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The open-plan academy: space, control and the undermining of professional identity

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Abstract
The introduction of open-plan (OP) academic offices is critically examined through interviews undertaken in Scotland and Australia. The development is discussed in the context of the increased managerialism in higher education. The conclusion is that, despite a rhetoric of synergy, the dominant rationale for OP is one of cost reduction and that the experience for many academics is proving detrimental to both scholarship and professional identity.

Keywords
office design, open plan, universities

Space and the labour process – a resume

The physical workplace – the office, the factory, the hospital – is built to house and facilitate a given labour process and should be viewed as a mechanism for social control (Baldry, 1999). However, the relationship between the built workspace and the daily experience of work is a complex process of interaction between the social relations of the organization (such as internal hierarchy), the nature of the work and whether the built environment supports or obstructs this (Baldry et al., 1997), and the symbolic messages given out by the way work space is configured and presented to occupants (Eco, 1980).

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Central to this, and reflecting the above, is the degree of control that occupants have over their working environment: the extent to which they can maintain visual and auditory privacy, personally satisfactory levels of heating, lighting and air quality, and their ability to configure the proximate environment (desks, chairs, cupboards) to suit the way they work (Vischer, 1989). Such degrees of environmental control have the added function of both sustaining and conveying social and personal identity within an otherwise bureaucratic anonymity. Any reduction by management of occupant control has, historically, accompanied an intensification of particular labour processes and has had the congruent effect of reducing collective identities for the groups of workers affected (Baldry, 1999).

The increasing promotion of open-plan (OP) academic offices in universities, and the organizational and economic context for this, should therefore be of critical interest to all academics. Such developments clearly challenge the tradition of personal offices in universities and their role in contributing to and sustaining professional identities.

This article is the result of small-scale unfunded research to investigate the experience of, and responses to, OP university offices in the UK and Australia. It uses interview and observational data from occupants of both traditional and OP offices to ascertain the role that academic workspace plays in concepts of professionalism and occupational identity. It will argue that it is significant that the promotion of OP coincides with an increased managerialism in university governance and the squeezing of the remaining vestiges of collegiality.

Academic offices – room for improvement?

In both Australia and the UK declining government funding for higher education (HE) has placed pressure on universities to reduce costs and boost revenue (Bryson, 2004; Winefield et al., 2003). Academic labour has been cheapened by an increasing casualization through the use of fixed-term contracts, postgraduates and part-time tutorial assistants (Parker and Jary, 1995). Declining funding has reduced job security and increased staff-student ratios and led to an unwillingness to offer less popular courses. These changes have adversely impacted not only workloads but also threaten to 'undermine the quality of education and research' (Kniest, 2010). Secondly, a 'commodity discourse' (Willmott, 1994) has pervaded the sector, which, for example, refers to students as 'customers'; this contributes to a commodification of the academic labour process in which teaching and research are now treated as a business that has to be sustainable through the recovery of its full costs.

While financial efficiency is a laudable aspiration, the market model chosen to pursue this is having a direct effect on the work experiences of academics. The weakening of professional control structures and their replacement by externally derived performance indicators results in an intensified academic labour process (Kolsaker, 2008; Parker and Jary, 1995), The consequences are evidenced in the figures for extension of working time in the education sector and in the regular stress surveys undertaken by academic unions in both the UK and Australia, which continue to indicate high levels of occupational stress. The lack of time for research, excessive workloads, lack of research resources and poor work-life balance are the four highest scoring reported contributory factors (Court and Kinman, 2008; Winefield et al., 2003).

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These stresses are the manifestation of a growing strain between the demands of the new managerialism and the motivation and commitment deriving from academics' shared professional values. The nature of academic work has not lent itself readily to conventional performance management: despite organizational clustering in departments, disciplines and faculties, academics often do much of their work alone, delivering their own courses and pursuing their own research. Where they do work with others, it is often with colleagues in other institutions. They seek approval and recognition from their peers rather than their own senior management and rarely work regular contractual hours, with significant amounts of work being done at home or at a variety of research locations.

