarians continued thinking in terms of a service to support information seeking and consumption, rather than learning; a focus on providing services instead of "one that encourages students to devote more time to study" (2005, Increasing Time on Task section, para. 12). Fuller understanding the needs of learning implies going beyond library concepts of information literacy. Bennett asserts the following needs:

- Supporting a distinction between studying and socializing that does not deny the social dimension of study
- Favoring learning functions in the space's mix of academic and social functions
- Providing choices of place, ranging from personal seclusion to group study, that variously reinforce the discipline needed for study
- Permitting territorial claims for study that enable students to govern the social dimension of their study space
- Fostering a sense of community among students. (2005, Increasing Time on Task section, para. 11)

Thus, Bennett recognizes the problem students have of distraction and the social character of learning becoming merely a diversion into socializing. He suggests that there is a need to let students own space, to use it in different ways at different times, to work in a context where they know others and feel safe such that social aspects of learning can take place. He refers to this as the "domestication" of public spaces of libraries. In fact, he is rather close to defining "transitional spaces," Winnicott's term for a safe place where the learner feels secure enough to take the psychological risks necessary for learning and where the emotions around learning can be contained (Sagan, 2008). Sagan found learners wanted "a local, safe place in which they felt ownership over the course . . . and they wanted consistency; of teacher, time, place and pedagogical approach." For Sagan, "space and emotion are inextricably linked in learning" (2008, p. 175); creating such safe places is a key to providing the conditions for learning.

Of course, there may be some theoretical and practical obstacles to achieving this vision. First, Bennett's account of learning does seem to privilege one approach, active learning, seeming to deny that learning can ever effectively occur through a transmissive process. The claim that knowledge is a social construction seems to be construed to mean that learning requires direct social interaction. Certainly the resource implications of pursuing the "domestication" of space would appear to be challenging.

If, as this suggests, the IC cannot fully answer the spatial needs to support learning at Sheffield, we need to ask about the other places where students study. As a topic in the literature this seems to have been relatively neglected (Temple, 2007), even though, as Sagan (2008) observes, talk about learning in Higher Education is pervaded with spatial metaphor (e.g., the very term "student-centered"). Cambridge University's learning landscape project is a notable exception in exploring where students study and with whom and how IT fits into this. The study found students continued to work primarily in their own rooms and colleges, though social learning space was also valued. ICTs played an important role in coordinating work and communicating with peers. Such suggestive findings point to a need for more studies that look holistically at students' experiences of space when learning (Howell, 2008).

Indeed, the discussion so far has been on learning space as such, and not the campus as a whole, yet this itself shapes learning. One theme that Jessop and Smith's (2007, 2008) study of University of Winchester teaching spaces identifies is the symbolic hierarchy in the campus layout, with the "heart" of the university occupied by the most prestigious departments and administration. Thus, where a space is and its proximity to other buildings signifies status. In organizations generally, space is symbolic of status, so that the amount of space given to an individual, the quality and order of furnishings (very regular ordering indicates control), its maintenance and the degree of control over the air/light/sound environment are all indicators of status (Baldry, 1999). Thus, the ordering of space may itself reproduce specific power relations or categories, most obviously in the symbolic priority given to certain types of space.

Further, the notion of the hidden curriculum may have some bearing on how space influences learning. Above the facts and knowledge more obviously imparted to learners, much of what is learned in school are disciplines, habits, and implicit values conveyed through rules about behavior, role models, and the design of physical space. Thus, Costello (2000) sees the opulent buildings of a law school, donation plaques, art works, and lecture theatre layouts socializing students to "adopt role expectations of power and authority, wealth, comfort and an appreciation of upper class culture" (p. 58). The faded grandeur of a school of welfare, in contrast, with its more personal decoration, student work displays, and

seminar rooms laid out so students face each other in circles sends alternative messages of "limited resources and class aspirations, and about the values of empathy, modesty, tolerance, public service and communal responsibility" (2000, p. 58-59). Because these things are partly imparted through, and apparent in, the built environment of learning spaces, one could say that the hidden curriculum is visible (Prosser, 2007) or "hidden in plain sight" (Costello, 2000, p. 59).

