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Your Place or Mine? Organizational Identification and Comfort as Mediators of Relationships Between the Managerial Control of Workspace and Employees' Satisfaction and Well-being

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A large body of management and design literature argues that organizational outcomes can be enhanced either by strict managerial control or by managerial enrichment of office space. An alternative model, derived from the social identity approach to organizational life, argues that because they fail to empower workers both strategies are likely to compromise employees' organizational identification and should therefore be associated with sub-optimal workplace experiences. Two studies ($n = 288$, 1643) were conducted to compare these models. Both indicated that managerial control of space was associated with feelings of physical and psychological discomfort in the office and with lower levels of organizational identification. Discomfort and identification were also found to mediate relationships between managerial control and job satisfaction and well-being. Implications for theory and practice are discussed.

Organizational research has examined many of the social and personal issues that impact upon people's working lives (e.g. Mayo, 1933; Organ, 1988; Schein, 1990). Yet despite being central to several classic studies in the first half of the last century (e.g. Roethlisberger and Dickson, 1939), and being a prominent feature of people's working lives (Vischer, 2005; Zeisel, 2006), the question of how office space should be designed and managed has dropped down the psychological research agenda in recent years. This paper seeks to re-open investigation into the psychology of office space and attempts to do so through the lens of the social identity approach to organizational life (e.g. after Ashforth and Mael, 1989; Haslam, 2004). Key issues here are (a) whether space management has a bearing on employees' organizational identification and (b) whether this in turn is associated with significant organizational outcomes (in particular, satisfaction and well-being).

Dominant approaches to space management and design

We can begin by examining the question what is meant by the term management. Fayol (1918) introduced fourteen general principles of management which together encompassed five major functions: (1) planning, (2) organizing, (3) commanding, (4) coordinating and (5) controlling. Despite this apparent clarity, the term 'management' is subject to multiple interpretations and has proved hard to both define and conceptualize (Peters and Waterman, 2004). Nevertheless, there is general agreement that, when it comes to organizational space, a key management task is

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to identify and ensure the optimal configuration, control and use of that space (Baldry, 1997; Kreiner, Hollensbe and Sheep, 2006).

Along these lines, a body of literature suggests that tight managerial control of space should aid the smooth running of an office and therefore be of benefit to both employers and employees. This has been a dominant theme of the office management literature since the end of the industrial revolution. However, it received particular impetus from the work of Taylor (1911) who argued that optimal organizational outcomes could be achieved only if workers and their workspace were arranged in terms of simple, deskilled constituent units (Hobsbawm, 1969). As a result, company managers were encouraged to arrange their employees into efficient 'cells' (Hyer and Wemmerlov, 2002, p. 40), for the benefit of clients and customers rather than themselves. As well as this, it is argued that managerial control of space also enhances employees' well-being and psychological comfort. For example, Tapping and Shuker (2002) explain how a game of catchball – where management and workers agree to accept management methodology by passing ideas between the groups until management is happy with the results – is good for well-being and actually empowers employees (p. 17). Yet, while it is seen as crucial for designers to obtain input and consent from managers when implementing office changes (Tapping and Dunn, 2006; Veitch *et al*., 2007), the engagement of those that that they manage is seen to be largely irrelevant – or even an inconvenience (Peters and Waterman, 2004). Here it is assumed that 'the vast majority of office buildings and office environmental systems [require] little interaction and low levels of individual autonomy' (Laing *et al*., 1998, p. 9).

Autonomy, in this and other organizational contexts, involves being allowed to fail in one's job function in order to be able to learn from one's mistakes and do better next time (Drucker, 1959). Peters and Waterman (2004) argue that this is vital if workers are to become 'champions' for their company. However, Armstrong (1991) recognizes that autonomy involves trust, and that this can be problematic for managers who are often instructed to discipline and control their staff (McCabe and Black, 1997; Tyler and Blader, 2000). For if managers are charged with creating standardized working conditions, then opportunities for autonomy become necessarily restricted (Elsbach, 2004; Hyer and Wemmerlov, 2002; Sewell and Wilkinson, 1992). As a result, several commentators argue that the best that workers can hope for is to have a sense of involvement in the decisions affecting their workspace (Duvallearly and Benedict, 1992; Rose and Wright, 2005).

Even here, though, the indications are that such involvement is not always forthcoming – especially for employees who have low status. Sutherland (2005) explains how Kentucky-based LG&E Energy invited an array of staff from all levels to attend company meetings, yet despite this apparent involvement in the decision-making process it is apparent that management developed a system in which '[w]ork was standardized with clearly mapped-out procedures' (p. 103) (see also George *et al*., 2004; Keyte and Locher, 2004; Tapping and Shuker, 2002). Management policy thus dictates, *inter alia*, whether workers are allowed to have photographs or plants at their workstations and whether they are allowed to readjust office temperature (Crompton and Jones, 1984, Elsbach, 2003; Pruijt, 2003). Typically, too, favoured solutions recommend a *lean* approach in which decoration and opportunities for personalization, if they are present at all, are kept to a minimum (Duffy, 1997; Harris and Harris, 2006).

Over the last century, then, office design for non-management staff has tended to focus on issues of job process rather than on the psychological needs and interests of those who carry out particular job functions (George *et al*., 2004; Haslam and Knight, 2006; Tanis and Duffy, 1993). Nevertheless, in the last 50 years, successive waves of design initiatives have been ushered in under the cloak of a contemporary design ethos that champions principles of openness and access (Wik, 2006). This started with the Bürolandschaft movement of the 1950s developed by the German office consultancy company Quickborner (Zalesny and Farace, 1987) and has been reflected in continued enthusiasm for various types of 'open-plan' office (Oldham and Brass, 1979). As Moran (2004) notes, according to its devotees, 'the open-plan office helps to sweep away outdated hierarchies and inefficient bureaucracy, fostering creative interaction and teamwork' (p. 12). However, many commentators are sceptical about the utopian claims that accompany these enthusiasms. For example, Baldry, Bain and Taylor (1998b) note (a) that the deceptively liberating terminology of modern management – such as 'management by team' and 'flexible working'

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(Barker, 1993; Peters and Waterman, 2004) – has been used to exert pressure on employees to work ever harder within the office and (b) that this is reinforced by particular spatial arrangements.

The open-plan office, in particular, functions as a high-surveillance environment which provides managers and other team members with opportunities both to monitor other team members' performance and to put pressure on them to achieve team-related goals (Sundstrom, Herbert and Brown, 1982). For this reason, open-plan arrangements have been compared to Bentham's *panopticon* – providing prison-like environments in which patterns of surveillance both mirror and reproduce styles of differential agency and power (Sewell, 1988; Sewell and Wilkinson, 1992). Moreover, against the view that changes in office architecture and design have removed workers from the excessive control that was characteristic of early Taylorism, data from the UK Office for National Statistics (2007) suggests that more than 70% of office workers find themselves in conditions that have remained essentially unchanged over the past 100 years (see also Baldry, Bain and Taylor, 1998a).

Problems with dominant approaches to space management and design

Reflecting on such data, Baldry and colleagues observe that despite declarations of employee commitment and empowerment, the 'tight physical and technological surveillance' of the modern office is a major contributor to employee disenchantment (1998a, p. 175). Consistent with this claim, in a study of 130 secretarial staff, Duvallearly and Benedict (1992) found a strong relationship between the low levels of privacy afforded in open-plan offices and key components of job dissatisfaction.

A key aspect of prescriptive control of the workspace is the effect that it has on feelings of *comfort*. As Zeisel (2006) explains, people often use their work environments to express their uniqueness, be this in terms of photographs, toys or sentimental mementos, so that 'each such use shows how someone is different from his neighbour – in taste, personality, and in habits' (p. 175). As Vischer (2005) observes, the fact that management typically takes away people's rights to personalize their workspace and instead dictates how space should be used can contribute directly to feelings of discomfort at work. This is because 'people intuitively and reliably know the difference between workspace that gives them support and workspace that is a barrier and slows them down' (p. 202).

Along related lines, Elsbach (2003) argues for a strong link between feelings of discomfort brought about by managerial control of employees' space and feelings of organizational *dis*identification, such that control leads workers to feel less involved with, and more remote from, the organization and its goals (see also Kreiner, Hollensbe and Sheep, 2006). Similar patterns have been found in studies of call centres, with several researchers remarking that these are emblematic of workers' contemporary experiences as 'victims at the "sharp end" of extreme technological control of the "electronic panopticon" variety' (Rose and Wright, 2005, p. 136; see also Bain and Taylor, 2000). Here managerial practices that restrict employees' autonomy have been found to be associated with high levels of psychological discomfort (Briner and Totterdell, 2002; Vischer, 2005) as well as stress and absenteeism (e.g. as reflected in the number of sick days taken by employees; Trades Union Congress, 2001; Wegge *et al*., 2006).

Research thus suggests that the prescriptive management of office space has a deleterious impact on both corporate and individual well-being (Ayoko and Härtel, 2003; Gensler Architecture, 2005; Vischer, 2005). Moreover, a number of commentators have argued that confidence in Tayloristic approaches to space management is based on ideological conviction (e.g. belief in the 'managerial prerogative') rather than empirical evidence (Baldry, 1997; Baldry, Bain and Taylor, 1998a; Haslam, 2004). Accordingly, many practitioners within the design industry itself have argued that an interrogation of the basic assumptions that underlie the design and management of office space is long overdue (e.g. Cohen, 2007; Danielsson and Bodin, 2008; George *et al*., 2004; Tanis and Duffy, 1993).

