Fragmented Dreams, Flexible Practices

New roles and new methods of practice are significantly changing the profession.

The most often-heard lament of architects is that they must regain lost power and stake a larger claim over building and design services. But to reassert the profession’s power, architects must first understand that while design—their most central task—has not changed significantly, the broader context in which buildings develop has been irrevocably altered. Architectural services are becoming increasingly divided among myriad specialists and consultants. The politics of building have vastly expanded into the public domain through liability, regulation, and citizen participation. And technical knowledge has advanced so rapidly that conception and execution are specialization itself.

This fragmentation creates a heightened need for management of the design process, since single buildings are now created by geographically and ideologically separated firms. The transformation has been under way for decades and now significantly affects how architects go about their business. As a result, opposing responses have emerged from within the profession: firms try to be comprehensive in order to deliver all services, or develop associations with other firms in order to deliver services collaboratively. Robert Gutman observes these trends in his seminal book, Architectural Practice: A Critical View (Princeton Architectural Press, 1988), contending that firms are growing either large and comprehensive, or small and specialized.

The economy’s effect

How long will the current recession last? The litany among developers, “Stay alive till ’93,” appears to have some basis in fact, according to Bill Fanning, director of research for the Newton, Massachusetts-based Professional Services Management Journal (PSMJ). Current quantities of building stock and likely absorption rates suggest that every market is overbuilt except low-end housing, where architects have been least likely to contribute. Fanning adds that architects rendering traditional services will be hardest hit, since the market for private clients has shrunk drastically, while infrastructure, transportation, and environmental work has been growing at a steady pace.

For most architects, this is not their first nor their last recession. When sociologist Judith Blau of the University of North Carolina at Chapel Hill conducted her study of New York architectural firms during the recession of the 1970s (Architects and Firms, MIT Press, 1984), she found that half of all firms went out of business. All indications are that, in most areas, the 1990s will be even more difficult to survive. The same outcomes are likely: large firms survive by slowly winnowing their sheer bulk; some small entrepreneurial firms that respond flexibly will do well in times of economic hardship.

Short-term effects include more competition for fewer jobs, lower fees, and higher unemployment.

Today, an architectural commission is a constellation of coordinated pieces, with some projects so complex that they defy comprehension.

In the aftermath, architecture will become a leaner profession with more practitioners working in the public sector, in client organizations, and abroad. This trend will further increase public awareness of architects’ value, benefiting the profession as a whole.

Nontraditional careers in architecture have been difficult to track, since data is typically gathered from private firms rather than alternative workplaces such as corporations or institutions. In a 1991 survey of AIA members, one out of six indicated that his or her primary professional activities were conducted outside of an architectural firm or private practice. Richard W. Hobbs, group vice president of AIA’s Practice/Education group, estimates that half of all architects will be employed outside firms in the near future. The majority of these nontraditional practitioners will work directly for a public or private client organization.

Fragmentation in action

In a profession based on the Renaissance myth and the Bauhaus ideal of an architect designing everything from spoons to cities, fragmentation and specialization have been difficult to accept. The “architect” is scattered among many design and construction professionals who deliver the necessary complement of services. Consultants far outnumber architects on any project as specialization and the threat of liability encourage each trade to handle a narrowly tailored piece of the overall project services. One example of this specialization is the Monterey Bay Aquarium, designed by Escherich Hornsey Dodge and Davis, with more than 200 consultants and 16 review panels, resulting in 200 pages of working drawings.

By contrast, when Henry Hobson Richardson built in the late 1800s, his office produced one set of construction drawings, often inked and colored on linen, that were sent to the job site. This one fact—and all that it implies—is almost inconceivable from today’s perspective. Richardson faced few consultants, few review processes, few documented changes, and had little need for record keeping. He worked very closely with his builders so that details could be produced during construction. The load-bearing masonry of his buildings, which constituted both the structure and the finish, enabled design, technology, and construction to be unified.