Research Questions

Thus the literature as yet tells us relatively little about how students experience new learning spaces like the IC, and about what the impact has been on their places of study. More immediate evaluative studies of specific new buildings are likely to neglect the wider picture in terms of re-evaluation of existing space or the hidden curriculum in campus design more generally. The study reported here endeavored to make a small contribution to filling these gaps by pursuing the following three research questions:

1. How do undergraduate students (UGs) and staff of one particular department experience university provided teaching spaces?
2. When and where do students prefer to conduct independent study?
3. How do students and staff experience the physical environment of the department, and how does this shape their relations with staff?

Methodology

The study was conducted at the author's own department in a research strong (Russell Group) university in northern England. The Information School is recognized as one of the UK's leading Departments of Information and Library Science; for example, it has been ranked first in every one of the Research Assessment Exercises. It has around 400 undergraduate, postgraduate, and research students. The project was a small-scale exploratory study and the primary data source consisted of six in-depth semi-structured interviews conducted with third-year (finalists) UGs on the BSc in Information Management. Three interviewees were students in the cohort that finished in 2009, and three with the cohort that finished in 2010. Each cohort is small with 25-30 students in it. Three interviewees were female. Finalists were chosen partly because aspects of their understanding of their subject explored in the individual interviews were most relevant to finalists. It is acknowledged that final year UGs have a particular viewpoint and that their perspectives would not represent those of all other level students or postgraduates. Two interviews were also conducted with staff members. All the interviews lasted between 40 and 80 minutes. Data collected about the researcher's own experience of space included notes on memories and feelings about different teaching spaces and the building. Some material was also generated in an interview conducted by a colleague as part of a joint study of teachers' views of space (author co-authored paper).

Both the student and staff interviews employed visual methods, namely using photos as a tool for eliciting opinion and memories. The research questions revolved around everyday experience of space and emotional and aesthetic responses to it. Yet getting participants to articulate aesthetic and symbolic experiences of organizational space is hard (Jones, 1996; Taylor, 2002; Halford, 2004). Taylor identifies the cause of such "aesthetic muteness" in the way that talking about feeling is a less legitimate discourse in many organizations because it is subjective; it undermines instrumental cultures because it "complexifies and distracts" (Taylor, 2002, p. 835) and detracts from subjects' attempts to represent themselves as the "powerful and effective manager." This may be less true in academia, where the emotionality of learning is partly recognized. However, much of the talk of learning as a purely cognitive process of transmitting and absorbing information will again limit the extent to which the fullness of experience can be easily explored.

Visual methods were considered to be a promising approach to overcome such barriers since images tend to have a strong symbolic or connotative element and open to many interpretations, excite discussion and exploration. An interest in the multiplicity of everyday experiences of educational space has led a number of researchers to adopt participative visual methods of research (McGregor, 2003, 2004; Loxley, 2009; Mannion, 2003). The use of imagery could take the form of asking respondents to make drawings (Jones, 1996), take photos of favorite or significant objects (Tian & Belk, 2005), or take images that express their feelings about their work environments (Warren, 2002). Montgomery (2008) asks respondents to reflect on teaching practices by looking at schematics of possible room layouts. One problem with drawing or complex representational tasks is that it requires a degree of skill. Thus the simplest approach is to use images produced either by the researcher or the interviewees to elicit comments or stories in interviews, through captioning or discussion. The approach taken here was to use researcher-created color photos, and it involved the use a dozen 6" by 4" prints as an elicitation tool within an in-depth semi-structured interview in which interviewees were also asked about preferred learning spaces and study practices. Clearly the particular

photos chosen for the interviews constructed the spaces in particular ways. One staff interviewee commented on how well the photos used in the study captured the spaces; no one explicitly said they were misleading. However, it is hard to disentangle how far interviewees' responses were to the picture offered or to the room itself. They did elicit specific memories of those spaces, but the pictures could also be seen as representations of types of space, as in Montgomery (2008).

