on the job
design and the american office

National Building Museum
November 18, 2000 – August 19, 2001
on the job

*design and the american office*

The office building has represented the face of American business to the world throughout the twentieth century. Who can picture New York City without conjuring up the Empire State Building and the twin towers of the World Trade Center? Or San Francisco without invoking the Transamerica Tower? Or Chicago without the black silhouettes of the Sears Tower and John Hancock Center? These iconic structures—suggestive of the nation’s economic and technological prowess—have made indelible impressions on the modern imagination. Yet behind these famous facades is another compelling story: the evolution of the American office.

*introduction*

The office is a microcosm of American social transformation and a yardstick of cultural progress. National dialogs between freedom and control, the individual and the crowd, private agendas and public concerns, personal mobility and communal connection are played out in the office. The constantly shifting interaction between building design, technology, finance, and employees has yielded a dynamic environment whose significance extends beyond its physical boundaries. The office has figured in American life as architecture, but it has also been “on the job” as an incubator of radical social and cultural change.

Great Hall of the Pension Building (now National Building Museum), c.1920; Washington, D.C.; Architect: Montgomery C. Meigs; Courtesy Theodor Horydczak Collection, Prints and Photographs Division, Library of Congress

Completed in 1887, the Museum’s home was originally a federal office building where government workers processed the pension benefits of Civil War veterans. The Great Hall—designed to host inaugural balls—was converted into overflow office space as early as the 1920s; it was restored during the 1980s.
"No; the office is one thing, and private life is another. When I go into the office, I leave the Castle behind me, and when I come into the Castle, I leave the office behind me. If it's not in any way disagreeable to you, you'll oblige me by doing the same."

Charles Dickens, *Great Expectations*, 1860

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**birth of the modern office**

Although the office has had an enduring role in this country's history, it wasn't until after 1900 that the modern office developed as we know it today—an exemplar of the science of business management, information systems, and construction technologies. Modernizing forces transforming post-Civil War America reached the nerve center of capitalism—the office—in the early decades of the twentieth century. As the economy's emphasis shifted from farm to factory and office, legions of employees joined the ranks of white-collar workers, and women entered the workplace in force. Manuals codified office culture and procedures. New types of buildings were developed to accommodate these changes, and the office itself emerged as a showcase of innovations in design and technology.

The coming of age of the modern office reflected contemporary trends in business development. After the Civil War, the rise of "the company," a term derived from military parlance, necessitated a new level of bureaucracy—"middle" management. Employees were hired to implement marketing strategies, coordinate long-distance distribution networks, track sales performance, and perform myriad other tasks. They were assisted by salespeople and office clerks, who processed orders and facilitated correspondence. The paper chase had begun. In 1860, the census indicated that about 750,000 persons worked in "professional service" and other managerial and "commercial" positions. Thirty years later the number had risen to 2,160,000, while in 1910 it more than doubled again to 4,420,000. (The 1890 census also was the first major use of Herman Hollerith's tabulating punch cards that were the forerunners of the computer, inaugurating a tradition of government-endorsed technological innovations later adopted by business.) As social historian Thomas J. Schlereth noted in *Victorian America* (1992), members of this new urban managerial class were active participants in the era's revolutionary changes in politics, leisure, education, and consumer culture. In 1919, social critic Upton Sinclair coined the term "white collar" to describe this new capitalist worker, signifying a seismic shift in the American labor force (*Brass Check*).
women in the workplace

Women represented a major component of this new class. Although paid less than men, many women found that office work offered better pay and more freedom than factory jobs or domestic service. Between 1900 and 1920, the percentage of female clerical workers zoomed from 2 to 12 percent (A. Kessler-Harris, *Out of Work*, 1982).

A predominantly female workforce informed Frank Lloyd Wright's design for the unprecedented Larkin Administration Building in Buffalo, New York (1906). Conceived as the headquarters for the soap company's mail-order business, Larkin was the first office building to integrate innovations in architecture with progressive management philosophy, mechanical systems, spatial distribution, and furniture. Partly to attract the best workers (mostly women) and partly for public relations, Wright designed a clean, light-filled world completely separate from the gritty industrial environment around it. This monument to the progressive-era ideal of uplifting work, designed with the most advanced communications and distribution systems, also provided opportunities for employees' self-improvement: a YWCA, library, and music lounge.

Order entry department at Sears, Roebuck and Company, c. 1913; Chicago, Illinois; Courtesy Sears, Roebuck and National Museum of American History

Sears Roebuck's mail orders were processed at the company's main catalog distribution center. Hundreds of women worked on order forms in a huge space that looked more like a factory than an office.
Computer rendering of the Larkin Administration Building atrium (summer solstice lighting condition). 2000; Rendering and modeling: Earl Mark, Ph.D., Associate Professor of Architecture and Director of Computer Technologies, with Khanh Uong and Seth Peterson at the University of Virginia's School of Architecture.