Many have also attempted to promote an approach to space management which differs from that recommended by Taylorists. This seeks to *enrich* the office environment through considerate use of design and investment in 'environmental comfort' (Vischer, 2005, p. 102; Zelinsky, 1999). This strategy is typically informed by a belief that such enrichment may promote employees' health.

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In particular, aesthetically uplifting art – particularly images from nature – are believed to reduce stress and anger in a working environment (Kweon *et al.*, 2008; Zelinsky, 2006). Yet regardless of whether businesses' management of workspace is informed by lean management principles or by an enriched design model, it remains the case that workers generally have little input into their own immediate space. Certainly, *senior* employees are often encouraged to become involved in the design process because, as Stegmeier (2008) explains, 'there is a need for a shared language between designers and managers in order to break down communication barriers' (p. 10). Yet at least 70% of office workers do not enjoy high status and they typically have little or no input into either the design or the organization of their workspace (Baldry, Bain and Taylor, 1998b; Morrell, 2004; Office for National Statistics, 2007).

The social identity approach

Of course, the idea that disempowering organizational strategies have negative consequences is not new to either social or organizational psychology. In both disciplines a massive literature suggests that productivity and well-being can be enhanced by including employees in decision-making processes and giving them a sense of ownership and voice in the workplace (e.g. Eggins, Haslam and Reynolds, 2002; Ellemers *et al.*, 1998; Haslam, Eggins and Reynolds, 2003; Herzberg, Mausner and Synderman, 1959; Town, 1982; Tyler and Blader, 2000). Following the classic work of Lewin (e.g. 1956; see also Katz and Kahn, 1966), it is argued that the importance of employee engagement derives from its capacity to increase both motivation and well-being. The former is enhanced by increasing 'buy-in'; the latter by increasing employees' sense of value and self-worth.

Recently, much of the work that supports these ideas has been conducted within the framework of the *social identity approach* to organizational life (e.g. Ashforth and Mael, 1989; Haslam, 2004; Haslam, Postmes and Ellemers, 2003). Following self-categorization theory (Turner, 1985; Turner *et al.*, 1994), this argues that people's sense of self can be defined at multiple levels (in terms of personal, social or human identity), and that, whatever identity is salient, individuals are motivated to have interests associated with that identity both recognized and realized (e.g. Ellemers, de Gilder and Haslam, 2004; Van Dick, 2004). Thus if people define themselves in terms of their personal identity as idiosyncratic individuals (Turner, 1982), they should seek to articulate and to satisfy their personal needs (e.g. for personal self-actualization; Maslow, 1943); but if they define themselves in terms of their social identity as a member of a particular group then they will want the group's goals both to be given voice and to be met (Haslam, Powell and Turner, 2000).

A corollary of this point is that where identity-based needs are perceived to be compromised or thwarted by a particular individual or group, then this will tend to undermine shared identification with that social entity. Accordingly, in an organizational context, if a person's personal or group-based aspirations are not recognized by, or not realized because of, the actions of those who are perceived to act on behalf of the organization (e.g. management), then this should tend to reduce employees' organizational identification (i.e. the extent to which they define themselves in terms of an organizational identity shared with those who represent the organization – e.g. managers) (Albert and Whetten, 1985; Cornelissen, Haslam and Balmer, 2007; Dutton, Dukerich and Harquail, 1994).

This is important because shared social identity is hypothesized, and has been found, to be a major determinant of social behaviour. In organizational contexts, where people define themselves in terms of identity that is shared with others (e.g. as members of the same organization, department or team; van Knippenberg and van Schie, 2000), they (a) are more trusting of those others (e.g. Kramer, Brewer and Hanna, 1996), (b) tend to communicate more effectively with them (e.g. Dovidio *et al.*, 1997; Postmes, 2003; Postmes, Tanis and de Wit, 2001; Suzuki, 1998), (c) are more influenced by them (and more able to exert influence over them in return; e.g. Ellemers *et al.*, 1998; McGarty *et al.*, 1994; Reicher, Haslam and Hopkins, 2005) and (d) are more willing to co-operate with them in order to achieve shared goals (e.g. as reflected in levels of organizational citizenship; Christ *et al.*, 2003; Kramer, 1993; Tyler and Blader, 2000, 2003). Clearly these various processes all have the potential to contribute to material organizational outcomes.

At the same time, recent work has also identified a relationship between organizational identification and employees' health, satisfaction and physical comfort (e.g. Haslam *et al.*, 2009).

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Multiple processes have been found to underpin this relationship, including (a) the capacity for shared social identity to be a basis for help and support that buffers individuals from the impact of potential stressors (Branscombe, Schmitt and Harvey, 1999; Levine *et al.*, 2005) and (b) the tendency for individuals to withdraw and disengage from groups with which they do not identify (Reicher and Haslam, 2006). In organizational and other social contexts, a lack of shared organizational identification is thus found to be associated with (a) reduced levels of perceived social support (Haslam *et al.*, 2005), (b) increased stress and burnout (Haslam and Reicher, 2006; Scheepers and Ellemers, 2005), (c) withdrawal (e.g. absenteeism, and turnover intentions; Abrams, Ando and Hinkle, 1998; van Knippenberg, Van Dick and Tavares, 2007) and (d) sickness (e.g. ranging from minor ailments to depression; Reicher and Haslam, 2006; Wegge *et al.*, 2006). For all these reasons, the social identity literature suggests that a managerial approach to space management (whether informed by lean or by design models) will tend to have deleterious consequences for office employees.

Social identity and organizational space: the present research

Putting the ideas that have been explored in the previous two sections together leads us to propose the control–comfort–identification (CCI) model that is represented schematically in Figure 1. The core thesis here is that managerial control of space has a negative impact on employees' experiences at work because it reduces comfort and undermines organizational identification. Specifically, and in line with social identity principles, our central hypotheses are that strategies of space management which involve high managerial control and low worker autonomy will tend to be associated with reduced psychological comfort (Hypothesis 1) and that this will predict reduced levels of organizational identification (Hypothesis 2), which in turn will be associated with reduced job satisfaction (Hypothesis 3a) and compromised well-being (Hypothesis 3b). Importantly, we also expect the relationship between space management and organizational identification to be mediated by employees' sense of psychological comfort (Hypothesis 4; Briner and Totterdell, 2002), and the relationship between psychological comfort and both job satisfaction and well-being to be mediated by organizational identification (Hypotheses 5a, 5b).

Although research into the relationship between space and identity in the workplace is in its infancy, several independent strands of research provide indicative support for these hypotheses. In addition to the theory outlined above, support for Hypothesis 1 comes from several studies which indicate that the behaviour of management impacts more upon feelings of psychological comfort than ergonomic desks and chairs (Baldry, 1997; Elsbach, 2003; Kotter, 1982). Support for Hypothesis 2 emerged from a recent experimental study reported by Millward, Haslam and Postmes (2007). This found that when employees were given their own desks they showed higher levels of work-team identification than those who were required to hot-desk (i.e. take the first desk that is available to them when they arrive at work). This relationship was also mediated by the forms of activity (e.g. face-to-face versus electronic communication) in which employees engaged in order to sustain that identity – with work-team identification being underpinned by an increase

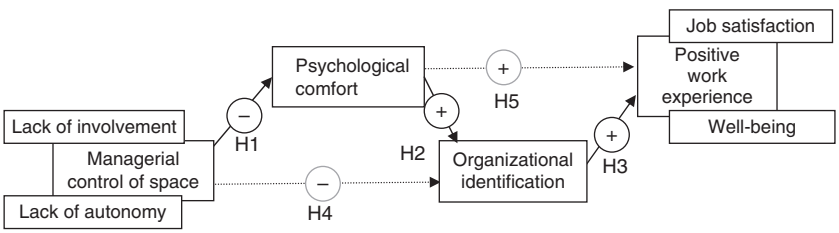

Figure 1. The hypothesized CCI model.

Note: The lack of autonomy and involvement associated with managerial control is predicted to reduce organizational identification by reducing employees' sense of comfort; this in turn is predicted to reduce employees' job satisfaction and their well-being.

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in face-to-face communication. Support for Hypothesis 3 also emerged from qualitative research by Elsbach (2003) which examined the subjective experiences of employees who had been placed in a new office environment. Here, the introduction of a clean-desk policy meant that employees had very limited opportunities to express their personal identities (e.g. by decorating their work area), and this was observed to contribute to high levels of (personal) identity threat, increased stress, and a reduced willingness to comply with company policy. Support for Hypothesis 4 is derived from both sociological and social psychological literatures which examine people's reactions to working in spaces either that they have developed themselves or that have been imposed upon them by management (Oldham and Brass, 1979; Vischer, 2005). Here, involvement in decisions to alter the working space has been shown to affect how comfortable workers feel (regardless of the physical quality of their working environment). Finally, support for Hypothesis 5 comes from a body of social identity research in the organizational domain which indicates that identification with one's employer is an important predictor of job satisfaction and well-being (e.g. Van Dick, Christ and Stellmacher, 2004).

Examination of these hypotheses allows us to compare our CCI model with two other models that are prevalent in the literature. The first of these is the management model in which managerial control of space is expected to enhance (and maximize) productivity (along Taylorist lines) (e.g. Bibby, 1996; Gorjup, Valverde and Ryan, 2008; Hyer and Wemmerlov, 2002; Kleindeinst Group, 2005; Kotter, 1982). The second is the design model which suggests that organizational outcomes can be optimized by enriching a workspace with objects that have aesthetic appeal in the belief that this produces happier, more productive workers (Brill *et al.*, 1984; Cohen, 2007; Gensler Architecture, 2005; Laing *et al.*, 1998; Veitch *et al.*, 2007). Importantly, though, like the management model, the design model does little to encourage the empowerment of the majority of workers (Vischer, 2005).