Current forms of specialization reflect the demand for more sophisticated services from more sophisticated clients, the pressure of liability, and the expertise needed to perform services competently. The more technical and scientific knowledge demanded of contemporary architecture further fragments the profession. Rapidly developing materials and building systems, for example, require cooperation with networks of product representatives and a level of experimentation that increases liability exposure, elevating the stature of the specifications writer. Computers, which have greatly enhanced architects’ information-management abilities, have also placed a stupefying amount of information...
at their fingertips. Electronic mail and fax machines have taken both time and space out of verbal and graphic communication.

Fragmentation is also decidedly apparent in the entitlement and approval processes, given the pressing issues of growth and environmental management. Extensive negotiations are required among myriad community groups, review boards, regulatory jurisdictions, and clients, each with constraints that the architect must weigh when shaping a building. The burden of compliance has consequences for a project's timely progress, profitability, and design quality. Architect Jon Jerde, principal of The Jerde Partnership in Venice, California, and an effective player in the political design arena, argues that projects heavily scrutinized by agencies and interest groups must be designed like clay pots—with forethought about design elements that may "burn off in the firing." Some architects estimate that present projects entail three times the administrative work that they would have 10 years ago.

A flexible response

AS A RESULT OF SUCH COMPLICATIONS, THE typical architecture firm must construct and reconstruct itself around the different projects it undertakes. Architects themselves have become specialists, in part because the more sophisticated clients of the 1980s and 1990s have demanded greater performance, dividing their commissions to get it. Public and private client organizations, now with their own in-house architects and project managers, subcontract pieces of their projects, creating teams of specialized consultants. Differing project-delivery systems have evolved to respond to client demand, and to related conditions such as liability, project complexity, and geographic separation of design firm and project site.

In theory, there is no limit to the ways projects can be organized. The most common segmentation assigns one firm the role of design architect with another firm acting as executive or associated architect. The first handles schematics and design development; the second completes construction documents and supervision. Other variations are possible: the very first steps of a commission, such as programming, master planning, or community participation programs, are completed by an independent firm that hands its results to the design architect; large Japanese development/construction companies subcontract their working drawings but maintain responsibility for the rest of the implementation phase. In a survey I conducted in 1991 of 66 widely varied recent buildings in the Los Angeles area, about 6 percent were designed by one office and produced by another. The phenomenon is most apparent in high-profile commissions; based on my survey of buildings published in professional magazines between 1987 and 1990, more than a third of the projects were structured as some kind of split commission.

The most interesting and effective reactions to such changes in project-delivery systems have not been from the firms that specialize in one phase or another, or even from those that take the opposite design-build strategy. Rather, firms that are prototypes for the future embrace the concept of flexible production, echoing other service and manufacturing industries, from the film industry to retail clothing. At least three different types of practice—the elastic firm, the mosaic firm, and the nomadic architect—demonstrate appropriate responses to conditions architects confront today.

Elastic model

SOME SMALL FIRMS ACHIEVE AN EFFECTIVE elasticity by staffing on a project-by-project basis. An example of such a practice is the three-person San Diego firm headed by Adele Naude Santos. Expanding and associating as needed to compete for jobs, her West Coast office grew temporarily to 17 people to work on a recent competition for a massive, multiuse development on Rokko Island in Japan. When American architects work in distant cities or foreign countries, it is often advantageous to associate with local firms and consultants for political reasons as well as for their knowledge of local building practices. In Japan, Santos works with one architect, Yassou Ohadera of JIN Corporation, who tailors a production team to fit each commission, with Tokyo-based engineers T.I.S. and Partners consistently involved in the structural design.

Both at home and abroad, Santos achieves a desired quality and reliability with a small core of collaborators. Her firm has been very successful in assembling talented people—including environmental artists, landscape architects, developers, and associated architectural firms—to win design competitions, so that a unique project team is tailored to each client. The creux of such an elastic model is a small, capable core team with a network of

![Adele Santos's San Diego firm temporarily expanded from three to 17 (left) to compete for a mixed-use project on Rokko Island in Kobe, Japan (above). Had her firm been commissioned, Santos would have enlarged the team to include her Philadelphia office, a Japanese architect, and consulting engineers. This strategy is appropriate for small firms undertaking large projects.](image)

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reliable and talented collaborators, located where and when there is a ready supply of skilled, relatively inexpensive labor, such as in urban areas during a recession or in university towns. Some architects have found another way to achieve elasticity: they harness their computers to produce work at a scale equivalent to much larger firms.