The skylit atrium of Wright's structure perfectly fit the company's business activities. In spite of a national outcry, the building was demolished in 1950.
Wright’s Larkin Building established the office building as a testing ground for technological and design innovation. Throughout the twentieth century, elevators, steel-frame structural systems, fluorescent lighting, and metal and glass curtain walls were all eagerly embraced by both the design and business communities as ways to improve efficiency and productivity as well as profits. After World War II, air conditioning allowed people to work year round, day and night, virtually anywhere in the United States, forever changing the cyclical nature of commerce.

Business was also quick to adopt new office technologies, from typewriters to Dictaphones, fax machines to e-mail, in its efforts to increase the speed, volume, and range of communications. As technologies changed, office design changed with them. Flexibility became the watchword of contemporary office design; modular wall, floor, and ceiling systems as well as workstations were developed to accommodate the constantly shifting dynamics of organizational structures and technical systems. Facilitating change has also driven design as most office space has been speculatively built for unknown tenants with unknown needs.

"Information, its communication and use, is the web of society; the basis for all human understanding, organization, and effort."

John Diebold, Beyond Automation, 1964
in the name of efficiency

Even some of the smallest innovations had tremendous impact on office life. The Modern Efficiency Desk, developed in 1915 for the Equitable Assurance Company's new Manhattan headquarters, was pivotal in the emergence of modern office culture. Little more than a table with shallow drawers, this new desk banished the privacy previously afforded by rolltop desks and the cabinetlike Wooton desk. Company managers preferred the new desk because it allowed them to easily survey workers and their work. The desk was also praised because it forced workers to keep office files and correspondence moving rather than hidden in the Wooton's myriad pigeonholes.

Aligned in orderly rows, the Modern Efficiency Desk symbolized the era's obsession with factory-like standardization and rational science. This was the period of Frederick Winslow Taylor's treatise on scientific management and Ford Motor Company's development of the assembly line based on Taylor's studies. Time-and-motion studies shifted their focus from the factory to the office. Throughout the 1910s, Frank and Lillian Gilbreth, later memorialized in the best-selling novel Cheaper by the Dozen, applied assembly-line techniques to business, proposing ways to maximize the efficiency of office procedures from typing to rubber stamping.

Time-and-motion typing study, 1916; Remington Typewriter Company, Ilion, New York; Courtesy Gilbreth Collection, National Museum of American History

In 1916 the Remington Typewriter Company hired Frank Gilbreth, a pioneer in the field of scientific management, to help the company improve the efficiency of its typewriter operators. Part of a series, this image shows the technique of champion typist Margaret Owen.
Landscapes of Conformity

While mass-production developments improved office productivity, they also unleashed a backlash of debate about standardization versus individuality. The boredom of the routinized workday, regulated by time clocks, was poignantly depicted in novels such as Sinclair Lewis's *The Job* (1917), the prototype for tales of office “working girls,” and films like King Vidor's *The Crowd* (1928), which chronicled one man's internal struggle between his ambitious dreams and the crushing reality of quasi-military office life.

**Open Landscapes**

Although the dreary culture of Wilder’s movie plagues American offices today—witness the popularity of Scott Adams’s cubicle-bound cartoon hero, Dilbert®—a countermovement toward greater flexibility in the workplace was emerging by the 1960s. During that decade, the development of such fields as human relations and environmental psychology helped to recast the office as a nurturing environment. New informal office layouts came to be called office landscapes or “bureolandschaft,” a term favored by the German Quickborner Consulting Group who revolutionized business design and initiated today’s open office and flexible furniture systems.

Changes in the way America does business continue to transform the contemporary office environment. In the 1990s, the rise of the Internet, laptop computers, and telecommuting seemed to signal the demise of the conventional American office environment. Some of the country’s leading management consulting firms and advertising agencies replaced offices and cubicles with mobile pedestals and tele-

<table>
<thead>
<tr>
<th><strong>Caves</strong></th>
<th><strong>Commons</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private offices are quiet places for creative thinking.</td>
<td>Working in wide-open spaces enhances interaction with others.</td>
</tr>
<tr>
<td>Talking with fellow workers is easy through phone or email.</td>
<td>You’re out in the open, in full view and easy reach of everyone.</td>
</tr>
<tr>
<td>The bigger the private office and more expensive the finishes, the more important you are.</td>
<td>Status is “old economy.”</td>
</tr>
<tr>
<td>We value an individual’s privacy.</td>
<td>We’re one big, happy family.</td>
</tr>
<tr>
<td>You may hang up as many family snapshots and mementos as you wish.</td>
<td>You must follow guidelines that work within the office’s design.</td>
</tr>
</tbody>
</table>
communications networks allowing employees to plug in and work virtually anywhere, anytime. As technology allowed decentralization of the workforce, corporate headquarters seemed headed for obsolescence.