Study 1

In order to provide an integrated quantitative examination of the above ideas, we conducted two survey-based studies that explored the relationship between strategies of space management and employees' experience of their work, as mediated by their sense of comfort and organizational identification. Our first study took the form of a web-based survey administered to office workers in four organizations: a transport company, an office services company, a design company and a firm of architects. Employees in these organizations represented a broad range of white-collar workers, from highly skilled professional workers to clerical staff with limited qualifications. The recruitment of participants was intended to cast a wide net so that the sample was representative of office workers in general rather than any particular sub-sample.

Method

Participants. Two hundred and eighty-eight office workers (116 women and 172 men) from four separate white-collar organizations, ranging in age from 18 to 70 ($M = 32.75$, $SD = 11.84$), participated in the study. Potential participants were contacted via email through contacts of the researchers working in offices in the UK (13 locations) and the USA (three locations). A total of 814 people were originally contacted; 300 questionnaires were returned of which 12 were unusable (a response rate of 35.3%).

Of those who submitted complete responses, 16% described themselves as non-management, 37% as lower management, 34% as middle management and 13% as senior managers; 96% were full-time workers, 99% were permanent members of staff; 90% were based in the UK and 10% in the USA; and 60% were male. Respondents took part in the survey on a voluntary basis and received no reward for their participation.

Materials and procedures. Participants were emailed a link to an on-line questionnaire, which was introduced as an examination of their attitudes to the office in which they worked. Participants were informed that completion of the survey was taken as an indication of their consent to take part in the study, but that this was voluntary. Confidentiality and anonymity were assured. After this, respondents worked their way through a 95-item questionnaire, in which items measuring different constructs were presented on seven separate pages. Most of these required a response on a seven-point

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scale (1 = 'completely disagree', 7 = 'completely agree'), 'not applicable' or 'don't know' options were always available, and where these were used responses were coded as missing. The penultimate page obtained participants' demographic information and the final page provided details about the study and the research project as a whole. The instrument was constructed so that participants could not progress to a new page, or submit the final version, until they had completed all responses.

Managerial control of space was measured by means of two three-item scales that examined (a) *involvement* ($\alpha = 0.77$; typical item 'In the office, I am consulted when changes in layout are planned'; after Lodahl and Kejner, 1965) and (b) *autonomy* ($\alpha = 0.79$; typical item 'In the office, it is easy for me to personally change the temperature within my own working area'; after Breaugh, 1989). *Psychological comfort* was measured using a five-item scale ($\alpha = 0.77$; typical item 'I am comfortable in the office'; after Vischer, 2005). *Organizational identification* was measured by six items that assessed employees' identification with their managers and with the organization as a whole ($\alpha = 0.87$; typical item 'I feel strong ties with this organization'; after Ellemers, 1993). Employees' *positive experience of work* was assessed using two scales: (a) *job satisfaction* (six items; $\alpha = 0.90$; typical item 'I enjoy my work'; after Haslam *et al*., 2005) and (b) well-being (nine items; $\alpha = 0.90$; typical item 'The lighting in the office gives me headaches'; after Spector *et al*., 2005).

Results

Analytic strategy. None of the key demographic variables (sex, age, occupational status (ranging from non-manager to director/partner), length of service) was correlated with any of our core analytic constructs and so these were not included in further analysis. In order to test our hypotheses, we first checked the robustness of the scales we had constructed. Direct tests of our hypotheses were then provided by means of structural equation modelling. This analysis also provided the fit of the overall organizational identity model, which was compared with models based on the design and management literature.

Factor structure and scale integrity. The latent structure scales assessing managerial control, comfort, organizational identification and workplace experience were assessed by means of confirmatory factor analysis (CFA) using EQS software. No error terms were allowed to correlate and associations were specified between the factors. Each item was allowed to load only onto its designated factor. Standardized factor loadings from the hypothesized model confirmed that each factor was well defined by its items (all item loadings >0.60).

Structural equation modelling. To confirm and further examine the relationships between managerial control, psychological comfort, organizational identification and both job satisfaction and well-being, we tested a structural model with measured variables, again using EQS software (Byrne, 2006). The hypothesized four-stage CCI model specified above (see Figure 1) was tested with psychological comfort and organizational identification specified as variables sequentially mediating the relationship between managerial control of space and positive organizational experiences. Here – and in line with the literature – lack of autonomy and lack of decisional involvement were specified as separate factors, as were job satisfaction and physical comfort.

Fit indices for this model are presented in Table 1 with cut-off criteria set at confirmatory fit index (CFI) >0.95 and standardized root mean square residual (SRMR) <0.096 to minimize type I and type II error (Hu and Bentler, 1999). These indicated that the four-stage model fitted the data well. Modification indices indicated that adding any of the remaining direct paths would not reliably improve the fit of the model (all $p>0.20$). Parameter estimates are presented in Figure 2.

Relationships between measures. Relationships between the study's measures are presented in Figure 2. From these it can be seen that, as predicted by Hypothesis 1, increased managerial control of office space (operationalized in terms of both lack of involvement and lack of autonomy) was associated with reduced employee comfort ($\beta = -0.30$, -0.35, respectively; both $p<0.01$). Consistent with Hypothesis 2, there was also a significant positive relationship between comfort and organizational identification ($\beta = 0.24$, $p<0.01$). In line with Hypothesis 3, there was

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Table 1. Study 1: Structural equation modelling – fit indices and model comparisons

	Model AIC	df	Fit indices					Model comparison Δdf
			CFI	IFI	GFI	SRMR	RMSEA	
Three-stage uncorrelated factor model A	115.63	4	0.753	0.763	0.911	0.274	0.223	
Two-stage management model B	47.45	2	0.899	0.901	0.945	0.167	0.119	2
Two-stage single-factor model C	30.62	2	0.926	0.928	0.957	0.145	0.097	0
Three-stage organizational identification model D	22.94	4	0.937	0.947	0.961	0.080	0.148	2
Three-stage design model E	21.68	4	0.944	0.945	0.964	0.062	0.127	0
Four-stage organizational identification model F	4.11	6	0.999	0.999	0.998	0.026	0.001	2

Notes: n = 288; AIC, Akaike information criterion; CFI, comparative fit index; IFI, incremental fit index; GFI, goodness of fit index; SRMR, standardized root mean square residual; RMSEA, root mean square error of approximation.
*p < 0.01.

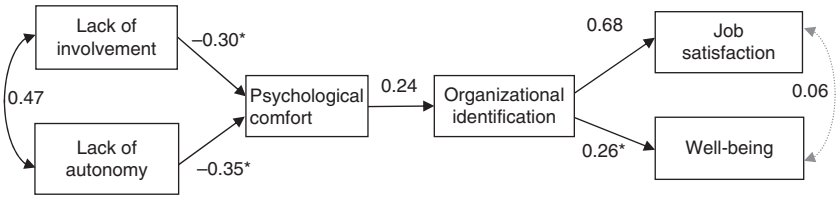

Figure 2. Study 1: Model of the relationship between managerial control of space, comfort, organizational identification and experience of work.

Note: Standardized parameter estimates shown. *p < 0.01.

a positive association between organizational identification and both job satisfaction and well-being (β = 0.68, 0.26, respectively; both p < 0.01).

Model comparison. Referring again to Table 1, the CCI model (referred to as stage F in the table and shown in its entirety in Figure 2), was tested again against five alternative models (A–E). From these it can be seen that the two most relevant models – i.e. the two-stage management model B (Keyte and Locher, 2004) and the three-stage design model E (Laing *et al.*, 1998) – fitted the data less well than the CCI model.

As shown in Table 2 and as predicted by Hypothesis 4, comfort mediated the relationship between managerial control of workspace and organizational identification (compared to the three-stage organizational identification model D from Table 1 where management control was directly associated with organizational identification). Also, as predicted by Hypothesis 5, organizational identification mediated the relationship between psychological comfort and positive workplace experiences (compared to the three-stage design model E from Table 1 where psychological comfort was directly associated with positive workplace experiences).

We checked for common method bias by examining CFA data (Podsakoff *et al.*, 2003; Williams, Cote and Buckley, 1989) and by testing two further models. The first of these was a two-stage single-factor model C, where the only exogenous variable was autonomy; granting autonomy has been said to be the single most important driving force behind a successful workspace (after Froggett, 2001). Second, a three-stage uncorrelated factor model A was tested; here all items loaded onto the uncorrelated, covert monitoring measure which has been argued to be the main mediating variable in maintaining a satisfactory workspace (after Sewell, 1998). As can be seen from Table 1, both these additional models fitted the data less well than the design and CCI models. However, the two-stage single-factor model C fitted the data satisfactorily and indeed was a better fit than model B (Pruijt, 2003).

Discussion

In line with our core hypotheses, this study provided evidence that increased managerial

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Table 2. Study 1: Results of path analysis

IV	MV	DV	DV on IV	DV on IV when entered with MV	Sobel's test (z value)
Lack of involvement	Psychological comfort	Organizational identification	0.37**	0.26**	5.49**
Lack of autonomy	Psychological comfort	Organizational identification	0.19**	0.01	5.56**
Psychological comfort	Organizational identification	Job satisfaction	0.31**	0.08	5.95**
Psychological comfort	Organizational identification	Well-being	0.40**	0.31**	4.83**

Notes: **$p<0.01$; *$p<0.05$.

control of office space (operationalized in terms of a lack of autonomy and a lack of involvement) was associated with reduced employee comfort (Hypothesis 1), and that this was associated with reduced organizational identification (Hypothesis 2), which in turn predicted a less positive orientation to work itself (operationalized in terms of lowered satisfaction and compromised well-being; Hypothesis 3). Path analysis also provided evidence that the relationship between managerial control of space and employees' organizational identification was mediated by employees' sense of psychological comfort in the workspace (Hypothesis 4) and that the relationship between this sense of comfort and employees' positive work experiences was mediated by their organizational identification (Hypothesis 5). This mediation was only partial in the case of the relationship between a lack of involvement and organizational identification, and between psychological comfort and well-being, but there was full mediation in the case of relationships between lack of autonomy and organizational identification and between psychological comfort and job satisfaction.