Mosaic model
A DIFFERENT TYPE OF FLEXIBILITY IS POSSIBLE among larger firms that link varied pieces of their own organization with outside consultants for each commission to create a mosaic of interconnected services. The Hillier Group in Princeton, New Jersey, demonstrates how this model works. The firm operates internally as a constellation of independent studios, each loosely specialized by building type or market segment, and each with its own design, technical, administrative, and marketing leaders. The education studio, for example, with Alan Chimacoff as lead designer, has won a number of high-profile commissions on university campuses. The advantage of comprehensive specialization is apparent in Hillier's university laboratory buildings, where the education studio collaborates with the research and development studio on the interiors, rather than with an independent architectural specialist. In turn, the studios are served by a set of centralized departments for specifications writing, accounting, and so on. Depending on the job, the studios perform full services, act as design architects with an associated firm, or contract for only the construction documents. The office also has a division responsible for construction management of its own projects as well as those of other firms. While this structure sounds like a textbook matrix organization, it frequently subverts its own structure in order to respond to new projects. People are temporarily pulled from all studios into a new space to work on a big, fast-track project; Hillier's "corporate" studio, for example, designed the recently opened New Jersey Aquarium in Camden.

Only a large firm can be this comprehensive, but few large firms have so embraced flexibility. One difficulty confronting the mosaic firm is image and marketing, since it behaves as a wide range of offices rather than as one coherent and consistent entity. Another problem is managing the pieces within the firm. As Hillier's director of design technology, Bob Barnett is responsible for maintaining a project's integrity throughout the design and building processes, shepherding the cast of contributors across what has, in many firms, become a distressing chasm between conception and execution.

Nomadic model
A THIRD AND SEEMINGLY IDIOSYNCRATIC form of flexible practice is exemplified by AIA Gold Medalist Charles Moore's affiliations with various practices around the country, including Moore Ruble Yudell in Santa Monica; Centerbrook in Essex, Connecticut; Urban Innovations Group in Los Angeles; and Moore/Anderson Architects in Austin. While I argue that the office is where the project is, Moore and others like him maintain that the office is where the architect is. This model depends on the lead architect's name recognition and willingness to be a design nomad, and the ability of each office to follow through.

The vagabond architect only functions in collaboration with a team of talented architects who can carry a project forward, maintaining the clarity of the proverbial napkin sketch. For example, the 45-person firm Moore Ruble Yudell (MRY) is surviving the recession with sizable projects on the West Coast, in Germany, and in Japan. The design process at MRY might begin on a retreat, when the three partners sequester themselves for intensive focus on several projects. The partners remain actively involved through design development, with Moore flying in for several days each month to review projects. MRY places high value on design collaboration, structuring all phases of every project around a high degree of overlap of partners, of design firm and production firm, of conceptual phases and detailing.

On a commission such as the Nishiokamoto housing development in Kobe, Japan, for Mitsui-Fudosan Company, Moore, Yudell, and consultant Tina Beebe met initially with the clients. The group, later joined by Ruble, came up with a design concept that organized housing blocks around a sequence of gardens. The building and landscape design were carried out by MRY, working with Mitsui Construction Company's architectural and construction management divisions, as well as a Japanese landscape firm that delivered technical and production services. Periodic meetings of partners, project team, clients, and associates kept the concept alive as the building developed. For their projects abroad, MRY associates with a local firm that undertakes construction documents, while

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The Hillier Group has developed a comprehensive range of specialized services that can be pieced together to suit each client and commission. For example, three distinct in-house studios (left) collaborated on the Environmental and Occupational Health Sciences Institute (above) at Rutgers University. This mosaic model is applicable to large and midsize firms.
simultaneously maintaining some construction-supervision responsibilities. This overlapping interconnection, rather than a clear division of labor, affords consistency within an otherwise fragmented process.