The clash between enhanced cost-consciousness and the unique nature of academic work is nowhere more starkly revealed than in the proposals for alternative configurations of workspace. Estimates suggest that space provision currently absorbs between 10 and 20 per cent of a university's total expenditure (AAPPA, n.d.: 2; Pinder et al., 2009) and in 2005 the UK National Audit Office specifically highlighted reducing estate costs in its advice to university management (NAO, 2005; cited in SMG, 2006a). Whereas most of the ensuing discussion has focused on learning spaces and new ways of learning (Harrison and Cairns, 2008), such general-purpose teaching space makes up only 12–15 per cent of the non-residential estate (AAPPA, n.d.: 5; SMG, 2006b: 5). Much greater savings are possible by re-evaluating the approximately 50 per cent of the non-residential estate given over to academic and research space.

From a facilities management perspective it could seem that the workspace traditionally allocated to academics, the single-occupancy cellular office, and the conventional way in which such offices are laid out, the 'corridor office' (see Figures 1 and 2, below), when combined, result in low occupant space densities and chronic underutilization, with academics on average occupying their workspaces for only 30–40 per cent of the working day (Pinder et al., 2009).

In 2003 the UK HE Funding Councils set up the UK Higher Education Space Management Group (SMG) to help HE institutions identify and implement best practice in space management; in Scotland a series of reports on space effectiveness were commissioned by a partnership between the Scottish Funding Council (SFC), the University of Strathclyde and space planners DEGW (SFC and University of Strathclyde, 2008). In its summary report, amid much talk of flexibility and knowledge sharing, the SMG identifies as one of the keys to space efficiency the provision of 'versatile office and research space, with appropriate open plan areas, supplemented by meeting and quiet spaces' (SMG, 2006b: 10). An examination of the SFC's reports reveals a vision in which education and research are not only open plan but almost totally IT-driven. The reports' case study illustrations display a book-free (indeed, a paper-free) world in which everything is presumably both accessible and deliverable on line.

The views of the (non-academic) administrators who increasingly form the university management cadre are instructive in helping us understand the new hegemonic perception of academic work. As the head of estates at Glamorgan University told a *Times Higher Education* reporter:

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Figure 1. The cellular office

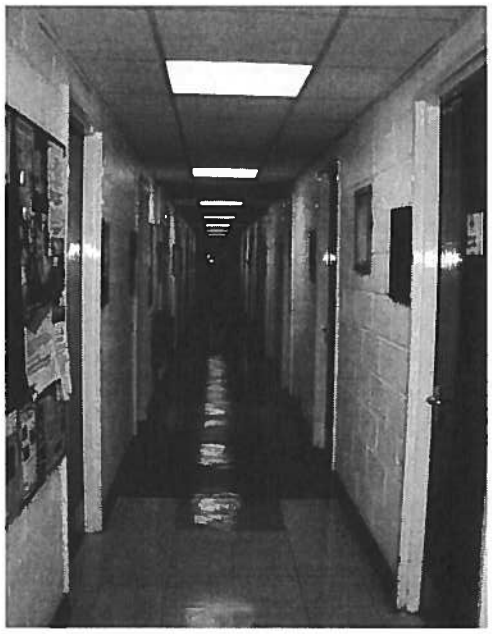

Figure 2. Corridor office arrangement

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> Traditionally academics want single-occupancy rooms full of books so they can shut the door on the world, so they can have one-to-one chats with students and have their scholarly quiet time. But academics have to get real. Space costs a lot of money and there are some cynics who would say that lecturers should spend most of their time in class – so why would they need their own rooms? (THES, 2006: 5)

To fully understand this management perspective we first need to remind ourselves of the history and development of the OP office.

A short history of the open-plan office

The OP office originated in the USA in the 1920s, boosted by Leffingwell's enthusiastic advocacy of applying Taylorism to white-collar work (Duffy, 1980). Leffingwell's 1917 'Scientific Office Management' recommended centralization of functions such as typing and bookkeeping into single, necessarily large, office spaces, as this would aid the process of standardization. The implementation of this was accompanied by the cheapening of clerical labour, a decline in status and the removal of any claims to personalized workspace.

Although only taken up in the UK after the war, by the 1960s OP had became the spatial paradigm for offices in the USA, the UK and Australia. The now familiar decor aesthetic of indoor plants and carpeting owes its origins to the German innovation of 'Office Landscape' or *Bürolandschaft*, but in the USA and the UK this form of OP, with its flexible arrangement of workstations and movable partitions, quickly became a way to save money on space costs and to squeeze more people into a given floor area (Aronoff and Kaplan, 1995: 30).

