Cubicle, **Sweet** Cubicle

Once upon a time the factory, with its dirty, noisy machinery, was the standard workplace of industrialized nations; today it's the office. Hundreds of millions of people—at least 15 percent of the population in developed countries—work at a desk, with or without a partition that separates them from the desks of their co-workers. That's an awful lot of swivel chairs.

But a cubicle is more than a mere physical workspace. In recent years social and organizational psychologists have begun to amass evidence that the character of people's personal work environments affects their performance in profound and surprising ways. The size of our desks, our proximity to natural light, the quality of the air we breathe and our privacy (or lack thereof)—all are major predictors of our comfort, our contentment and our productivity.

We have found in our experiments, for instance, that when well-meaning employers hang art posters and provide potted plants to brighten the atmosphere, their efforts can backfire, creating environments that are as discouraging to workers as sterile ones and that inspire the same level of disaffection. Employees perform best when they are encouraged to decorate their surroundings as they see fit, with plants and ornaments, comic calendars, photographs of their children or their cats—whatever makes them feel most comfortable and in their element.

Not only does office design determine whether or not people's backs ache, it influences how much they accomplish, how much initiative they take and their overall professional satisfaction. Employers rarely consider these psychological ramifications—but they should, because paying more attention to workspace design can boost employees' well-being and productivity at minimal cost.

A Very Short History of Office Design

The origins of the modern office can be traced back to the medieval scribes who were entrusted with keeping church and government records. These skilled artisans worked in the homes of kings and noblemen, painstakingly writing and copying documents by hand. Becoming a scribe required education beyond the reach of most citizens, so scribes were regarded as a privileged class. They were often allowed to set up the small rooms where they worked however they liked, typically with a motley assortment of chairs, stools, books and drafting tables.

Why some office spaces alienate workers, while others make them happier and more efficient

By S. Alexander Haslam and Craig Knight

At some companies, employees have free rein to deck out their cubicles. But at others, managers put up posters with sayings like: "Attitude is a little thing that makes a big difference."

By the end of the industrial revolution, this picture began to change. As the ranks of the professional class swelled, so did the number of supervisors tasked with overseeing their labor. This development drove the demand for standardized workplaces in which managers had greater control over their clerical workforce and were able to keep an eye on underlings' progress at all times.

In the early 20th century Pennsylvania engineer Frederick W. Taylor pioneered what became known as the scientific management movement. For Taylor, the core task of management was to discover and implement the "one best way" to do any particular job. In 1911 he wrote *The Principles of Scientific Management*, a book so influential that people began to speak of firms that had been optimized for productivity as having been "Taylorized." Everything should be removed from a given workspace, Taylor recommended, except the materials absolutely needed to do the job at hand. Whereas much of Taylor's analysis pertained to jobs in industry and the assembly line, employers soon began to apply his ideas to white-collar and creative workspaces as well.

White-collar workers everywhere are familiar with the open-plan office—a sterile space intended to accommodate, or "warehouse," large numbers of employees at clusters of desks separated by flimsy partitions that offer a bare modicum of privacy. Such spaces can be quickly modified in response to hirings, firings or fluctuating work assignments. Some organizations even go so far as to practice "hot desking," allocating space on a first-come, first-served basis so that no one is guaranteed the same desk from one day to the next. In such environments, any form of clutter—particularly mess created by employees themselves—is viewed as an impediment to productivity.

The open-plan setup enables supervisors to subtly monitor what their subordinates are doing. Anyone who has had

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FAST FACTS
Feng Shui at the Office

1 ›› In the modern office, many desks are often crammed into a wide-open space possessing few interior walls. This layout was designed for flexibility and to enable bosses to keep an eye on subordinates.

2 ›› Studies show that employees are happiest and most productive when they control the look and style of their work areas.

3 ›› Recent research indicates that even apparent bonuses such as comfy hang-out rooms and luxurious decor can alienate workers when they are imposed by management without genuine consultation.

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to walk past his boss's desk to get to (or leave) his own or whose computer is positioned in such a way that she knows her manager could appear at any moment and, peering over her shoulder, see exactly what she is doing will find it interesting to learn that the designers of open-plan workplaces borrowed from a concept called the Panopticon. Developed in 1785 by utilitarian philosopher Jeremy Bentham, this circular prison featured a central tower from which guards could monitor the inmates without themselves being seen. This was an efficient form of control in that a small number of jailers could keep all the prisoners on edge; the inmates would never know when they were or were not being observed.