Put together, there was also evidence that the CCI model (represented schematically in Figure 1) fitted the data well. Indeed, here the relationship between managerial control of space and employees' work experiences was fully mediated by employees' sense of psychological comfort and organizational identification. This model also provided a superior account of the data than alternative models in which organizational identification was not treated as a mediator but as an endogenous variable. In particular, it was superior to (a) a design model which argues that a sense of comfort alone mediates between space management and the quality of employees' work experience (e.g. Duffy, Cave and Worthington, 1976; Gensler Architecture, 2005; Gul *et al.*, 2007; Laing *et al.*, 1998; Mahdavi and Ulla, 2005) and (b) a management model in which identification and well-being are predicted to be enhanced through appropriate managerial control (e.g. Baldry, 1997; Counsell and Puybaraud, 2007; Faller, 2002; Keyte and Locher, 2004; Kleindeinst Group, 2006; after Taylor, 1911). Indeed, contrary to the fundamental ethos of the latter model, there was a very strong *negative* relationship between work-related experiences (specifically employee satisfaction and well-being) and managerial control of space. At the most basic level, then, this study challenges the idea, implicit in both management and design literature (George *et al.*, 2004; Laing *et al.*, 1998; Myerson, 2007; Smith, 2006), that employees fare better if they have limited (or no) input into decisions about the structuring of their working environment.

Yet while these findings provide encouraging support for our hypotheses, they are also limited in a number of ways. In particular, the sample for this study was not especially large, and it was drawn from a small number of targeted organizations. Also little insight is provided into the role that aspects of the physical environment play in determining employees' comfort, and hence we are not in a position to ascertain whether this physical environment matters at all in determining people's experience of work. Based on previous ergonomic research (e.g. Cohen, 2007), there are good reasons to suppose that it does, but from the present study we have no basis on which to quantify that impact or to gauge its importance relative to the other factors we have considered here.

To address these issues, we therefore conducted a second study. This involved a larger and broader sample of respondents and also asked them to reflect directly on the quality of the physical features of their working environment.

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Study 2

Study 1 provided evidence that employees feel better and are more positive about their work if they are given input into decisions that affect how their office space is used. As hypothesized, the study also suggested that organizational identity plays a mediating role in the link between decisional input, comfort and workplace well-being.

To verify and elaborate upon these findings, Study 2 collected responses from a larger, more diverse, population. It also explicitly incorporated measures of the perceived qualities of the physical environment as a sub-scale within the managerial control scale so as to more accurately reflect the influence of *design* as it is presented in the literature. This allowed us to differentiate between (a) aesthetic features of the work environment and (b) the perceived physical comfort of that space as it is experienced by the people who work within it (Elsbach, 2003; Millward, Haslam and Postmes, 2007) as predictors of key variables in which we were interested (i.e. satisfaction and well-being). The research again took the form of a survey, but on this occasion this involved members of the public responding to an on-line BBC article about office space (Haslam and Knight, 2006). Our sample was now predominantly composed of non-managerial respondents – and was thereby more representative of the workforce at large.

Method

Participants. One thousand, six hundred and forty-three office workers (1088 women and 555 men), ranging in age from 18 to 73 ($M = 28.84$, SD = 10.46) participated in an on-line survey that examined people's attitudes to the office space in which they worked. Of those who completed the survey, 54.7% described themselves as working in a non-managerial role, 17.5% classed themselves as lower management, 16.6% as middle managers, 4.5% as senior managers, 1.5% said they were sitting at board or partner level and 5.3% categorized themselves as 'other'. No reward was offered for completing the questionnaire. A total of 90.5% of participants were based in the UK or Ireland; of the remainder 4.4% worked in North America, 2.4% in northern Europe and 0.9% in Australia/Oceania. A further 1.8% came from other parts of the globe.

The majority of the sample (91.8%) comprised full-time workers, with 85.1% of respondents being permanent members of staff. Contract workers made up 9.0% of respondents and 4.4% had temporary work roles; 62% of the sample was female.

Materials and procedures. A hyperlink from an on-line BBC article (Haslam and Knight, 2006) took participants to a questionnaire which was introduced as an examination of attitudes towards office space. From here the procedure for completing the questionnaire was the same as in Study 1.

Managerial control of space comprised three items: the two three-item scales used in Study 1 (a) *involvement* ($\alpha = 0.76$) and (b) *autonomy* ($\alpha = 0.71$), plus (c) a new seven-item *physical environment* scale which captured features the type of physical environment in which workers found themselves ($\alpha = 0.75$; typical item: 'I cannot see the outside world from my desk'; after Ferguson and Weisman, 1986). All other scales were identical to those used in Study 1.

Results

Analytic strategy. None of the key demographic variables (sex, age, occupational status (part-time, full-time, contract based), organization type (private sector, public sector, not-for-profit) correlated with any of our core analytic constructs and so these were not included in further analysis. Following the strategy adopted in Study 1, in order to test our hypotheses we first checked the robustness and coherence of our scales. Direct tests of our hypotheses were then provided by means of structural equation modelling. This analysis also provided the fit of the overall organizational identity model, which was compared with models based on the design and management literature.

Factor structure and scale integrity. The latent structure scales assessing managerial control, comfort, organizational identification and workplace experience were assessed by means of CFA using EQS software. No error terms were allowed to correlate and associations were specified between the factors. Each item was allowed to load only onto its designated factor. As in Study 1, standardized factor loadings from the

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hypothesized model confirmed that each factor was well defined by its items (all item loadings >0.60).

Structural equation modelling. To confirm and further examine the relationships between managerial control, psychological comfort, organizational identification and workplace experiences (job satisfaction and well-being), we again tested a structural model with measured variables using EQS software (Byrne, 2006). Here the hypothesized four-stage CCI model (see Figure 1) was tested with comfort and organizational identification specified as sequential variables mediating the relationship between managerial control of space and positive organizational experiences. As in Study 1, lack of autonomy and lack of involvement were specified as separate factors, as were job satisfaction and physical comfort.

Fit indices for this model are presented in Table 3 with cut-off criteria set at CFI >0.95 and SRMR <0.096 to minimize type I and type II error (Hu and Bentler, 1999). These indicated that, as in Study 1, the four-stage model fitted the data well. Modification indices showed that adding any of the remaining direct paths would not reliably improve the fit of the model (all $p>0.20$). Parameter estimates are presented in Figure 3.

Relationships between measures. Relationships between the study's measures are presented in Figure 3. From this figure it can be seen that, as predicted by Hypothesis 1, increased managerial control of office space (operationalized in terms of a lack of involvement, a lack of autonomy and working in a poor physical environment) was associated with reduced employee comfort ($\beta = -0.26$, -0.30, -0.38 respectively; all $p<0.01$). Consistent with Hypothesis 2, there was a significant positive relationship between psychological comfort and organizational identification ($\beta = 0.43$, $p<0.01$). Finally, in line with Hypothesis 3, there was a positive correlation

Table 3. Study 2: Structural equation modelling – fit indices and model comparisons

	Model AIC	df	Fit indices					Model comparison Δdf
			CFI	IFI	GFI	SRMR	RMSEA	
Three-stage uncorrelated factor model A	1617.61*	5	0.670	0.672	0.829	0.387	0.190	
Two-stage management model B	1577.54*	2	0.670	0.671	0.782	0.146	0.182	3
Two-stage single-factor model C	791.39*	2	0.833	0.833	0.901	0.225	0.167	0
Three-stage organizational identification model D	372.90*	5	0.953	0.953	0.943	0.066	0.136	3
Three-stage design model E	190.85*	5	0.951	0.951	0.958	0.059	0.120	0
Four-stage organizational identification model F	9.83	8	0.999	0.999	0.999	0.005	0.001	3

Notes: n = 1643.
*$p<0.01$.

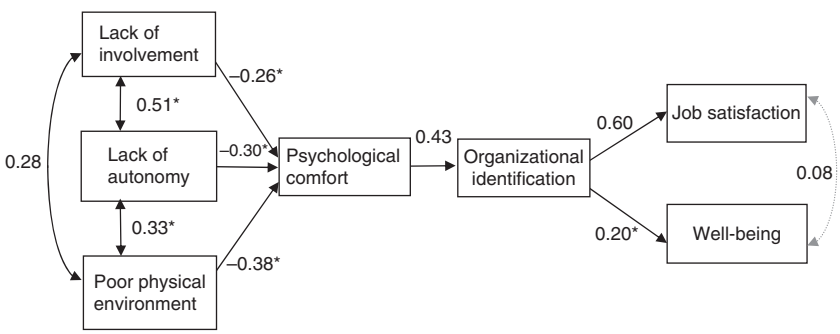

Figure 3. Study 2: Model of the relationship between managerial control of space, comfort, organizational identification and experience of work.

Note: Standardized parameter estimates shown. *$p<0.01$.

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between organizational identification and positive workplace experiences (operationalized in terms of job satisfaction and physical comfort; $\beta = 0.60$, 0.20, respectively; both $p < 0.01$).