OP has traditionally offered management the twin advantages of economies of space (a reduction in 'unproductive' built features such as walls and corridors) and an enhanced visual surveillance of employees' performance (Aronoff and Kaplan, 1995; Barnes, 2007). More recently the concept has been developed further by the advocacy of 'non-territorial' space practices such as hot-desking (working from or sharing whatever desk is available), which offer further economies in workspace costs by eradicating the personal workstation (Vischer, 2005). These changes in working space utilization have followed and mirrored changes in white-collar labour processes, becoming particularly associated with large-scale routinized workflows (Baldry, 1999).

There is a substantial body of research findings from the 1960s to the present day evaluating the effects on employees' job satisfaction and motivation of the move from conventional (small or individual enclosed offices) to OP. Post-occupancy evaluations have examined such factors as communication, acoustic and visual privacy and self-identity. We now know quite a lot about the experience of OP working for various grades of clerical, professional and managerial work and yet, as Gorgievski and colleagues (2010) point out, surprisingly little about such flexible working contexts in educational settings. To begin to remedy this, we next examine the research evidence from the commercial sector and compare it with the experiences of our academic respondents currently working in OP, at the same time indicating aspects specific to academic work and for which few comparators will be found.

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Method

Semi-structured interviews were undertaken between 2008 and 2010 in three universities in Scotland and one in Australia, with small samples of occupants of both OP offices and those in traditional offices who were faced with a move to OP. We also interviewed two union representatives who had been engaged in discussions, negotiations and campaigns over proposed OP introduction in locations in both countries. While problems of access prevented our securing a balanced number of locations, it was hoped that by comparing the responses of academics in two different continents we could identify some features of academic work that were generic rather than system-influenced. Although preliminary investigation has indicated that the different university systems of UK and Australia were facing similar trends in higher education management, this article is not really an exercise that compares different HE systems: we would argue that, if we can demonstrate that academics view and use their workspaces in similar ways in two different societies, then this will identify some core elements in academic work and the extent to which different spatial arrangements either support or hinder these.

Respondents were selected in each institution from a single subject area (business and management) that was felt to offer a typical mix of teaching, research and administrative workflows. Keeping the subject area constant was felt to be critical as there is evidence that academics engaged in science research and with minimal teaching responsibilities can find an OP or shared space conducive to their work (Pinder et al., 2009: 5). However, as our interviews show, there may be dangers from the unthinking application of OP to *all* academic workflows.

One OP case was a new-build, while the other was in an older building, enabling us to overcome the limitations of previous studies of OP which have often confounded the change in workspace layout with an overall improvement in working conditions through a move to a new-build structure.

Access to these locations was necessarily covert, which accounts for the small size of the samples. Space management policy had become such a sensitive issue that several respondents indicated the possibility of disciplinary action if they spoke out publicly against their institution's policy. Such covert methods might be objected to under current thinking on research ethics but, as the object of ethical research procedures is to protect the research subject, we maintain that this approach was fully in keeping with this goal. We therefore relied on a contact in each location to select a sample of their colleagues that included both early career and experienced academics and those with teaching and those with teaching/research contracts. The total number of interviews was 18 and interviews typically lasted 30–40 minutes. Because much of the interview data was provided in confidence and because of ongoing campaigns in some of the locations, we have used pseudonyms throughout. Real names of universities have been used only where this information is already in the public domain.

The cases

'Glenfiddich University' in central Scotland has widely adopted OP in most of its departments and schools. While some of these premises have been purpose built, the Business

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and Management department is housed in an old (early 20th-century) building, whose large rooms accommodate up to 20 people at a time. Most of the staff could compare the current OP accommodation with a previous experience of individual offices.

'Glengrant University' is housed in a new-build campus at the outskirts of a major Scottish city, specifically designed to be OP throughout. At the time of interview the campus had been open for about two years, the institution moving out to the new premises from three old and separated inner-city sites. The Management department is housed in an OP 'wing', accommodating around 30 academics, which in itself flows into similar sized areas housing different subject groupings.

'Glenlivet University' is currently located on two sites in a major Scottish city. One of these is to be sold for housing development and the faculty currently located there were told they would be moved to a new-build structure on the main campus, which would feature large areas of OP. The union staff representative who had been involved in the consultation process was interviewed and access was granted to internal surveys of staff accommodation preferences. At the time of writing the planned move had been frozen due to a slump in property values.