The analysis was thematic, using coding and rereading to identify themes emerging from the data (Braun & Clarke, 2006). The study sought to investigate the experience of social actors and how these are shaped by social structures. There was a concern to explore emic perspectives: students' experiences understood through their own words. It is recognized after Geertz, that understanding of social life is inevitably indirect, "our constructions of other people's constructions" (1973, p. 9), yet that language and interaction is adequate to build some reasonably trustworthy account. It is also recognized that the interview is a co-creation between the interviewer and interviewee, but without saying that the data collected is only about the interview process. Reflexively we have to locate ourselves in the research. Indeed, according to Hammersley and Atkinson (2007) we should be "systematically exploiting" (p. 18) our participation in the social world we are studying to enrich our accounts of it. Here the researcher's own intimate knowledge of the spaces being talked about and his reactions to what students and colleagues told him was an important source of insight. Equally as interviewing is itself a form of engagement, he learned a lot about relational aspects of student engagement by examining the interview itself and by looking at his own participation in it. All the interviewees were known to the interviewer. While this is again a limitation on the potential validity of the findings, the approach saw the pre-existing relationship between the interviewee and interviewer as a strength in terms of increasing understanding and honesty. The inclusion of the researcher in the study does not qualify the attempt to understand actors' own viewpoints for themselves; indeed, by being explicit about the researcher's place in the research, such subjectivity can be limited.

Although there was a central concern to discover the views of actors, this cannot be the end-point of analysis, since there is a moral imperative to explore the shaping of actors' experience by social structures, which may be outside their own awareness in order to inform action. So broadly the research could be positioned as critical interpretivist.

The research observed the guidelines of the British Educational Research Association (BERA, 2004) and was cleared under The University of Sheffield ethics review process. The ethics review process provided external validation of the application of procedures for gaining voluntary informed consent through explaining the research to potential participants verbally and in a written information sheet, anonymization of interviewees, as well as legal compliance to the Data Protection Act. As well as producing practical recommendations to the department concerned, the interviews were inherently useful. Sagan (2008) sees her own collection of learning biographies for research as an active, essential part of the learners' learning process itself. Similarly, this research was a positive act of engagement, enhancing rapport between the researcher and the students concerned, as well as being justified as research because of the theoretical and practical value of the findings.

Results: Teaching Space

Five of the thirteen photos shown to interviewees were of teaching spaces- including lecture theatres, labs and a redesigned "collaboratory" which had laptops at clustered tables- and that they might have remembered using in their first year. All names included are pseudonyms. Grant and Harold are the names given to the lecturer interviewees.

Broadly, the response to these photos was what would be expected in terms of a preference for the "interactive" (Dawn, Fiona), "specialized" (Ellen), "spacious" (Fiona), and technology rich environment seen in a collaborator in the IS, over a "stereotypical . . . utilitarian" (Charles), "traditional" (Fiona), even "old-fashioned" (Ellen) lecture theater. There was some acknowledgement that the computers could be a distraction. Staff were more skeptical and felt that rich technologies were not often used effectively. The space was actually difficult to reorganize, because of the need to secure laptops. Furthermore, because there were many screens, "students don't know where to look" (Grant). So, there were more tensions between Chism's (2006) principles than is immediately apparent. The notion of decentering is particularly problematic.

Despite their preference for the collaboratory, most of the student interviewees were quite accepting of the value of the lecture theatre when fit for purpose. Only one took the preference for the collaboratory further to be strongly critical of more lecture-orientated spaces.

> It's very rigid. Very static . . . Everyone is focussed and guided in their attention. Obviously there's going to be somebody standing at the front there, talking. . . . The way it's organized, it's just very static. It's not like we are all facing in a big circle. It doesn't show we are going to have a discussion, it shows very much that someone is going to be lecturing at us. And we've to sit quietly and take notes.

But this extension of criticism was unusual. Looking at the lecture theatre layouts interviewees tended to focus on the importance of simple comfort, of being able to see and hear. So complaints about one room were around its tendency to get hot, but too noisy if the windows were opened to cool it down. The space was cramped:

> I don't like the fact it hasn't got proper desks. It's just got the pull out table on the arm of the chair. I'm not a big fan of that because you haven't got space to spread out, like I mentioned earlier, so it's pretty much you've got the paper you're writing on and your pen in your hand and that's it. No space for pencil case, no space for a bottle of water. (Dawn)

The inability to have room to "spread out" was a recurrent theme in Dawn's interview. Another interviewee pointed to the difficulty of finding space for one's bag and coat, suggesting a sense of never really being able to occupy a space.