Model comparison. As in Study 1, the organizational identification model was again tested against five alternative models (see Table 3). On the basis of previous research, the two most relevant of these were the two-stage management model B (in which both organizational identification and psychological comfort were treated as undifferentiated endogenous variables; Keyte and Locher, 2004) and a three-stage design model E (in which organizational identification was treated as an undifferentiated endogenous variable; Laing *et al.*, 1998). As can be seen, all models (including the two most relevant) fitted the data poorly and less well than the organizational identification model.

As predicted by Hypothesis 4, the data in Table 4 also indicate that comfort mediated the relationship between managerial control of workspace and organizational identification (the three-stage organizational identification model D has no mediating variable between managerial control and organizational identification). As predicted by Hypothesis 5, this table also shows that organizational identification mediated the relationship between psychological comfort and positive workplace experiences (the three-stage design model E has no mediating variable between psychological comfort and positive workplace experiences).

Once again, a check was made for common method bias which followed the same procedure as Study 1 (Podsakoff *et al.*, 2003; Williams, Cote and Buckley, 1989). Following the examination of CFA data, two additional models were tested, a two-stage single-factor model (C) where all factors loaded onto the autonomy variable (after Froggett, 2001) and a three-stage uncorrelated factor model A, where items loaded onto an uncorrelated, covert monitoring variable (after Sewell, 1998). As can be seen from Table 3, both these additional models fitted the data poorly.

Discussion

The results of this study replicate those of Study 1 and again provide support for our three core hypotheses. The fact that this support was gleaned from data drawn from a much larger sample, and one that was more representative of the general workforce, increases our confidence both in the external validity of our findings and in the theoretical analysis from which the hypotheses were derived.

Once more, increased managerial control of office space was found to be associated with reduced psychological comfort (Hypothesis 1). Increased managerial control was also associated with reduced organizational identification (Hypothesis 2), and this in turn was a predictor of the quality of employees' work experiences (Hypothesis 3). Following up on these correlations, path analysis indicated that a sense of psychological comfort at work mediated the relationship between managerial control of space and employees' organizational identification (Hypothesis 4) and that the relationship between employees' psychological comfort and their positive experiences of work was mediated by organizational identification (Hypothesis 5). As in Study 1, this mediation was only partial in the case of the relationship between psychological comfort and well-being, but there was strong and full mediation in the relationships between lack of autonomy

Table 4. Study 2: Results of path analysis

IV	MV	DV	DV on IV	DV on IV when entered with MV	Sobel's test (z value)
Lack of involvement	Psychological comfort	Organizational identification	0.46**	0.22**	17.89**
Lack of autonomy	Psychological comfort	Organizational identification	0.39**	0.09	18.72**
Poor physical environment	Psychological comfort	Organizational identification	0.36**	0.06	16.89**
Psychological comfort	Organizational identification	Job satisfaction	0.57**	0.22**	20.42**
Psychological comfort	Organizational identification	Well-being	0.58**	0.45**	17.89**

Notes: **$p < 0.01$; *$p < 0.05$.

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and organizational identification and between comfort and job satisfaction.

Consistent with Study 1, the CCI model also provided a superior account of the data than alternative design and management models. In this regard, novel findings in this study related to the perceived quality of the physical environment. More specifically, perceptions of a poor (i.e. unenriched) physical environment were negatively correlated with job satisfaction and this relationship (like those associated with lack of autonomy and lack of involvement) was again strongly mediated by a sense of psychological comfort. This pattern provides further support for Hypothesis 4, suggesting that employees' perceptions of the physical features of their work environment constitute an important dimension of their overall work experience.

Finally, two additional models were tested in order to check for common method bias. These provided no evidence that the above findings could be explained as a straightforward consequence of such bias (Crowne and Marlowe, 1964; Podsakoff *et al.*, 2003). Taken as a whole, the findings from this study thus replicate and extend those of our first study. In this, they give us greater confidence in the validity of the model that the present programme of research was designed to investigate and, in particular, of the important interrelationship between control, comfort and identification in shaping employees' space-related experiences and responses.

General discussion

The findings from the two studies reported above provide coherent and consistent support for hypotheses derived from a social identity approach to issues of organizational space management. In both studies, to the extent that employees felt that they had control and autonomy in their workspace (and, in Study 2, were working in a pleasant physical environment), they tended to report a greater sense of psychological comfort (Hypothesis 1). These perceptions of comfort were also associated with higher levels of organizational identification (Hypothesis 2), and comfort also mediated the relationship between perceptions of the physical environment and organizational identification (Hypothesis 4). Higher levels of organizational identification were in turn associated with enhanced job satisfaction and well-being (Hypothesis 3). Moreover, in both studies the relationship between comfort and these positive work experiences was mediated by organizational identification (Hypothesis 5).

These findings are consistent with a social identity approach to organizational life in which group-based relationships are seen to be central to employees' workplace experiences because they serve to structure individuals' perception, motivation and engagement (Ashforth and Mael, 1989; Ellemers, de Gilder and Haslam, 2004; Haslam, 2004). Consistent with a large body of previous research, the present research indicates that organizational identification is associated with a positive orientation to one's work – in particular, with greater job satisfaction (e.g. van Knippenberg and van Schie, 2000; Kreiner and Ashforth, 2004; Van Dick, Christ and Stellmacher, 2004) and enhanced well-being (Haslam *et al.*, 2005; Reicher and Haslam, 2006; Wegge *et al.*, 2006). A novel contribution of the present research, however, is to demonstrate that these variables are associated with – and appear, at least in part, to be predicated upon – the way in which space is managed in the workplace, and the degree to which managers give employees a sense of autonomy and control. This pattern makes good theoretical sense in terms of previous work which has suggested that where managers provide employees with a sense of autonomy and control this can be a basis for mutual identification (rather than alienation; e.g. see Briner and Totterdell, 2002; Elsbach, 2003; Millward, Haslam and Postmes, 2007; Vischer, 2005). Nevertheless, although it has been hinted at, to our knowledge this association has not been demonstrated in previous quantitative research.

Evidence of this association is important for a range of reasons – most notably because it challenges managerial models which argue that the optimal way to manage organizational space is to leave relevant decisions in the hands of managers, thereby removing autonomy and control from those they manage (e.g. Bibby, 1996; Gartenberg, 2006; Hyer and Wemmerlov, 2002; after Taylor, 1911). Indeed, the present findings suggest that such strategies can be counterproductive in so far as they tend to be associated with the reduced comfort, identification, well-being and satisfaction of employees.

In light of this evidence it is perhaps strange that belief in the value of tight managerial control

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of office space, accompanied by high levels of surveillance (Sewell, 1998), has informed dominant management practice in offices around the world (Baldry, Bain and Taylor, 1998a; Laing *et al.*, 1998). Taylor originally stressed that 'all possible brainwork should be removed from the shop and centred in the planning or laying out department' (Braverman, 1974, p. 127) and today, when it comes to space management, mastery of one's workspace is typically only retained by high-status employees who are seen to require 'higher degrees of interaction and autonomy ... [with] greater discretion over the timing content and the tools of work' (Laing *et al.*, 1998, p. 18). As a result, the conditions faced by many office workers have been likened to those of the sweat shop or slave galley (Baldry, Bain and Taylor, 1998a; Kjellerup, 1998; Veitch *et al.*, 2007).

In this regard, the present findings certainly speak to recent calls to adopt a more humane, psychologically sensitive approach to the management of workspace, in line with Vischer's observation that 'companies willing to experiment with giving occupants some say in workspace design have found that people expand their territory to take responsibility for communal and even public space, develop more attachment, and are more psychologically comfortable at work' (2005, p. 72). The fact that giving workers 'some say' in the design of their workspace is seen as 'experimental' indicates just how ingrained the ethos of managerial control has become (Ayoko and Härtel, 2003; Baldry, 1997; Szilagyi, Holland and Oliver, 1979).

As with the management literature, these present findings are also somewhat at odds with the design literature (Commission for Architecture and the Built Environment, 2004; Laing *et al.*, 1998; Mahdavi and Ulla, 2005; Myerson and Ross, 2006). Evidence reported here indicates that attention to issues of design (e.g. through consideration of ergonomics, fit-out and aesthetics) will not be sufficient, on its own, to create a positive working environment. This is because, psychologically, it would appear that comfort is as much the product of the relationship between management and workers within the workspace as it is a consequence of the physical combination of desks and interior design. As one respondent to the BBC website article wrote, 'if you are not allowed to arrange your desk as you would like to (then) you'll feel uncomfortable, like an outsider and not part of the team' (Haslam and Knight, 2006).

It is true of course that much design literature does encourage user involvement in the development of workspace. Nevertheless, this involvement is largely confined to those in the upper echelons of the organizational hierarchy (Austin, 2005; Gensler Architecture, 2005; Laing *et al.*, 1998; Myerson, 2007; Peters and Waterman, 2004; Soltani and Green, 2007). The present findings suggest that benefit may be derived from engaging *all* employees in the design of their workspace – an argument that is consistent with social psychological literature which speaks to the capacity for voice to engender a sense of mutual respect and thereby identification (Ashforth and Mael, 1989; Baldry, 1997; Ellemers, de Gilder and Haslam, 2004; Haslam, Eggins and Reynolds, 2003; Smith, Tyler and Huo, 2003; Tyler and Blader, 2000, 2003).