'Penfold University' is an urban university in Australia whose staff, with the exception of a small research group, have traditionally worked in personal offices but where junior staff were faced with a proposal to move to OP. Interviews were conducted with a sample of staff in affected departments and with the union organizer charged with organizing the resistance campaign. A proposal to introduce OP at another, less wealthy university was abandoned in the face of staff disquiet. Discussions with affected staff at this location mirrored the concerns raised at Penfold.

The critical dimensions of open plan

Synergy versus privacy

The most frequent rationale for introducing the OP office in the commercial sector in the 1970s was the claim that it removed barriers to workflow and communications (Zalesny and Farace, 1987), a claim that has had a resurgence within recent 'knowledge work' discourse (Heerwagen et al., 2004). However, early research on OP offices by Sundstrom found that, while clerical grades agreed that this had occurred, managerial grades reported a decline in the effectiveness of communication as, for these grades, good communication meant the ability to hold *confidential* conversation (Sundstrom et al., 1982). This is a reminder that the design of the work environment is never a one-size-fits-all process. Although research by Sundstrom and others has indicated that OP may suit, for example, creative and design offices, the evidence equally suggests that it does not suit professional and 'think work' (Bosch-Sijtsema et al., 2010; Hedge, 1982: 534).

Despite the lack of supporting evidence in the research literature, the stated rationale of the current academic OP proposals continues to stress a goal of increased synergy, a flow of ideas and mutual creativity (SFC, 2008). There is clearly a fine line between more effective communication and the maintenance of privacy, perceptively defined by Rapoport (1980) as 'the control of unwanted interaction with other people'. The literature on employee experience of OP makes frequent mention of a perceived decline in

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acoustic privacy and a corresponding increase in distraction (Oldham and Brass, 1979; Sundstrom et al., 1982).

We asked our respondents which of the usual dimensions of academic work they could perform in their current workspaces. Whereas in the personal offices at Penfold the rooms were used for teaching preparation, seeing students, research and storing files, books and papers, none of the research-active OP respondents at Glenlivet or Glengrant said that they could undertake cognitive-based work such as research or marking in their shared or OP rooms, and most opted to do it at home. The reason given by all our respondents was auditory distraction, a complaint also noted in other post-occupancy reviews of OP academic space (Harrison and Cairns, 2008; Pinder et al., 2009).

Banbury and Berry (2005) found that it was not the level of ambient noise that was the most distracting for open plan employees but rather sudden peaks of noise or distinctive sounds such as background speech that were most bothersome. This comes out clearly in the experience of the OP academic offices at Glenfiddich and Glengrant, with almost universal complaints of the distraction caused by phones ringing and intrusive phone conversations.

Some of the mechanisms underlying these responses are indicated by a useful analysis of knowledge work (KW) by Bosch-Sijtsema and colleagues (Bosch-Sijtsema et al., 2010). They show that KW is commonly composed in varying degrees of both individual and collaborative work and that knowledge workers can work in solitude, asynchronously with others, virtually online and in face-to-face collaboration with others. However they found that the boundary between individual and collaborative working was porous and even individual working took place in 'pseudo-privacy', interrupted by phone calls, emails, text messages and online virtual meetings.

The conflict between the two aspects of academic work was well summed up by respondents in the OP environment at Glengrant where even a sense of 'pseudo-privacy' was absent; even the confidential meeting rooms had glass walls. For one respondent, an early career researcher, there was an appreciation of the opportunity for informal and helpful chats about joint research with her colleagues who shared the space. However:

> When you need to have quiet time and thinking time, and other people are having those helpful advice conversations that yesterday I thought were fantastic but today are not because I need to think. (Glengrant #2)

For others, there were few redeeming features:

> There's none [privacy] so to speak, I mean there's people all around you. On the desk where I'm sitting, there's people on the desk next to you that can see everything, that can hear everything, that can listen into phone calls, that can see any personal papers that are lying on the desk. When they wander along, can look at your emails, can look at your screen, can see what's on the screen. So there's very little privacy. (Glengrant #1)

Walls and doors are the normal structural features that ensure privacy and where these are absent occupants of an open space, such as our respondents at Glenfiddich, may have to improvise physical 'privacy filters' by moving furniture such as lockers and filing

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cabinets, almost simulating the 'cubicles' of US commercial offices. Additionally, official and unofficial rules or 'manners' (Rapoport, 1980) often have to be developed. A library is an OP structure within which concentrated individual work is carried out; this can only be done through insistence on a rule of silence where conversation is accepted by all as an unwanted distraction. Pinder and colleagues (2009: 13) give an instance of where a 'library quiet' rule has had to be established in an OP science department at Newcastle. We found evidence of similar rules in some of the Glenfiddich offices:

> There's an exact replica of the room that we're in downstairs and it's like a morgue! – people actually whisper and it's dreadful. It's clearly something that people feel quite strongly about because I've got a quite a loud voice that carries and I'm a noisy person and if I'm downstairs I often get 'X, for goodness sake, keep it down a bit.' (Glenfiddich #3)

Environmental control

As indicated earlier, occupants with a greater degree of control over their immediate environment report a greater degree of environmental satisfaction (Baldry et al., 1998; Marans and Spreckelmayer, 1982; Vischer, 2005). Control over privacy is an important part of this – the simple ability to shut a door becomes significant, as it sends out a privacy signal to other occupants. In addition to having no control over the parameters of privacy, respondents at Glenfiddich and Glengrant reported virtually no control over lighting, heating or air quality. At Glengrant the academics had experienced some of the problems of the computer-controlled 'intelligent office' (Bain and Baldry, 1992):

> Also if you're here and there's not many people about ... and you're not moving about – [Interviewer: 'There's a movement sensor?'] – yeah, you can be plunged into darkness – you have to get up and move and wave at the lights. (Glengrant #1)

The original 1960s office landscape concept stressed flexibility: by using light screening and non-fixed furniture, offices could be easily reconfigured to adapt to organizational change. In practice, however, most OP offices tend to remain static, and facilities management usually prefer to move people instead of furniture (Aronoff and Kaplan, 1995: 32–3). Although the phenomenon of organizational 'churn' is now familiar in the commercial sector it is relatively new in academia. It is significant therefore that several of the Glenfiddich respondents mentioned the frequency with which they had been instructed to move location:

> I don't regard it as personal [space] – I've been moved around so many times here and I'm expecting to be moved again – there's no feeling of permanency ... It's something they probably feel keeps the staff on their toes but you don't have this certainty. (Glenfiddich #1)

The logical end point of obtaining space flexibility through shifting the human resources around is the creation of entirely non-territorial space through hot-desking. This was introduced in the Architecture School at Delft University of Technology with mixed results: social interaction increased but the occupancy rate stayed at a low

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27 per cent and there was an *increase* in the number of people choosing to work at home (Gorgievski et al., 2010).

Space and signals about hierarchy

Research on offices has shown that their layout, decor and furnishing constitute environmental signs that convey information about the social order of the organization and the individual's place within it (Baldry, 1999). Signals about hierarchy are most often conveyed by the amount of personal space allocated and the introduction of academic OP is often, paradoxically, hierarchical. At Penfold the space plan initially affected only junior staff: associate lecturers were to be relocated to offices housing between six and eight staff members, and lecturers to offices shared by two to four people. At Glengrant and Glenfiddich only senior staff and management had retained the right to owned space.

> And the thing that sticks in most people's gullets is that the people who advocate open plan don't work in it themselves. To me that's double standards. (Glenfiddich #3)

Against these organizationally structured signals one can often detect informal counter-signals sent out by employees, usually in the form of attempts to personalize individual workspaces. The traditional individual academic office is frequently marked by personal identifiers such as posters, photographs and artefacts from exotic locations. In contrast, very few of the respondents at Glenfiddich or Glengrant had opted to personalize or decorate their workspace because they did not regard the workspace as permanent enough to personalize or felt that, as they worked so much at home, it was not worth it.

The perceived undermining of status was also reflected in some locations by an increase in direct management control, confirming the long association of enhanced control with the introduction of OP (Baldry, 1999).

> What happened when we first moved to open plan, the Principal and other people used to come round at a certain time on a Friday and take note of how many people were not at their desk. This used to happen fairly regularly. They seem to have moved away from that now, but it's not uncommon for somebody in senior management to come round and note if a lot of staff are not there – they may be teaching or may be at home working. (Glenfiddich #1)

Student contact

The aspect of academic work that is not replicated in the commercial sector is staff-student interaction, which plays a large part in academic professional identity and self-perception. It is significant that the question of student access is one of the critical variables in academic OP proposals. The Glenlivet respondent had been a member of the consultative Building Users' Group which had been taken to see and evaluate a variety of OP academic sites in the UK:

> We couldn't find a single academic space that had solved the problem of confidentiality versus student access. [University X] had done it by basically saying students have got no access to

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> academics, they have to make appointments. They basically seem to be saying here, that students *will* have access and what we need to do is, we need to lock up, we mustn't have anything confidential anywhere, so if you go to the loo you need to shut down your computer, lock away your exam papers, you know, etc., etc. (Glenlivet #1)

Both Glenfiddich and Glengrant operated a no-student access policy. At Glenfiddich the doors to the staff areas had security locks and students had to phone their tutor's extension from a phone in the corridor and then meet the tutor in one of the small meeting rooms.