Of Legos and Lightsabers

The 1990s dot-com boom—the proliferation of well-funded startups and more established digital media firms, all vying to woo skilled workers—popularized an alternative to the open-plan office. Along with cappuccino bars, air hockey tables and Aeron chairs, bold and invigorating visual elements carried the day—huge tropical fish tanks and dramatic works of art—resulting in attention-grabbing and sumptuous environments. The idea was to make workers feel valued, to win their loyalty and to encourage them to spend extra hours at their desks. At the Google "campus"—the word itself signals a distancing from traditional workplace dynamics—in Mountain View, Calif., and at game companies, interactive advertising agencies, and other entrepreneurial white-collar firms, workers have free rein to deck out their cubicles with lightsabers, vintage lunch boxes, Hello Kitty memorabilia or masterpieces built of Legos—anything beautiful, fun or personally meaningful. Employees compete to see who can devise the most unique and appealing workspace.

But at other companies, managers take a top-down approach to workspace enrichment, bedecking cubicles in "Successories" posters ("Attitude is a little thing that makes a big difference") and creating "synthetic fun" with, for exam-

ple, fake dens stocked with beat-up sofas and a fridge full of beer.

Enriched offices are widely thought to increase employees' well-being and productivity. But they do not always yield dramatic upswings in productivity. In 2009, for instance, scientists at the University of Amsterdam replaced traditional offices with an enriched open-plan office design in which spaces were set aside for specific work functions (a "cockpit" for tasks demanding concentration and a "living room" for social interaction with colleagues). Despite these innovative extras, the quantity of work the employees performed actually decreased slightly after they had been in the new office space for six months. Why would this be?

We recently carried out two experiments to study the effect of the office environment on productivity. We conducted one study in a psychology laboratory and the other with real workers in a commercial office in London. In both studies, we asked participants to perform an hour's worth of office tasks (checking documents and processing memos, for example) in one of four kinds of office space [see box on next page].

The "lean" office was a sanitized-looking space containing only the items necessary to perform the tasks: a pencil, paper, a bare desk and a swivel chair. The "enriched" office had these basic supplies but was decorated with plants and art, including several large, bright

Georgia O'Keeffe–style pictures. In the "empowered" office, participants were provided the same plants and art that were in the enriched office but were allowed to arrange them however they chose or not use them at all. Finally, in the "disempowered" office, participants were given the opportunity to decorate,
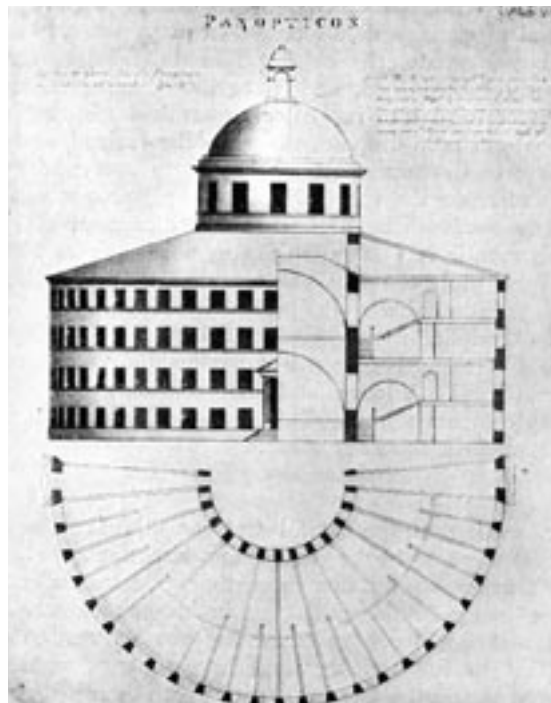
The modern office is based in part on an 18th-century prison design, the Panopticon. A round building full of cells encircles a courtyard with a central tower, from which a few guards efficiently monitor the inmates. Sound familiar?

but when they had finished doing so, the experimenter rearranged the office so that it matched the enriched condition.

This last scenario may not seem to have real-life relevance, but in fact office workers have to cope surprisingly often with this kind of interference. We recently interviewed an IT manager at a large bank in Sydney, Australia, whose office arrangements and decor have been changed by senior management no fewer

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than 36 times over the past four years. "I feel like a pawn on a chessboard, and everyone in my office feels the same," he said. "It's one of the main things we talk about: 'What are they planning to do to us next?' To be frank, it's not a lot of fun, and we all find it incredibly stressful."

Our studies, published in the June issue of the *Journal of Experimental Psychology: Applied*, found that while an attractive environment increases worker productivity, even more critical is employee autonomy. People in the enriched office worked about 15 percent faster than those in the lean office, with no more errors, and they reported fewer health-related environmental complaints. "The pictures and plants really cheered up the place" was a typical reaction to the enriched office, while one participant said of the lean office, "It just felt like a show space with nothing out of place. You couldn't relax in it." Productivity and well-being increased even further—by around 30 percent—in the office that participants customized themselves. "That was smashing; [I] really enjoyed it. What a fantastic office. When can I move in?" one subject gushed. Yet when employees' personal choices were overridden, their performance and well-being dropped to

> An IT manager at a bank in Sydney, Australia, told us that senior managers had rearranged his office decor 36 times over the past four years. "I feel like a pawn on a chessboard," he complained.

the same levels they showed in the lean office. "I felt really undermined," one of the workers in the disempowered office reported. "I'd spent ages arranging the room." Another told the experimenter, "I wanted to hit you."