Surprisingly, the recent growth of e-commerce has spurred a return to the office building—not the conventional corporate glass and steel skyscraper—but nevertheless a centralized place where employees gather, exchange ideas, and work. Contemporary idea-driven businesses have found that their success depends on collaboration between employees and clients and their work environment needs to foster that interaction. Such businesses are creating homelike work environments where people can relax, share ideas, and be creative. The new corporate work places of the dot-com economy have kindergarten-like “romp spaces,” coffee bars, gyms, day-care centers, pool tables, and dartboards. Spaces are provided for collaboration as well as private creative thought. Walled cubicles have been replaced by dynamic modular workstations on wheels that can be configured


SEI Investments found itself reorganizing teams so often that they put everyone's desk on wheels and plugged them into a reconfigurable power, data, and telecommunications network hanging from the ceiling.
both as shared and as private areas. Innovative furnishings update the multitiered enclosures of vintage Wooton and rolltop desks. Managers are back in offices, but their offices are in the middle of work areas so they mingle with employees throughout the day. The executive dining room and washroom are relics of the past. Instead, there are shared coffee bars and kitchens to minimize hierarchy and encourage company-wide interactions.

The appeal of the communal office environment has been reinforced by popular culture. Television programs such as *The Mary Tyler Moore Show* (1970–77), *LA Law* (1986–92), and *Ally McBeal* (1997–present) have charted the domesticated business realms where coworkers are surrogate families. Office life on *Murphy Brown* (1988–98), for example, unfolded in the show’s shared newsroom-cum-kitchen. The recent introduction of a unisex bathroom in Ally McBeal’s law firm moves the nation a step closer to understanding and accepting the contemporary office as a home away from home.

<table>
<thead>
<tr>
<th>high technology</th>
<th>50% TELECOMMUTING</th>
<th>37% VIRTUAL OFFICING</th>
<th>15% HOTELING</th>
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<tr>
<td>insurance companies</td>
<td>43% TELECOMMUTING</td>
<td>25% VIRTUAL OFFICING</td>
<td>8% HOTELING</td>
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<td>consulting firms</td>
<td>33% TELECOMMUTING</td>
<td>31% VIRTUAL OFFICING</td>
<td>11% HOTELING</td>
</tr>
<tr>
<td>non-profit organizations</td>
<td>23% TELECOMMUTING</td>
<td>10% VIRTUAL OFFICING</td>
<td>1% HOTELING</td>
</tr>
<tr>
<td>legal services</td>
<td>16% TELECOMMUTING</td>
<td>12% VIRTUAL OFFICING</td>
<td>3% HOTELING</td>
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<tr>
<td>real-estate firms</td>
<td>17% TELECOMMUTING</td>
<td>11% VIRTUAL OFFICING</td>
<td>2% HOTELING</td>
</tr>
</tbody>
</table>

Different types of businesses have adopted "alternative officing" in varying degrees. Source: “What Office Tenants Want” (1999), Building Owners and Managers Association and Urban Land Institute.
**where will we office tomorrow?**

The workplace is no longer a single place, but a network of places. Exactly where one's office is has become less important in an age of e-mail, cell phones, faxes, and teleconferencing. People increasingly work at home, on airplanes, in restaurants—anywhere that new technologies reach. Whether these technologies will feel "real" enough for people to completely forgo face-to-face contact has yet to be determined. However, it seems likely that people will need some human contact and the social cohesion of the office's physical space to be productive. More than any other single factor, this need suggests that the office, continuing to change into forms we can't yet imagine, is here to stay.

**Chill-Out Room at 11600 Sunrise Valley Drive, 2000; Reston, Virginia; Architect: Stanmyre Noel Architects; Photographer: Steven Brooke**

The chill-out room is one of many amenities offered in this speculative office project where the building's developer, the Morino Group, targets emerging Internet businesses and private equity firms as tenants.

Cover:

**Ford Foundation headquarters,**
1967; New York, New York; Architect: Kevin Roche John Dinkeloo and Associates; Landscape architect: Dan Kiley; Photographer: Ezra Stoller © Esto. All rights reserved.

An oasis of verdant, tropical growth, the Ford Foundation's atrium gave staff views of a welcome patch of green at the center of the city. The atrium also glorified a stroll-in-the-park metaphor for engendering and sharing ideas—a concept that would become increasingly important in the workplace of the 1980s and after.

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