Limitations and future research

Notwithstanding the support that it lends to our theoretical model, it is clearly the case that there are a number of limitations to the present research. The first of these is that the correlational nature of the two studies precludes a definitive causal interpretation of the relationship between the variables we have investigated. The CCI model presented in Figure 1 argues for a specific set of directional and mediational relationships, and several of the causal pathways here are consistent with previous experimental work (e.g. Haslam *et al.*, 2004). However, it needs to be acknowledged that alternative interpretations of these relationships are both possible and plausible. Indeed, elsewhere we and others have argued that organizational identification has the potential to create an 'upward spiral' whereby identification increases well-being which in turn increases organizational identification (e.g. Haslam and Reicher, 2006; Schmitt and Branscombe, 2002). It seems likely too that, just as comfort is a basis for organizational identification, so too identification can increase employees' sense of comfort. Nevertheless, as structural modelling indicated, the relationships specified in this model fit the data well and the model is clearly superior to several others that might be postulated on the basis of other work. These include (a) single-factor models and (b) models in

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which items are allowed to load onto additional uncorrelated factors (Podsakoff *et al.*, 2003; Williams, Cote and Buckley, 1989).

One potential limitation of the second study relates to the fact that our participants were accessed via a BBC News website in which we explicitly discussed ideas of the form that this study tested. Yet, against the idea that these factors were major contaminants of our data, we would make two observations. First, our confidence in the external validity of our findings is reinforced by the fact that the findings of Study 2 accord closely with those of Study 1 in which there was no clear or particular framing of the survey. Second, although the news article certainly presented information related to the questions we were addressing (and may, like the questionnaire itself, have primed particular considerations), it in no way 'forced' the participants to agree with our analysis. Indeed, it seems quite likely that, had they had wanted to, respondents could have used the survey as a way of communicating their *dis*agreement with anything that we (or anyone else) had to say on the topic of space management. Along these lines, research by Moor (2007) indicates that across a range of websites a large proportion of the comments that people make involve some form of protest or 'flaming'.

Nevertheless, it remains true that there is certainly a need for future research to examine the variables that we have investigated in the present studies using experimental designs that would allow us to make hard and fast statements about causality and which would give us tighter control over features of the response context. Significantly too, as well as *manipulating* the way in which office space is managed, there is a need for this research to examine how workers actually respond to these manipulations, rather than relying on self-reported behaviour as the present studies do. Relevant outcome measures here would include not only participants' feelings and sentiments, but also their actual behaviour – in particular, their reporting of illness and displays of productivity and citizenship. We note, too, that despite the differences in working environments that generally exist between managers and workers (Laing *et al.*, 1998), managerial position did not have any impact on the variables discussed in the present research. That managers and workers seem to understand and appreciate working space in a similar way, in spite of the differences between their experiences of that space, may suggest a universal appreciation of how one's own space should be handled. The difference between this appreciation and the reality in which high- and low-status workers find themselves may well prove an interesting area for future research.

Indeed, as part of the present programme, we have conducted such studies (both in the laboratory and the field; Knight and Haslam, 2009; Knight, Haslam and Haslam, 2009). For present purposes, the important point to note is that these findings provide strong support for the present analysis. Nevertheless, it needs to be emphasized that they too have important limitations (e.g. because they are obtained from small, non-representative samples and in contrived situations). Accordingly, this and other future research will not render the present studies superfluous, but rather should serve to complement and flesh out their contribution.

Concluding comment

Most contemporary offices are 'functional, predictable, and consistent' and are characterized by 'low user control' (Laing *et al.*, 1998, p. 34). Within them, most employees are 'over-managed and over-monitored' (Morrell, 2004, p. 4), justifying their description as 'Bright satanic offices' (Baldry, Bain and Taylor, 1998a, p. 163). Despite being characterized as 'modern', these practices can clearly be linked to managerial philosophies that have prevailed for well over a century (e.g. since Taylor, 1911). These emphasize the importance of the managerial prerogative, and suggest that management control is not only in the interests of managers but in the interests of workers too. Nevertheless, at least when it comes to issues of space management, the findings of the present studies point to ways in which this philosophy appears to be misguided and may need to be challenged. In particular, this is because it would appear that managerial control of workspace can compromise employees' organizational identification and lead to sub-optimal work experiences. Certainly, if the path to organizational success passes through identification (in the way that social identity researchers suggest; e.g. Ellemers, de Gilder and Haslam, 2004; Haslam, 2004; Tyler and Blader, 2000; Van Dick, 2004), then closer interrogation of the

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received wisdom relating to issues of space management seems warranted.

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References

Abrams, D., K. Ando and S. Hinkle (1998). 'Psychological attachment to the group: cross-cultural differences in organizational identification and subjective norms as predictors of workers' turnover intentions', *Personality and Social Psychology Bulletin*, **24**, pp. 1027–1039.

Albert, S. and D. A. Whetten (1985). 'Organizational identity'. In L. L. Cummings and B. M. Staw (eds), *Research in Organizational Behavior*, Vol. 8, pp. 263–295. London: Sage.

Armstrong, M. (1991). 'A Handbook of Management Practice'. London: Kogan Page.

Ashforth, B. E. and F. Mael (1989). 'Social identity theory and the organization', *Academy of Management Review*, **14**, pp. 20–39.

Austin, W. (2005). 'The chairman will have no permanent seating position', *Architects' Journal*, **222**, pp. 44–45.

Ayoko, O. B. and C. E. J. Härtel (2003). 'The role of space as both a conflict trigger and a conflict control mechanism in culturally heterogeneous workgroups', *Applied Psychology: An International Review*, **53**, pp. 383–412.

Bain, P. and P. Taylor (2000). 'Entrapped by the "electronic panopticon"? Worker resistance in the call centre', *New Technology Work and Employment*, **15**, pp. 2–18.

Baldry, C. (1997). 'The social construction of office space', *International Labour Review*, **136**, pp. 365–378.

Baldry, C., P. Bain and P. Taylor (1998a). '"Bright satanic offices": intensification, control and team Taylorism'. In P. Thompson and C. Warhurst (eds), *Workplaces of the Future*, pp. 163–183. Basingstoke: Macmillan.

Baldry, C., P. Bain and P. Taylor (1998b). 'Intensification, control and team Taylorism'. In P. Thompson and C. Warhurst (eds), *The New Workplace*, pp. 97–116. London: Macmillan.

Barker, J. R. (1993). 'Concerting control in self-managing teams', *Administrative Science Quarterly*, **38**, pp. 408–437.

Bibby, A. (1996). 'Leeds: working life in Call Centre City', updated from an original article in *Flexible Working*, August; http://www.andrewbibby.com/telework/leeds.html (last accessed 27 June 2006).

Branscombe, N. R., M. T. Schmitt and R. D. Harvey (1999). 'Perceiving pervasive discrimination among African Americans: implications for group identification and well-being', *Journal of Personality and Social Psychology*, **77**, pp. 135–149.

Braverman, H. (1974). *Labor and Monopoly Capital*. New York: Monthly Review Press.

Breaugh, J. A. (1989). 'The work autonomy scales. Additional validity evidence', *Human Relations*, **42**, pp. 1033–1056.

Brill, M., S. T. Margulis, E. Konar and the Buffalo Organization for Social and Technological Innovation (1984). *Using Office Design to Increase Productivity*. New York: Workplace Design and Productivity.

Briner, R. B. and P. Totterdell (2002). 'The experience, expression and management of emotion at work'. In P. Warr (ed.), *Psychology at Work*, pp. 229–252. London: Penguin.

Byrne, B. M. (2006). *Structural Equation Modeling with EQS*. Boston, MA: Lawrence Erlbaum.

Christ, O., R. Van Dick, U. Wagner and J. Stellmacher (2003). 'When teachers go the extra mile: foci of organisational identification as determinants of different forms of organisational citizenship behaviour among schoolteachers', *British Journal of Educational Psychology*, **73**, pp. 329–341.

Cohen, L. M. (2007). 'Bridging two streams of office design research: a comparison of design/behavior and management journal articles from 1980–2001', *Journal of Architecture and Planning Research*, **24**, pp. 289–307.

Commission for Architecture and the Built Environment (CABE) (2004). *The Impact of Office Design on Business Performance*. London: British Council for Offices.

Cornelissen, J. P., S. A. Haslam and J. M. T. Balmer (2007). 'Social identity, organizational identity and corporate identity: towards an integrated understanding of processes, patternings and products', *British Journal of Management*, **18**, pp. 1–16.

Counsell, J. and M. C. Puybaraud (2007). 'Real-time data and analysis of the use of office space', *Proceedings of the 11th International Conference on Information Visualization*. Los Alamitos, CA: IEEE Computer Society.

Crompton, R. and G. Jones (1984). *White Collar Proletariat: Deskilling and Gender in Clerical Work*. London: Macmillan.

Crowne, D. and D. Marlowe (1964). *The Approval Motive: Studies in Evaluative Dependence*. New York: Wiley.

Danielsson, C. B. and L. Bodin (2008). 'Office type in relation to health, well-being and job satisfaction among employees', *Environment and Behavior*, **40**, pp. 636–668.

Dovidio, J. F., S. L. Gaertner, A. Validzic, K. Matoka, B. Johnson and S. Frazier (1997). 'Extending the benefits of recategorization: evaluations, self-disclosure, and helping', *Journal of Experimental Social Psychology*, **33**, pp. 401–420.

Drucker, P. F. (1959). *Landmarks of Tomorrow*. New York: Harper.

Duffy, F. (1997). *The New Office*. London: Octopus.

Duffy, F., C. Cave and J. Worthington (1976). *Planning Office Space*. London: Architectural Press.

Dutton, J. E., J. M. Dukerich and C. V. Harquail (1994). 'Organizational images and member identification', *Administrative Science Quarterly*, **39**, pp. 239–263.

Duvallearly, K. and J. O. Benedict (1992). 'The relationships between privacy and different components of job-satisfaction', *Environment and Behavior*, **24**, pp. 670–679.