**Emerging roles**

*WHAT THE ELASTIC, MOSAIC, AND NOMADIC forms of practice have in common is flexibility and delivery of services to other professionals rather than directly to clients. Thus, a design architect works with—and often contractually for—a production architect; a firm takes on construction management of another architect’s project; an environmental artist and landscape architect work as consultants to the design team; a project team hires four recent graduates on a short-term basis.*

The future will require even more skillful navigation through uncharted territory. Firms will need to restructure project teams in response to the requirements of each commission, and they must become integral parts of architectural and other networks to compete for work. This process will require having something real to offer—either expertise or commissions—as well as demonstrated collaborative skills. Marketing and management will become more difficult, and design quality will be harder to maintain under less standardized conditions. Office management will take a back seat to project management. Successful firms will find a way to integrate management into their varied routines, so that dramatically more unpredictable projects meet clients’ ever-more-exacting demands.

New types of contracts and procedures must develop to accommodate these projects. At present, legal requirements are more likely to dominate the coordination of divided labor than are goals of design quality. The tendency is to keep each set of services as distinct as possible, even though the project would benefit from greater overlap among contributors. Moreover, the client, or constellation of clients, wields new power over those teams that operate as a fragmented association rather than as a collaborative venture. The best buildings will result from very messy interactions among team players.

This growing complication may be the most difficult transformation of all. My studies of projects and firms over the past 10 years, documented in *Architecture: The Story of Practice* (MIT Press, 1991), indicate that architects’ in-house teams should remain small and loosely organized, and there should be a great deal of overlap among teams of contributors. For example, some of the architects responsible for working drawings should participate in the design phases, and members of the design team should move temporarily with the project when it goes to the production office. In divided projects, if design and management are separated, as has been the trend, design tends to lose out. For this reason, a firm’s management goals must be better integrated with design goals.

For individual architects, new roles, new services, and new arenas for practice are emerging. The “people work” of architecture—defined by Roger Montgomery, dean of the University of California, College of Environmental Design in Berkeley, as the social aspects of architecture, from management to programming to community facilitation—will continue to grow. Architects will also be faced with expanding opportunities in client organizations such as real-estate development companies, public agencies, and private corporations. These architects typically perform some design services, manage projects, and hire outside architect-consultants. Within the building industry, architects will wear a variety of hats, from cost consulting and specifications writing to metalworking. As specialization continues, this group of renegade practitioners will expand.

The coming decades will witness a great deal of confusion as the profession reels from the recession, the fragmentation of services, and the required flexibility of practice. The assistance of professional and educational institutions to sort out this process will become paramount. Schools of architecture must respond to the new mandates for education, redirecting the focus from design only, to design plus many other skills. Postprofessional training should become more prevalent and, as part of a general strategy to increase professional competence and ensure societal responsibility, the architecture should develop a model closer to that of the medical profession, which requires continuing education. Training will also shift to address the demand for greater leadership and negotiation skills. Perhaps most urgent is new thinking about project management aimed at welding together the exigencies of contemporary practice with design quality.  

—**Dana Cuff**

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**Nomadic Model**

*JAPANESE ARCHITECTURAL CONSULTANTS*
- Liv Kenchiku
- Kekaku Kenkikyo

*CONSTRUCTION COMPANIES*
- Mitsubishi Construction Company, Ltd.
- Tokyo & Osaka Divisions
- Hiwasaka Corporation
- Mitsubishi Fudousan Construction Company

*JAPAN'S ARCHITECTURAL FIRM*
- Mitsubishi Fudousan Green Tack Co., Ltd.

*CLIENT*
- Mitsubishi Fudousan Company, Ltd.

*JOINT VENTURE PARTNERS*
- Kawasaki Heavy Industries, Ltd.
- Mitsubishi & Company, Ltd.

*ARCHITECTS*
- Moore Ruble Yudell Architects & Planners
  - Buzz Yudell
  - John Ruble

*CLUB DESIGNER COORDINATOR*
- H.A. Dux

*CLUB DESIGNER*
- Andrea Putnam

*CLUB PRODUCTION ARCHITECTS*
- Transaction

*HEALTH CLUB DESIGNER*
- Kumaian Massiah Architects & Associates

Architect Charles Moore maintains nomadic ties to several firms. Moore Ruble Yudell Architects, of Santa Monica, designed the Nishikamoto housing project (above) in Kobe, Japan, working with Japanese developers and their consultants (left).