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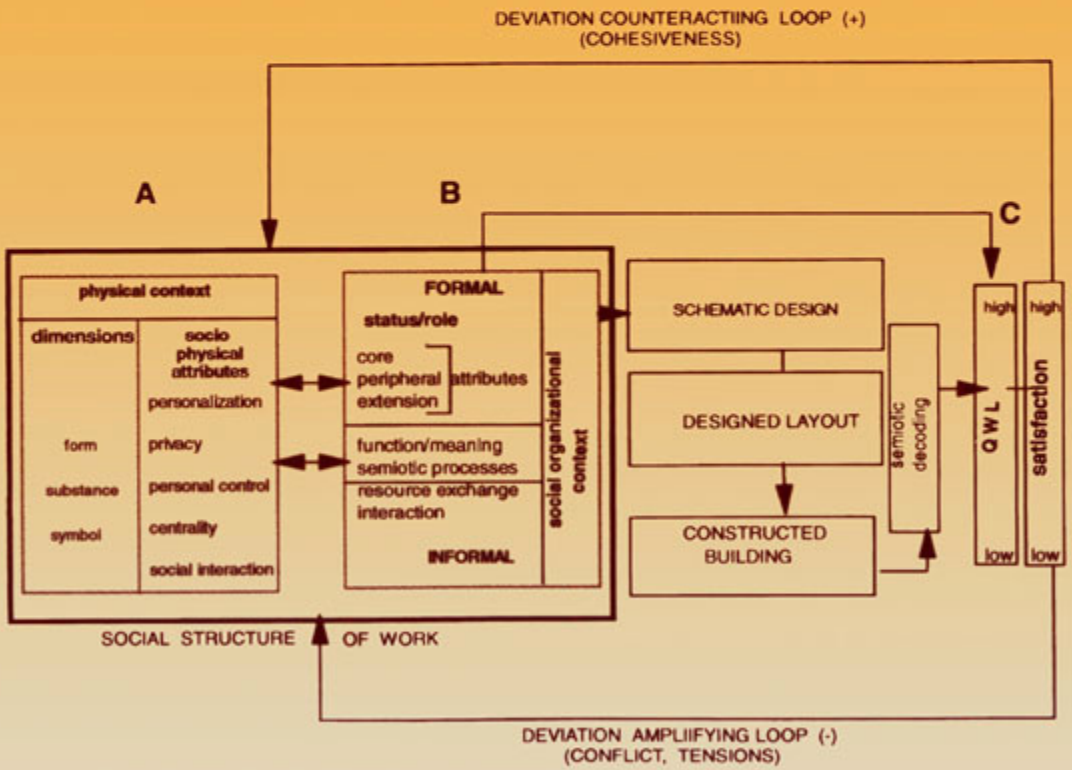
The Social and Spatial Ecology of Work

The Case of a Survey Research Organization



Rita Gorawara-Bhat

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The Social and Spatial Ecology of Work

The Case of a Survey Research Organization

Rita Gorawara-Bhat

The University of Chicago
Chicago, lllinois

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To my parents
with love and respect

Foreword

The Social and Spatial Ecology of Work is an important contribution to the Plenum Studies in Work and Industry. It is a theoretically informed case study, unique in that it takes full measure of the importance of physical space and the built environment for the quality of people's daily working lives and the attainment of organizational goals. Rita Gorawara-Bhat provides us with a theoretical framework for understanding how important space and environment are for experiential aspects of work as they are contextualized in social relations, linked to status and role, and embedded in organizational culture and bureaucratic structure. Her framework is a creatively synthetic one that draws notably from traditions in social psychology, symbolic interactionism, dramaturgical sociology, and social ecology. Sociologists will find themselves in comfortable surroundings; this is a case study of a major social science research center affiliated with a prominent midwestern university.

Studies carried out by psychologists and social psychologists in the decades of the 1960s and 1970s held great promise for introducing a language and methodology for inquiry about the importance of the physical environment for social life. However, the overall impact of this research turned out to be short lived, perhaps owing to overly deterministic assumptions about space and spatial constraints. Gorawara-Bhat, however, gives these earlier research traditions their due credit, with particular emphasis on contributions from small-group research, collaborative studies carried out by social scientists and planners, and also on work in the areas of phenomenological psychology and structural semiotics—whichmay not be as well known to sociologists as the former traditions. She synthesizes elements from these disparate traditions in a compelling and clear way and links them to social theories about organizational structure and culture in which most sociologists, and all students of work and organizations are well versed. This allows her to focus attention on the importance of space and the physical environment in a particular organization; that is, she etches into her theoretical and research plan nondeterministic and clear assumptions about the interrelations among space, meanings, behavior, and social interaction for the purpose of analyzing the quality of work life in a professional organization. Like any good case study, the theories and empirical findings have far broader implications than the case itself.