> One of the biggest losses is students not seeing where academics work. They have no opportunity to come in and see you surrounded by books or papers and to see what you do, for the many, many hours when you're not teaching them ... they don't see you with the rest of your job. And you can't sort of have a discussion with a student and say, 'Why don't you look at this book' and just get it off the shelf. (Glenfiddich #6)

At Glengrant, staff had to meet students downstairs at the main reception desk and then try to find a vacant room. Glengrant marketed itself as a small and student-friendly university yet the spatial separation of staff and students was felt to undermine this: 'Students say, this isn't how you sold it to us' (Glengrant #2).

Confidentiality was voiced by several of our respondents as an unrecognized aspect of academic work, and one that often required an immediate response to a student or colleague's problem:

> I've got people coming to see me about bullying, people coming to see me about harassment – and this idea that you can book a room, you know, well...! (Glenlivet #1)

At Penfold this was also seen as a potential problem in any move to open plan:

> Staff were worried that students would arrive at their door distressed and the quiet room that was to have been provided for these situations would be booked. (Penfold #1)

> University is not a business; it is a public place. Even if you place restrictions such as set consultation times, students still show up unannounced. Universities are public space. Students come and see you – we are human services, we deal in education, we can't dictate the terms under which students or colleagues drop in. (Penfold # 2)

Work organization

Critiques of contemporary commercial office design (Heerwagen et al., 2004) have frequently associated ineffective design with a lack of dialogue between space providers and space end-users. This is perpetuated in academic space management documents, which appear to accept uncritically models of the 'new office' that have been applied in other employment sectors, with little appreciation of the variety of workflow that characterizes academic work. The overview of university space planning by Pinder et al.

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(2009) makes clear that most of the rationale for the new academic workspace has been driven by space suppliers, such as estates professionals and architects, rather than the academic users.

The functions of lecturing, researching, tutoring and administration taken separately require very different supporting workspaces; when combined in typical academic work, the requirement has to be one of spatial flexibility. Those respondents still located in conventional cellular offices frequently remarked that this was how they used their space to organize the different aspects of their work. For these respondents, privacy also meant the freedom to work in ways that in other circumstances might distract others, including being messy, with papers scattered around, or noisy.

> I spend long periods moving between my bookshelves, filing cabinets and computer looking for journal articles and the like to prepare. I need solitary space. This process would be disruptive for others. Writing and researching is what is required and open plan undermines this. (Penfold #2)

This is similar to the findings of Kidd's 1994 study (cited in Bosch-Sijtsema, 2010: 193) of non-academic knowledge workers, who seemed to use physical spatial items such as desks and piles of paper as temporary holding patterns for ideas which could not yet be categorized or put to use.

Yet one theme that emerged from our investigation in nearly all our locations was the degree to which the move to open plan was linked to a management vision of a paperless university. This went far beyond the digitization of library services and the availability of online material, and extended to exhortations to replace all paper files with electronic storage, and predictions (mentioned in both Glengrant and Glenlivet) of a move to online marking and assessment. This was in radical contrast to the way in which our respondents – both in the UK and Australia, and including experienced and early career researchers – liked to organize their work, and ignores recent research on other KW professionals which has found that they still prefer paper to electronic material for thinking, planning, editing and reviewing (Sellen and Harper, 2002; cited in Heerwagen et al., 2004: 512).

Identity and professional values

As we have seen, the different workflows of academic work were felt to be directly supported by the layout and content of 'owned space', which itself provided visible evidence to others of the range of professional duties undertaken.

> I feel if you're an academic you should have your own office, you should have space for your books and papers, you should be able to speak to students in your office, and you should be able to have this rapport. It's a diminution of what we've been used to. (Glenfiddich #1)

The contribution of traditional individual offices to professional identity and academic culture were similarly strongly indicated by the Penfold respondents. They felt their rooms provided space to store academic libraries and display information pertinent to the

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profession. These libraries were used in the work processes but also indicated to others the importance of scholarship and teaching and research interests. Traditional offices signalled that the nature of the work was neither routine nor deskilled and required periods of independence from others.