Implicit acceptance of transmissive modes of learning was also indicated by feelings about the virtual learning environment (at Sheffield called "MOLE"). Whereas lecturers saw it as over-complicated and difficult to allow students to add content, students often liked it:

> Everyone uses MOLE. MOLE is the university. This is what you are paying your 3000 pounds for. This homepage here. It's got everything you need on it. (Bob)

> Everything you need is there (Adrian)

> I love MOLE . . . now that I've learned to use it properly in my final year, I think its brilliant. (Fiona)

Thus, students liked the idea of the social interactive spaces, but they were mostly rather accepting of lecture type delivery too.

One interviewee complained about the repetitive character of color scheme in rooms and the sense of their looking very much like all the places he had been taught in. "Same as any room I've learned in throughout my life. White walls. Rows of chairs. Desk at the front." (Charles)

There is the sense that all the spaces were rather similar because of institutional branding and ironically because of attempts to standardize equipment. One of the teachers had experience of school teaching and mourned the loss of the ability to shape a classroom into different areas and celebrate student work in displays. Customization or domestication in efficiently managed space is hard to achieve. But in the interview he also reflected on not customizing things where it was possible, e.g., in handbook design or on the VLE. There is a tendency of things to become standardized and regimented.

Independent Study

Another focus in the interview was where students conducted independent study and where they most liked to work, be that at home, in the library or a lab, or elsewhere. It was evident from these discussions that students work in less than ideal conditions. Students who still lived with their parents had better spaces. Student housing is often cramped, noisy, and poorly equipped, e.g., without a big desk. But the number of distractions where one lived was the main problem, students said. Even those who could concentrate in their rooms suffered from constraints of noise from neighbors or the wider environment. Ellen had to stop working when the local pubs and bars started opening because of the noise. Fiona felt she could only work away from home, yet fears about walking home after dark constrained the time she spent studying, even though the IC was open after 5:30. Such constraints forced students to be quite mobile, which also seemed to be linked to a lack of temporal routine. Time management for Bob revolved around putting himself in a position where it was more inconvenient to go and eat and risk getting diverted than to work. Students' mobility is associated with lack of routine and distraction.

All the students said that they always had a computer when they were studying. Ellen talked about "switching off" to mean finishing work for the day. This is could be particular to these students' subject of study, but is perhaps not untypical of students as a whole (Howell, 2008). Yet these students did not bring their laptops to campus because they were too heavy. This was an important factor shaping where they could study.

The IC was a recurrent reference point for the interviewees: an admired building, but it was not a popular place to study for these third-year students. In essence, this was because it was hard to find a computer and the "busyness" and chances of bumping into friends were too distracting:

> I don't know what people did before the IC was here. Where did everyone go? (Adrian)

> The building is brilliant, looks good. A proper Hi-tech library. . . . Everyone loves going to the IC. It's a social environment. It's like going out clubbing . . . you see everyone that you know there. It's like a huge cafeteria. Eating, relaxing, working, chatting. (Bob)

> If you sat and closed your eyes 'its just chatter.' (Bob)

During the day:

> The IC is a common room. It's a massive 26 million pound common room. And it's full of thousands of computers used for Facebook and BBC news and sports. . . . A conversation is 2 minutes away from you wherever you are. (Bob)

He concluded that 10 p.m.- 2 a.m. was when to work in the IC.

So, students sought out other library spaces, labs which were quiet at certain times (or at least where one was unlikely to bump into someone one knew), and above all the two computer labs in the department itself. Entering the department building, students turned naturally out of the lifts[elevators] towards the labs, it "seems like our area" (Charles). "Because there is not really a common room, so that's where people go" (Charles). Thus, one of the favored spaces for study on campus was in the department itself.

The Department

The final area of investigation was indeed the whole building and offices of the department. Students expressed strong identity with the department because it was small and because staff were friendly and helpful. Nevertheless, students complained about the entrance area of the department:

> Drab and uninteresting. The same sort of faded grey on the walls and carpet. Not a very exciting environment. (Adrian)

Charles associated it with waiting:

> Waiting for the lift, waiting in reception, waiting for a lecturer. There is nothing to do. Enclosed whitey/greyed colors.

Yet they did look and enjoy the research posters dotted around the Department, indeed complaining that they were not changed often enough.