Eggins, R. A., S. A. Haslam and K. J. Reynolds (2002). 'Social identity and negotiation: subgroup representation and superordinate consensus', *Personality and Social Psychology Bulletin*, **28**, pp. 887–899.

Ellemers, N. (1993). 'The influence of socio-structural variables on identity enhancement strategies', *European Review of Social Psychology*, **4**, pp. 27–57.

Ellemers, N., D. De Gilder and S. A. Haslam (2004). 'Motivating individuals and groups at work: a social identity perspective on leadership and group performance', *Academy of Management Review*, **29**, pp. 459–478.

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Ellemers, N., W. van Rijswijk, J. Bruins and D. de Gilder (1998). 'Group commitment as a moderator of attributional and behavioural responses to power use', *European Journal of Social Psychology*, **28**, pp. 555–573.

Elsbach, K. D. (2003). 'Relating physical environment to self-categorizations: identity threat and affirmation in a non-territorial office space', *Administrative Science Quarterly*, **48**, pp. 622–654.

Elsbach, K. D. (2004). 'Interpreting workplace identities: the role of office décor', *Journal of Organizational Behavior*, **25**, pp. 99–128.

Faller, L. M. (2002). 'Exiting cubicles and igniting creativity: the effects of the organizational climate on innovation in the workplace', *Leadership Review*, Winter: www.leadershipreview.org/2002winter/faller_winter_2002.asp (last accessed 25 January 2009).

Fayol, H. (1918). *Notice Sur Les Travaux Scientifiques et Techniques*. Paris: Gauthier Villars.

Ferguson, G. S. and G. D. Weisman (1986). 'Alternative approaches to the assessment of employee satisfaction with the office environment'. In J. D. Wineman (ed.), *Behavioral Issues in Office Design*, pp. 85–108. New York: Van Nostrand Reinhold.

Froggett, C. (2001). *Work Naked*. San Francisco, CA: Jossey-Bass.

Gartenberg, D. (2006). 'Destination workplace', *Management Today*, **9**, p. 101.

Gensler Architecture (2005). *These Four Walls: The Real British Office*. London: Gensler.

George, M. L., J. Maxey, D. T. Rowlands and M. Upton (2004). *The Lean Six Sigma Pocket Toolbook: A Quick Reference Guide to 70 Tools for Improving Quality and Speed*. New York: McGraw-Hill.

Gorjup, M. T., M. Valverde and T. Ryan (2008). 'Promotion in call centres: opportunities and determinants', *Journal of European Industrial Training*, **32**, pp. 45–62.

Gul, H., H. Issever, O. Ayraz and G. Gungor (2007). 'Occupational and environmental risk factors for the sick building syndrome in modern offices in Istanbul: a cross sectional study', *Indoor and Built Environment*, **16**, pp. 47–54.

Harris, C. and R. Harris (2006). *Developing a Lean Workforce: A Guide for Human Resources, Plant Managers, and Lean Coordinators*. New York: Productivity Press.

Haslam, S. A. (2004). *Psychology in Organizations: The Social Identity Approach*. London: Sage.

Haslam, S. A. and C. P. Knight (2006). 'Your place or mine?', BBC News Website: http://news.bbc.co.uk/1/hi/magazine/6155438.stm (last accessed 20 November 2007).

Haslam, S. A. and S. D. Reicher (2006). 'Stressing the group: social identity and the unfolding dynamics of responses to stress', *Journal of Applied Psychology*, **91**, pp. 1037–1052.

Haslam, S. A., R. A. Eggins and K. J. Reynolds (2003). 'The ASPIRe model: actualizing social and personal identity resources to enhance organizational outcomes', *Journal of Occupational and Organizational Psychology*, **76**, pp. 83–113.

Haslam, S. A., T. Postmes and N. Ellemers (2003). 'More than a metaphor: organizational identity makes organizational life possible', *British Journal of Management*, **14**, pp. 357–369.

Haslam, S. A., C. Powell and J. C. Turner (2000). 'Social identity, self categorization and work motivation: rethinking the contribution of the group to positive and sustainable organizational outcomes', *Applied Psychology: An International Review*, **49**, pp. 319–339.

Haslam, S. A., J. Jetten, A. O'Brien and E. Jacobs (2004). 'Social identity, social influence, and reactions to potentially stressful tasks: support for the self-categorization model of stress', *Stress and Health*, **20**, pp. 3–9.

Haslam, S. A., A. O'Brien, J. Jetten, K. Vormedal and S. Penna (2005). 'Taking the strain: social identity, social support and the experience of stress', *British Journal of Social Psychology*, **44**, pp. 355–370.

Haslam, S. A., J. Jetten, T. Postmes and C. Haslam (2009). 'Social identity health and well-being: an emerging agenda for applied psychology', *Applied Psychology: An International Review*, **58**, pp. 1–23.

Herzberg, F., B. Mausner and B. B. Synderman (1959). *The Motivation to Work*. New York: Wiley.

Hobsbawm, E. (1969). *Industry and Empire*. Harmondsworth: Penguin.

Hu, L. T. and P. Bentler (1999). 'Cutoff criteria for fit indexes in covariance study analysis; conventional criteria versus new alternatives', *Structural Equation Modelling*, **6**, pp. 1–55.

Hyer, N. L. and U. Wemmerlov (2002). 'The office that lean built', *IEE Solutions*, **34**, pp. 37–43.

Katz, D. and R. L. Kahn (1966). *The Social Psychology of Organizations*. New York: Wiley.

Keyte, B. and D. Locher (2004). *The Complete Lean Enterprise: Value Stream Mapping For Administrative and Office Processes*. New York: Productivity Press.

Kjellerup, N. (1998). 'Call center productivity: a sustainable solution', The Coaching Call Center Website: www.callcentres.com.au (last accessed 19 June 2004).

Kleindeinst Group (2005). 'Acceleration of job processing and customer oriented service': http://www.kld.de/en/pub/solutions_products/allgemeinedokumente/214beschleunigungvonprozessen.htm (last accessed 3 August 2005).

Knight, C. P. and S. A. Haslam (2009). 'Lean, green or chosen? Examining the impact of office space management strategies on organizational identification, well-being and productivity'. Unpublished manuscript, University of Exeter.

Knight, C. P., S. A. Haslam and C. Haslam (2009). 'In home or at home? Evidence that collective decision making enhances older adults' social identification, well-being, and use of communal space when moving into a new care facility'. Unpublished manuscript, University of Exeter.

van Knippenberg, D. and E. C. M. van Schie (2000). 'Foci and correlates of organizational identification', *Journal of Occupational and Organizational Psychology*, **73**, pp. 137–147.

van Knippenberg, D., R. Van Dick and S. Tavares (2007). 'Social identity and social exchange: identification, support, and withdrawal from the job', *Journal of Applied Social Psychology*, **37**, pp. 457–477.

Kotter, J. P. (1982). *The General Managers*. New York: Free Press.

Kramer, R. M. (1993). 'Cooperation and organizational identification'. In J. K. Murnigham (ed.), *Social Psychology in Organizations: Advances in Theory and Research*, pp. 244–268. Engelwood Cliffs, NJ: Prentice Hall.

Kramer, R. M., M. B. Brewer and B. A. Hanna (1996). 'Collective trust and collective action: the decision to trust as a social decision'. In R. M. Kramer and T. R. Tyler (eds), *Trust in Organizations: Frontiers of Theory and Research*, pp. 357–389. Thousand Oaks, CA: Sage.

© 2010 British Academy of Management.

Kreiner, G. E. and B. E. Ashforth (2004). 'Evidence toward an expanded model of organizational identification', *Journal of Organizational Behavior*, **25**, pp. 1–27.

Kreiner, G. E., E. C. Hollensbe and M. L. Sheep (2006). 'Where is the "me" among the "we"? Identity work and the search for optimal balance', *Academy of Management Journal*, **39**, pp. 1039–1057.

Kweon, B. S., R. S. Ulrich, V. D. Walker and L. G. Tassinary (2008). 'Anger and stress – the role of landscape posters in an office setting', *Environment and Behavior*, **40**, pp. 355–381.

Laing, A., F. Duffy, D. Jaunzens and S. Willis (1998). *New Environments for Working*. London: Construct Research Communications.

Levine, R. M., A. Prosser, D. Evans and S. D. Reicher (2005). 'Identity and emergency intervention: how social group membership and inclusiveness of group boundaries shapes helping behavior', *Personality and Social Psychology Bulletin*, **31**, pp. 443–453.

Lewin, K. (1956). 'Studies in group decision'. In D. Cartwright and A. Zander (eds), *Group Dynamics: Research and Theory*, 2nd edn, pp. 287–301. Evanston, IL: Row Peterson.

Lodahl, T. M. and M. Kejner (1965). 'The definition and measurement of job involvement', *Journal of Applied Psychology*, **49**, pp. 24–33.

Mahdavi, A. and U. Ulla (2005). 'Occupancy implications of spatial, indoor environmental, and organizational features of office space', *Building and Environment*, **40**, pp. 113–123.

Maslow, A. H. (1943). 'A theory of motivation', *Psychological Review*, **50**, pp. 370–396.

Mayo, E. (1933). *The Human Problems of an Industrial Civilization*. New York: Macmillan.

McCabe, D. and J. Black (1997). "'Something's gotta give": trade unions and the road to teamworking', *Employee Relations*, **19**, pp. 110–127.

McGarty, C., S. A. Haslam, K. J. Hutchinson and J. C. Turner (1994). 'The effects of salient group memberships on persuasion', *Small Group Research*, **25**, pp. 267–293.