> I think there is a strong link between doing professional work and having a private space ... a space where people can finish work that requires deliberation and reflection. That is what we do. That is the job and that is not changing and it won't change. You need to be able to shut yourself away and concentrate. (Penfold #3)

The individual office was also seen as important, not only for the cognitive aspects of the job but also for collegial relationships at work that contributed both to workplace culture and the exchange of ideas, which was central to both research and preparation of teaching materials. Contrary to the claims of the advocates of OP, Penfold staff believed the unsuitability of OP for academic work would result in less collegiality through more staff working at home (an expectation certainly borne out by the experience at Glengrant).

> Academics do communicate with each other on the basis of having private space and common areas, and I think that is a nice combination of how people socialize and work well together ... And inevitably [OP] space is a deterrent to collegiality. Whether it is thought through or not, I think that is the ultimate effect of that sort of thing. If nobody is there, collegiality falls apart. (Penfold #3)

Responses

None of our academic respondents viewed the experience or the prospect of OP offices with any degree of enthusiasm. At Glenlivet, as part of the consultation process, departments faced with relocation conducted an internal questionnaire on building design requirements, covering office space, teaching space, social space, and storage. Even though the survey included clerical and administrative staff as well as academics, nearly 80 per cent felt that having an individual office was important to them (Glenlivet, 2008), despite which the plan for the new OP building went ahead (and was only halted by the financial crisis).

In Australia, proposals for OP offices have been strongly contested. When, in 2008, Penfold university management proposed a move to new-build shared offices for junior academic staff, this was seen not only as a degradation of physical working conditions but also as an erosion of core research and teaching functions and an attack on the professional status of academic work (Penfold, 2009). The focus on junior staff also created a feeling of injustice through its targeting of those least likely to have housing arrangements capable of accommodating working at home.

> People work on kitchen tables; they work in un-renovated houses with none of the luxuries [that senior staff] have managed to build up at home ... some of us say the nicest place we go to is our office ... it is well set up, there is plenty of room. People really do work in their offices, especially the junior staff. (Penfold #3)

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In response, the National Tertiary Education Union held mass meetings and established a campaign group which, due to legislative prohibitions on traditional industrial tactics such as strikes, organized flyers, posters, co-ordinated departmental petitions, collective letters and briefing papers for the university senate, informed students and threatened to embarrass the university by picketing visiting dignitaries. The NTEU organizer noted that he had never seen staff so 'revved up':

> People were pretty open about being unhappy about it. 'We really don't like this, we hate this, this is running the institution down, devaluing what we do, making us feel like factory fodder.' People were using analogies about battery chickens, sweat shops and call centres and we used that kind of stuff in our campaign material. (Penfold #4, union organizer)

In response to staff opposition, management then proposed moving *all* levels of academic staff to OP, a move that succeeded only in galvanizing more staff. At the time of writing, Penfold staff and their unions have successfully resisted the move to OP offices.

In the UK, the response so far has been surprisingly muted. The University and College Union (UCU) restricts itself to a health and safety fact sheet, which refers members to the SMG studies and bemoans the fact that they were undertaken with no consultation or identification of the needs of staff (UCU, n.d.). Yet there has been no concerted campaign at those affected universities where, as shown in our limited evidence, space planning is clearly *not* supportive of the needs of academic staff. The managerial Greeks are busily climbing out of the horse, and no one in academic Troy seems to have noticed or, if they have, they have waved them in. The salami tactic of changing one building at a time seems set to win by attrition:

> If you had come five or six years ago you would have got loads of anger – but we've just got hardened to it. (Glenfiddich #6)

Preceding experience also conditions responses (Marans and Spreckelmayer, 1982). As OP is a relatively new development in university space planning, in all our cases the majority of our respondents could compare OP with their past experience of individual offices. In 10 years' time, for a new generation of young academics, OP may be all that they know: like chicks hatched into a battery shed, to borrow the analogy from the Penfold's campaign.

The economics of open plan

As Pinder's 2009 report makes clear, university space management has to strike a balance between *efficiency* (value for money) and *effectiveness* – the degree to which the workspace supports the work. The impression conveyed by the above cases is that there has been little attempt to match accommodation to the specific nature of the academic work involved, or to academic work in general; nor has there been any attention give to the well documented social and organizational consequences of OP working.