But it was a photo of a corridor that produced some of the most interesting reactions. Although the corridor is merely a row of staff offices, there were genuine doubts in some students' minds about whether they were allowed there:

> You'd open the door and you'd be like: should I be down here? Because it's so quiet. And . . . I don't know. I can't really explain why. You just felt like you were trespassing in somewhere you shouldn't have been. To some extent I still walk down here slightly frightened to breathe 'cause you've got all the staff offices and you know that people are working inside and (whispering) you don't want to make too much noise. (Dawn)

For Dawn it felt like she was trespassing where important work was being done, and she worried about disturbing the occupants of the rooms. "It reminds me almost of an empty hospital or something because it's so quiet. No doors are opening, there's nothing anywhere, there's no posters, no nothing. Yet it does look a bit dark" (Fiona). Ellen liked walking down the corridor to playing the computer game Doom, where monsters might jump out of the doors. "It looks like a maze. It looks like the long walk before you go off the plank" (Ellen). So, it was threatening, and although the whole department is only two floors in a small building, it produced the effect of feeling confusing like a maze. Thus, entering into the department in one direction the students felt at home, while a few yards away they felt like trespassers. There was a sense of withdrawal and distance. The layout was confusing, even frightening.

The effect was inadvertent, due to closing fire doors and perhaps also students' security concerns; the building has no controlled access, and security is simply achieved by the sense of privacy. The sense of withdrawal, even absence, also reflects the realities of pressures on academics to do research. The largely unintended—and for staff probably unnoticed—effect of these simple physical arrangements is a sense of distance.

Discussion

In reflecting on the findings about the first research question for this study, which related to experiences of teaching spaces, students like the newly designed, technology rich environments. Yet problems in terms of distractions were still acknowledged, and for the teacher interviewees there were doubts about how well the technology was used, especially about the decentering of attention and inflexibility. Providing computers securely rendered the room rather inflexible. Thus thinking through Chism's (2006) list of spatial design principles for active learning reveals the contradictions between the different characteristics. The university provides a variety of types of learning space in terms of scale and layout, but they are not in themselves greatly flexible, as Jessop and Smith (2007, 2008) observe. The timetabling system and simplicity suggest using one or two rooms for an entire module, but that means that too often the teacher will find himself or herself fighting the room design to deliver teaching in particular ways.

Further, Chism's (2006) claim that a key driver for the changed use of space is change in student learning preferences did not seem to be supported here. Rather, students were relatively accepting of transmissive modes of learning. Significantly, the basic comfort, audibility, and visibility in rooms became critical in evaluating space in this context. Acceptance of transmissive modes of learning was particularly evident in the positive view taken of the VLE. Some interviewees felt all the spaces looked the same, and certainly we seem to be a long way from being able to provide "domesticated" space in this context.

As the researcher in this study, and also an active participant in teaching in the department, I was quite surprised by lack of strength of criticism of lecture type spaces. Perhaps I should not have been; inevitably in mass institutions students are socialized into the lecture as a way of learning. While not ideal, they can be effective. They suit some students' learning styles. Yet it did make me reconsider my own practice. Without diminishing my commitment to bring active, social learning into the classroom, it convinced me also of the need to attend to basic comfort, especially in terms of students having space for their things. Of course this is basic good practice, but I do think these issues tend to get masked by a focus on active learning. Further, the research strengthened my sense of the tendency of everything to get standardized in the name of efficiency and consistency. We need to struggle against this almost inadvertent regimentation, which is likely itself to help produce the surface or strategic learner.

Turning to choice of independent study space (the second research question), the impression is of how far student conditions of study fall short of the ideal as defined by Bennett or Sagan, at least for those who do not still live with their parents. The IC is an incredibly powerful symbolic statement in placing a large area of student space at the heart of the university campus. Collectively the students have a sense of owning the IC. In reality, individually, they do not own space there. The IC works as a spectacle of a student centric institution. It revalues all other space relatively, by being a benchmark in terms of high quality, purpose built spaces for students. It certainly relieves pressure on other spaces. But the competition for resources within it is intense. Its "busyness" is a distraction. These students did not use the IC, but rather sought out other quieter spaces where competition for space and computers was less. This included seemingly obscure labs, other library spaces (at certain times) and the department itself.