Millward, L., S. A. Haslam and T. Postmes (2007). 'Putting employees in their place: the impact of hot desking on organizational and team identification', *Organization Science*, **18**, pp. 547–559.

Moor, R. J. (2007). 'Conforming to the flaming norm in the online commenting situation'. Unpublished thesis, University of Amsterdam.

Moran, J. (2004). 'How chairs gave the game away', *New Statesman*: http://www.newstatesman.com/200411150012 (last accessed 16 April 2008).

Morrell, P. (2004). 'Fit for purpose or fit to bust?' Paper presented in *Workplace Trends: The Emerging Office Landscape*. British Library: Merlin Events and Marketing.

Myerson, J. (2007). 'Focus on: office design', *Architects' Journal Specification*, **1**, pp. 23–28.

Myerson, J. and P. Ross (2006). *Space to Work: New Office Design*. London: Laurence King.

Office for National Statistics (2007). 'Socio-economic classification of working-age population, Summer 2003', *Regional Trends*, **38**: http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk = 7665 (last accessed 23 November 2007).

Oldham, G. R. and D. J. Brass (1979). 'Employee reactions to an open-plan office: a naturally occurring quasi-experiment', *Administrative Science Quarterly*, **24**, pp. 267–284.

Organ, D. W. (1988). *Organizational Citizenship Behavior: The Good Soldier Syndrome*. Lexington: D. C. Heath.

Peters, T. and R. H. Waterman (2004). *In Search of Excellence*. London: Profile Books.

Podsakoff, P. M., J. B. MacKenzie, S. Y. Lee and N. P. Podsakoff (2003). 'Common method biases in behavioural research: a critical review of the literature and recommended remedies', *Journal of Applied Psychology*, **88**, pp. 879–903.

Postmes, T. (2003). 'A social identity approach to communication in organizations'. In S. A. Haslam, D. van Knippenberg, M. J. Platow and N. Ellemers (eds), *Social Identity at Work: Developing Theory for Organizational Practice*, pp. 81–97. Philadelphia, PA: Taylor and Francis.

Postmes, T., M. Tanis and B. de Wit (2001). 'Communication and commitment in organizations: a social identity approach', *Group Processes and Intergroup Relations*, **4**, pp. 227–246.

Pruijt, H. (2003). 'Teams between neo-Taylorism and anti-Taylorism', *Economic and Industrial Democracy*, **24**, pp. 77–101.

Reicher, S. D. and . S. A. Haslam (2006). 'Rethinking the psychology of tyranny: the BBC prison experiment', *British Journal of Social Psychology*, **45**, pp. 1–40.

Reicher, S. D., S. A. Haslam and N. Hopkins (2005). 'Social identity and the dynamics of leadership: leaders and followers as collaborative agents in the transformation of social reality', *Leadership Quarterly*, **16**, pp. 547–568.

Roethlisberger, F. J. and W. J. Dickson (1939). *Management and the Worker: An Account of a Research Program Conducted by the Western Electric Company, Hawthorne Works, Chicago*. Cambridge, MA: Harvard University Press.

Rose, E. and G. Wright (2005). 'Satisfaction and dimensions of control among call centre customer service representatives', *International Journal of Human Resource Management*, **16**, pp. 136–160.

Scheepers, D. and N. Ellemers (2005). 'When the pressure is up: the assessment of social identity threat in low and high status groups', *Journal of Experimental Social Psychology*, **41**, pp. 192–200.

Schein, E. H. (1990). *Career Anchors (Discovering Your Real Values)*. San Francisco, CA: Jossey-Bass Pfeiffer.

Schmitt, M. T. and N. R. Branscombe (2002). 'The meaning and consequences of perceived discrimination in disadvantaged and privileged social groups', *European Review of Social Psychology*, **12**, pp. 167–199.

Sewell, G. (1998). 'The discipline of teams: the control of team-based industrial work through electronic and peer surveillance', *Administrative Science Quarterly*, **43**, pp. 397–428.

Sewell, G. and B. Wilkinson (1992). "'Someone to watch over me": surveillance, discipline and the just-in-time labour process', *Sociology*, **26**, pp. 271–289.

Smith, H. J., T. R. Tyler and Y. Huo (2003). 'Interpersonal treatment, social identity and organizational behavior'. In S. A. Haslam, D. van Knippenberg, M. J. Platow and N. Ellemers (eds), *Social Identity at Work: Developing Theory for Organizational Practice*, pp. 155–171. Philadelphia, PA: Psychology Press.

Smith, J. (2006). 'The ultimate guide to office fit-out'. *Maris Workplace Guide*. London: Maris Interiors.

Soltani, S. and R. Green (2007). 'Style council', *Building*, **272**, pp. 58–62.

Spector, P. E., T. D. Allen, S. Poelmans, C. L. Cooper, P. Bernin, P. Hart, L. Lu, K. Miller, L. F. R. Moraes, G. M. Ostrognay,

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H. Pitarlu, V. Salamatov, J. Salgardo, J. I. Sanchez, O. L. Siu, M. Tiechmann, T. Theorell, P. Vlerick, M. Widerszal-Bazyl and S. Yu (2005). 'An international comparative study of work–family stress and occupational strain'. In S. A. Y. Poelman (ed.), *Work and Family: An International Research Perspective*, pp. 71–86. Hove: Psychology Press.

Stegmeier, D. (2008). *Innovations in Office Design: The Critical Influence Approach to Effective Work Environments*. New York: Wiley.

Sundstrom, E., R. K. Herbert and D. W. Brown (1982). 'Privacy and communication in an open-plan office: a case-study', *Environment and Behavior*, **14**, pp. 379–392.

Sutherland, M. (2005). 'Call center's transformation produces award for service'. In *The Lean Office: Collected Practices and Cases*, pp. 95–104. New York: Productivity Press.

Suzuki, S. (1998). 'In-group and out-group communication patterns in international organizations: implications for social identity theory', *Communication Research*, **25**, pp. 154–182.

Szilagyi, A. D., W. E. Holland and O. Oliver (1979). 'Keys to success with open plan offices', *Management Review*, **4**, pp. 26–41.

Tanis, J. and F. Duffy (1993). 'A vision of the new workplace', *Industrial Development*, **24**, pp. 34–46.

Tapping, D. and A. Dunn (2006). *Lean Office Demystified*. Chelsea, MA: MCS Media.

Tapping, D. and T. Shuker (2002). *Value Stream Management for the Lean Office*. New York: Productivity Press.

Taylor, F. W. (1911). *Principles of Scientific Management*. New York: Harper.

Town, J. P. (1982). 'Effects of participation in office design on satisfaction and productivity'. Doctoral dissertation, Department of Psychology, University of Tennessee, Knoxville.

Trades Union Congress (2001). *Calls for Change*. London: Trades Union Congress.

Turner, J. C. (1982). 'Towards a cognitive redefinition of the social group'. In H. Tajfel (ed.), *Social Identity and Intergroup Relations*, pp. 15–40. Cambridge: Cambridge University Press.

Turner, J. C. (1985). 'Social categorization and the self-concept: a social cognitive theory of group behaviour'. In E. J. Lawler (ed.), *Advances in Group Processes*, Vol. 2, pp. 77–122. Greenwich, CT: JAI Press.

Turner, J. C., P. J. Oakes, S. A. Haslam and C. A. McGarty (1994). 'Self and collective: cognition and social context', *Personality and Social Psychology Bulletin*, **20**, pp. 454–463.

Tyler, T. R. and S. Blader (2000). *Cooperation in Groups: Procedural Justice, Social Identity, and Behavioral Engagement*. Hove: Psychology Press.

Tyler, T. R. and S. Blader (2003). 'The group engagement model: procedural justice, social identity, and cooperative behavior', *Personality and Social Psychology Review*, **7**, pp. 349–361.

Van Dick, R. (2004). 'My job is my castle: identification in organizational contexts'. In C. L. Cooper and I. T. Robertson (eds), *International Review of Industrial and Organizational Psychology*, Vol. 19, pp. 171–204. Chichester: Wiley.

Van Dick, R., O. Christ and J. Stellmacher (2004). 'Should I stay or should I go? Explaining turnover intentions with organizational identification and job satisfaction', *British Journal of Management*, **15**, pp. 351–360.

Veitch, J. A., K. E. Charles, K. M. J. Farley and G. R. Newsham (2007). 'A model of satisfaction with open-plan office conditions: COPE field findings', *Journal of Environmental Psychology*, **27**, pp. 177–189.

Vischer, J. C. (2005). *Space Meets Status*. Abingdon: Routledge.

Wegge, J., R. Van Dick, G. K. Fisher, C. Wecking and K. Moltzen (2006). 'Work motivation, organisational identification, and well-being in call-centre work', *Work and Stress*, **20**, pp. 60–83.

Wik, C. (ed.) (2006). *Modernism: Designing a New World*. London: V&A Publications.

Williams, L. J., J. R. Cote and M. R. Buckley (1989). 'Lack of method variance in self-reported affect and perceptions at work: reality or artefact?', *Journal of Applied Psychology*, **74**, pp. 462–468.

Zalesny, M. D. and R. Farace (1987). 'Traditional versus open offices: a comparison of socio-technical, social relations and social relations and symbolic meaning perspectives', *Academy of Management Journal*, **30**, pp. 240–259.

Zeisel, J. (2006). *Inquiry by Design*. New York: Newton.

Zelinsky, M. (1999). *New Workplaces for New Workstyles*. New York: McGraw-Hill.

Zelinsky, M. (2006). *The Inspired Workspace: Design for Creativity and Productivity*. New York: McGraw-Hill.

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