Ecology in sociology refers to the spatial and social context of social action and social relations and the ground in which meanings find expression. Her use of this concept is theoretically appropriate, but it is also timely in that it reminds us that work—though increasingly shaped by globalizing forces—is spatially embedded and that peoples' cognitive and affective orientations about their jobs are affected by the environments in which they actually work. Gorawara-Bhat also indicates that people (or *users,* as they often termed by design professionals), when asked, are articulate about what sorts of changes in their environments would enhance their motivations and performance. Architects and designers are often aware of this, but social scientists have not, for the most part, provided a language or methodology that would foster collaboration between themselves and design professionals. Nor have social scientists given much encouragement to design professionals in involving users in design decisions. Moreover, design professionals often consider the users of institutional buildings (such as universities, schools, and government buildings) as being too transient for the purposes of early and, especially, ongoing consultation. Yet as Gorawara-Bhat suggests, new building techniques, at least those now used for interiors, allow much greater flexibility than earlier ones did for accommodating to workers' changing activities, routines, and tastes, and to shifts in organizational goals and practices. Such techniques make it possible to alter spaces and, therefore, ought to make it routine to consult with people who use them as workers, users, or inhabitants.

Two overlapping, but distinct, organizational structures and cultures exist within Midwest Survey. One is the money-earning contract division, and the other, the grants-seeking division, which is closely tied to Midwest University and other academic institutions though its research activities. As Midwest Survey increased in size, these two structures and cultures ran the risk of becoming alienated from one another, which was aggravated by the different spatial needs within the two suborganizations. However, Midwest Survey is not unique in this regard. Many research institutes, and also large medical centers, have similar divisions that reflect functional differences between services and research, or between "bread-and-butter" and "esoteric" projects. And because every university-based organization or university component has disparate cultures made up of faculty, staff and administrators, and students, her study sheds light on academic settings in a general way.

However, the implications of this case study extend beyond academic and research settings. Midwest Survey has features common to organizations that produce services or information. They all rely on a highly professionalized workforce, have varied work schedules linked with a flow of changing and often highly customized projects, and have an ebb and flow of temporary and part-time workers. Therefore, Gorawara-Bhat's analyses of the work environment and the collective and individual needs for space and spatial amenities

are broadly relevant, as are her analyses of workers' morale and job satisfaction and organizational culture.

Midwest Survey was initially designed so that some work areas would be highly flexible, anticipating the fluctuating demands of survey research and the ever-expanding importance of computers. In the early stages of Midwest's move to its current location, organizational leaders were savvy about the symbolic value of space, such as the "sacredness" of the library, the social significance of computing functions, and how prestige of rank is reflected in office size and location. The building layout accommodates such features to amplify practical and symbolic meanings of space. There was also early provision for amenities that are rare in academic buildings, including gardens and kitchen areas. In addition, a committee exists for the sole purpose of space allocation, and committee members meet regularly to decide how to arrange activities that fluctuate around the phases of complex social surveys. In short, Midwest Survey administrators are unusually well informed about use-functions and building amenities. Yet as Gorawara-Bhat indicates, such sophistication about the significance of physical space is different from an understanding about how individuals use and perceive space in their work lives and relationships. Organizational actors, however sophisticated about use functions and even the symbolic meanings conveyed by architectural details, overlook the subtleties of how space and activities shape one another and how the environment is used and perceived.

She also shows that the precoded (that is, in the semiotic sense) and deterministically (that is, in the physical sense) built structure, which is created by design professionals, can never fully anticipate from the start the changing needs of the organization and workers. Over the course of time, new activities, relationships, and work patterns evolve. In the United States, we are more prone to demolish or abandon existing facilities and to build new ones rather than to restore or renovate old ones. However, as designs for airports and convention centers illustrate, contemporary building technology allows for considerable flexibility and ongoing changes. Even so, renovation and redesign of older structures around changing spatial needs are possible when location or locational sentiment is at stake—asillustrated by ancient urban markets, city squares, and also older buildings in major world capitals. Over the last decades, U.S. design professionals have grown accustomed to working closely with clients in the initial design of buildings, and a useful next step would be to involve all users (organizational participants) in subsequent renovations and additions.

Gorawara-Bhat is a skillful ethnographer, and a connection she helps the reader make is to consider that work organizations are not all that different from neighborhoods or communities in some important respects. Physical sites and differentiated spaces, whether they are work organizations or neighbor-

hoods, are the contexts for the creation and evolution of meaning, memory, individual identities, as well as social relationships. It is the grounding of work organizations and neighborhoods in situated places that allows for the unfolding of routines of local action that are socially constituted and culturally meaningful. Paradoxically, it may be because of the growing importance of global and aspatial communications that social scientists will again tackle questions about locale and local action from new perspectives and with different conceptualizations; that is, study of global organizations and communications may allow us to freshen our analytical tools for investigations of spatially situated activities and to question what we tend to take for granted. It is noteworthy that urban and community sociologists, such as Herbert Gans and Bennett Berger, have always emphasized the importance of proximity for social relations and shared culture. In contrast, organizational sociologists have stressed the importance of isolation and privacy as signifying prestige and authority. Gorawara-Bhat does not deny the importance of differentiated spaces that accompany differences in prestige and authority, but she concludes that conventional binary distinctions between high-prestige/private space and low-prestige/shared space fail to reproduce the actual interests of workers and activities in work organizations.