These findings convinced me that thinking more about where students study is an important part of reflective practice as a teacher. Of course, readers of this paper, as well as myself, were students once and the picture is perhaps not very different from what we experienced. But we can easily lose touch with such experiences, another effect of the distance between the teacher and the immediate experience of learning in a mass system. It had not been visible before to me that students liked to work in our own labs, even though my own office is just down the corridor.

As regards responses to the departmental building and offices themselves (research question three), students felt a strong identity with a small and friendly department. Yet the feelings of confusion, distance, and even fear generated by the corridor photograph reveal another layer of affect. The impression of distance seems to arise partly as an inadvertent by-product of health and safety concerns, as well as security concerns. Entirely necessary security measures have a pervasive impact on campus on student engagement by creating barriers. I do not think, as staff, we do enough to counteract these effects because we ourselves barely notice them. We may contribute to this distance via our efforts to put relevant information into web sites and VLE, reliance on email to communicate and most recently electronic submission of course work. Creeping virtualization in the name of efficient service reduces direct contact. The sense of distance is also about a withdrawal of staff from engagement, created by the pressure to do research and our loyalties to academic tribes beyond the institution. Our own qualified engagement in the institution is reflected in qualified student engagement. Our own needs for privacy, quiet, for our own learning, for our own transitional space, creates a necessary exclusion. Further, sheer student numbers, the complexification of the student body through internationalization and greater social inclusion, and the fragmentation of teaching through modularization all contribute to a distance, further reproduced as lack of student engagement.

Relistening to the interviews to what I myself had said and thinking how I felt during them, I was struck by a degree of emotional distance. In retrospect I seem unnecessarily doubtful of asking about the affective or imaginative response to the photos. My questioning too, at times, showed signs of a concern about invading their privacy. I think it is reasonable to interpret this reserve as produced by institutional discourses which continuously construe learning as capable of rationalized, large-scale solutions. Affect is acknowledged at end-of-module evaluation or as personal problems to be referred to professionalized counseling services (Sagan, 2008). These responses themselves tell us much about the withdrawal from personal engagement which a mass, pressurized system tend to produce.

Conclusion

The students interviewed for this paper were keen on their subject, and they liked the small friendly department. As third years they were engaged in studying quite intensely. Yet the investigation revealed much visible in the spatial environment that limits student engagement, features themselves reflecting wider structures. I suggest the same processes are at work in many departments in many institutions. Part of the power of the IC building is for us to see this more clearly. Change defamiliarizes the everyday experiences of space (Halford, 2004).

Improving teaching space is partly about providing more flexible, more technology-rich spaces. But in the context of partial acceptance of transmissive modes of teaching, there is a need to pay attention to basic comfort and to think about how to allow students to spread out and own space. Where students live is often poor for sustained independent study. The Information Commons is an acclaimed solution, not just architecturally, but by users. But there is a risk of seeing the IC as the whole answer. Individual groups of students, such as the finalists studied here, had very specific needs that were not always well met by IC. We need to explore more deeply differing needs and expectations (e.g., among international students). We need ongoing engagement with students about space; such discussions can open our eyes to how familiar spaces order the way students and staff relate, often in unwanted ways.

In reflecting on the spaces we use daily, Mann (2001) offers various theoretical resources for understanding student alienation and also strategies to address the issue. From this study of space, it is clear that strategic or surface learning seems to be partly a product of a mass system in which space is managed efficiently, at a cost in terms of flexibility, customization, "domestication" and, at times, even comfort. Even where sheer class size is not the issue, managerial efficiency, health and safety concerns, and security, continuing patterns of transmissive teaching, the time saving appearance of technologization, and pressures of competing staff priorities tend to produce a somewhat regimented, depersonalized environment. In this context students see themselves as outsiders (Mann, 2001). It may also be that because it is difficult to provide the spatial and other conditions for creativity, this produces a sense of alienation, too (Mann, 2001). Acknowledging these forces opens up many possibilities for fighting against the insidious effect of the structures. Simple personalization of learning materials, friendlier, hospitable signage and discourse, actively problematizing the effects of space during teaching, and the active creation of safe spaces are all available as strategies when the issues are made visible to us. As questions about membership of the organization are a common issue for staff and students, solidarity is another strategy (Mann, 2000). Practitioner research, such as that described here, as itself an act of engagement, is a contribution to such solidarity.

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DR. ANDREW M. COX is a lecturer at the Information School, University of Sheffield.