Control Issues

Factors other than the design and trappings of a workspace, such as acoustics, can also affect employee performance. A study in 2009 at the University of Turku in Finland evaluated how well workers did on cognitive tasks in a range of different sound environments. The team found that when workers heard irrelevant speech sounds nearby (think: the NPR broadcast drifting over from a colleague's cube), their performance on reading comprehension and number-recall tasks declined, as did their reported comfort. The researchers speculate that extraneous speech may disrupt working memory and prompt stress responses and recommend high cubicle walls and sound-absorbing wall materials to address the problem.

Showing employees how to manipulate work environments to their own advantage, on the other hand, has distinct benefits. In a 2009 study by the Liberty Mutual Research Institute for Safety in Hopkinton, Mass., researchers evaluated the effects of giving workers an ergonomics training course and supplying them with highly adjustable office chairs. Those who received the training and chair not only had a lower risk for musculoskeletal problems, they reported feeling better about their work situation in general.

Indeed, granting or withholding control over employees' working conditions has significant implications for health and well-being, as evidenced by studies exploring what is often called sick build-

Trading Spaces

To investigate how the look of a cubicle influences the work that gets done there, the authors asked people to do tasks in four environments. The "lean" office contained only essential equipment. The "enriched" office was decorated with plants and art. In the "empowered" office, people had the freedom to arrange the plants and art as they chose. In the "disempowered" office, the experimenter undid these personal touches. The "empowered" office workers were the most content and productive by far.

Lean

Enriched

Empowered

Disempowered
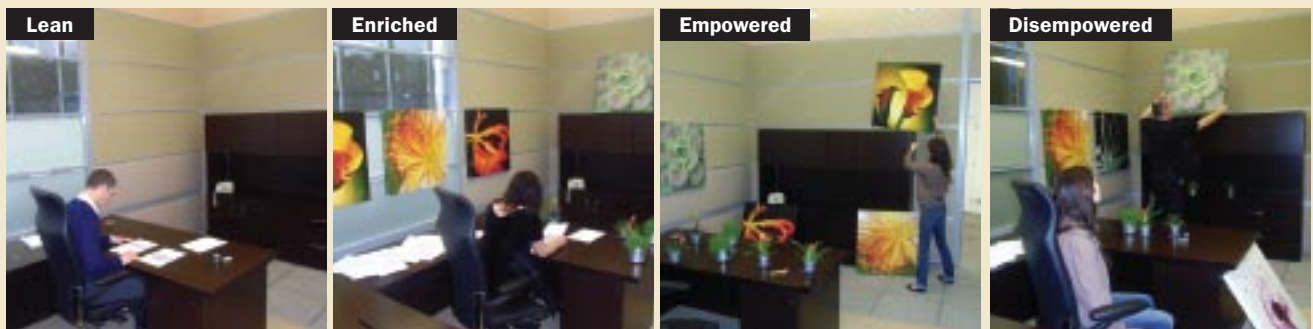
ing syndrome. Symptoms include irritation to the eyes, nose, throat and skin, as well as fatigue, nausea, headaches and dizziness. The syndrome is usually attributed to physical properties of the building, such as problems with the ventilation, heating or air-conditioning systems. But in 1989 a major survey at the University of Copenhagen challenged that notion. The researchers found that complaints of sick building syndrome are around twice as common among workers who have junior positions and hence exert little control over their work environments.

The relation between lack of workspace control and sick building symptoms holds true even in "employee-friendly" enriched environments like that of a U.K.-based travel company, according to research by Chris Baldry, a management professor at the University of Stirling in Scotland. On the surface, the work environment looked engaging—brightly colored workspaces were festooned with plastic palm trees. But a Panopticon-style zone called Mission Control allowed managers to clandestinely monitor employees at all times, and workers continually complained of physical ailments such as dry coughs.

Feelings of control are also linked to productivity. A 2010 study at Chung-Ang University in Seoul surveyed nearly 400 workers at Michigan companies and found a relation between employees' perceived control over their work environments and their ability to focus. In this study, "control" was defined, in part, as being able to move furniture around inside the workspace and customize displays, similar to our empowered office condition. Survey responses indicated that when workers felt they had a say in the physical aspects of their workspace, the negative effects of noise and other distractions were reduced.

Why are people who work in spaces to which they feel a personal connection happier and more productive—even healthier? We think that when people feel uncomfortable in their surroundings they are less engaged—not only with the space but with the work they perform in that space. Arranging offices in ways that ignore employees' preferences and individuality can undermine production and focus, even if well-meaning planners intend the opposite. When employees get to surround themselves with personally meaningful objects at work, the efficiency gurus, enrichment experts and plastic palm-tree peddlers can all stay home. **M**

(Further Reading)

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