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It was clear from our interviews that, despite the rhetoric about knowledge flow and synergy or, in the case of Glengrant and Penfold, a 'greenwash' of sustainability, financial considerations are the dominant force driving the proposals:

> We then had a number of focus groups with the architects, and the architects talked about what we need for our workplace and we were very clear that our offices were not just tiny cells that we sat and worked in on our own but they were where students came, they were where we could be found, they were where we kept stuff. They were, you know, our basic home ... we explained it very, very clearly and the architects were very, very good. And the architects basically came to a feeling that we needed individual offices, but they are stuck between a rock and hard place 'cos the university doesn't want to pay for them. (Glenlivet #1)

> If they had just said we can't afford to give you separate offices, we could probably accept that, but not all this synergy crap. (Glengrant #2)

These priorities are evident in the new managerial 'marketized' discourse. Thus, the assistant director of estates at Sheffield Hallam:

> When we looked at the capital costs of cellular offices they were quite horrendous. Our students are paying for a service, and we need to provide that. (Quoted in THES, 2006: 5)

It is noticeable that the economic arguments are made entirely from a narrow facilities management space-cost minimization perspective: there has been no attempt to build into the analysis the long-term dis-benefits arising from the distractions and negative environmental aspects noted above. As Pinder and colleagues make clear, the cost of housing academics is a fraction of the cost of employing them and therefore:

> If ... efforts to reduce occupancy costs by 10 per cent result in even a 1 per cent reduction in the income generating potential of an academic (lost through productivity and motivation), then the benefits of the space efficiencies will be lost. (Pinder et al., 2009: 7)

Yet, over 30 years ago Sommer, an early researcher into OP offices, had concluded:

> Most of the economics of open-planning have turned out to be illusory – no-one has been able to demonstrate improvements in morale, efficiency or work habits. (Quoted in Hedge, 1982: 520).

Conclusions

This article is not an argument for architectural determinism; we do not say that OP will automatically result in degradation of work for all academics. The past research on the introduction of OP into commercial premises demonstrates that how it is experienced will depend on the nature of the job and workflow (Hedge, 1982), the organizational context, and the general nature of employment relations (Marans and Spreckelmayer, 1982).

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OP, as office design, cannot be considered in a vacuum. As a variable in the labour process it has to be considered in its socio-economic context, which we argue is one of an increasing subsumption of higher education to the demands of the market and a concomitant intensification of workload and effort for academics. The UCU's stress survey for 2008 for the first time featured complaints about the distractions of OP among the selected responses of both academic and academic-related staff (Court and Kinman, 2008: 69, 83, 92).

This article represents the outcome of small-scale unfunded exploratory research conducted in parallel university systems on different sides of the globe. What is significant, from the limited data so far, is the evidence for a shared professional identity which not only transcends the institution (Parker and Jary, 1995) but is international. Our respondents in Scotland and Australia gave us unprompted identical answers relating both to the role of owned and controllable workspace in supporting their work and to the importance of maintaining flexible, accessible and interactive staff-student contact.

What is also significant is the evidence for a common managerial offensive that aims to replace the professional autonomy and internalized 'craft-control' of research and teaching with adherence to externally defined performance standards. What has not yet been generally realized is the degree to which the built academic workplace is becoming the stage on which this drama is being set. The distinctiveness of the traditional university was reflected in both a culture of shared intellectual inquiry and an architecture: even without ivy-clad walls and dreaming spires, the 1930s red brick and the 1960s concrete and glass universities looked like, and felt like, universities. If tomorrow's university starts to look like a call centre, this should be taken as a visual index of the extent of the current assault on professionalism.

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Evidence of a relationship between office design and self-reports of ill health among office workers in the United Kingdom.

Hedge, Alan

Journal of Architectural and Planning Research, Vol 1(3), Oct 1984, 163-174.

ABSTRACT

1. Selected data on 1,332 employees' self-reported health problems are reported from 4 user surveys conducted in conventional, enclosed offices; non-air-conditioned open-plan offices; and air-conditioned open-plan offices. Results show a significantly higher incidence of reported headaches among staff working in open-plan offices compared with those in conventional offices. In the 2 air-conditioned open-plan offices studied, more women than men suffered from frequent headaches, eye problems, and upper respiratory-tract complaints. (18 ref)
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