As I suggested, it is far from clear how work and communications will be shaped in collaborative aspatial endeavors made possible by the internet and for which there are few or no opportunities for eye-to-eye contact, cordial banter, and personal encounters. It is within this framework that we must also consider Gorawara-Bhat's case study. How much do we as analysts of work and organizations take for granted about contemporary arrangements? Few other authors have situated the particularities of local action and meaning in a study of a work organization in a way that highlights the importance of physical space as she does. She invites us to consider the centrality of locale for social action and the production of meaning and organizational culture. As an analytical concept for the study of work, locale or context may be as powerful as individuals' identities and backgrounds, or organizational goals and structure—allof which we typically do study.

Architecture has held a sort of fascination for a few sociologists who are interested in history, memory, aesthetics, and symbolic meaning. This is architecture spelled with a capital A. Gorawara-Bhat is interested in architecture in this sense in that she enriches her study with analyses of how personal tastes and visual experiences matter for workers. However, her primary focus is the experiential or phenomenological qualities of the built environment. In this regard, it might be suggested that extensions of this approach might include study of the importance of proximity and site in social networks, examination of classrooms and school layout in education research, and analyses of spatial layout of neighborhoods and homes in community and family sociology. Soci-

ologists easily dismiss spatial phenomena as simply reflecting merely more or less power—private versus shared offices—or more or fewer resources—"qualitity" versus dilapidated housing. In her exemplary review of the literature, she shows that others have recognized the importance of site and space for social life; but in the absence of a disciplinary home for theory and research on the built environment, such analyses are often overlooked outside of departments of planning and architecture.

Gorawara-Bhat's methodological approach is both innovative and sound. She combines participant observation techniques and structured interviews and gives serious attention to the layout of offices, halls, and conference rooms. She asks employees about coworker relations, job satisfaction, perceptions of past and current practices, and which aspects of the building facilitate their work and which ones impede it. She also observes how people interact, how they personalize their environment, and how much pride they take in workspaces. Her approach is sensitized by literature from planning and architecture, but she uses this literature selectively and as it is relevant for understanding how spatial experiences relate to people's participation in work roles and organizational life. Students of the built environment and of organizations alike will be surprised by some of her empirical findings. Asking different questions and with different methodologies, a researcher would not have found, as she does, that open, shared space, is preferred by some workers over private space, or that symbolically important functions are sometimes better situated in crowded places than in places where they can be protected.

In her analyses of organizational routines and collective life, she positions spatial conceptions—site, locale, architecture, proximity, and so forth—into theoretical conceptions that are familiar to academic social scientists. For example, she draws from Erving Goffman to indicate how space is used to stage performances, from Talcott Parsons to clarify the consequences for role and status incongruence of social–spatial mismatches, and from Howard Becker and symbolic interactionist theory to clarify how meaning and social action are intimately connected. The powerful significance of her analysis is to show how ecology is fundamental for understanding workers' daily lives and work organizations. This merits particular attention as we have come to consider the significance of social context as embedding work. By demonstrating that social context is, in turn, embedded in space, Rita Gorawara-Bhat's book is an important—indeed, pioneering—contribution to the study of work and work organizations.

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Preface

While her sister is busy with her dolls, and her brother with his slingshot, a little girl of six or seven is happily engaged in her favorite pastime in the family bungalow's backyard: stacking bricks and creating a sectional plan arrangement that would allow her to sit inside, do her homework, and read her favorite books. A few days later, she is rearranging the setting to accommodate her changing interests.

Ever since I can remember, I have been interested in how people live and work and in thinking about the types of spaces that would nurture them in their daily routines. Naturally, I grew up to become an architect. While I learned the art and science of how to design and build structures, my understanding of people's role in them was limited to the use of architectural standards—generally referred to for determining spatial dimensions based on human measurements. I was engaged in typical architectural activity that derives mainly from a set of programmatic and aesthetic factors. I never connected people's behavior, emotions, and lives with the spaces I designed to enclose them—thatis, until I became a social scientist motivated by the need to understand the individuals for whom we build. This book is a result of the culmination of these two diverse facets of our environment—architectureand social science. The medium used to communicate this amalgamation in the monograph is workers and their workplace; it is a book about work life in a contemporary work setting—inthis case, a survey research organization. More than ever before, this work has convinced me that optimal design, one that is meaningful for its users, has its roots in and emanates from social structures in which individuals are embedded.

This book is a conjoint study of both the social–organizational specifics *and* interior spatial setting of a survey research organization, knitted together through social science and architectural constructs. The ethnographic method is used to highlight the ways in which social–organizational dimensions become concretized into and through the spatial ecology of the work setting. In

addition, it draws out the ways in which workers, in the course of negotiating their routine work lives, use aspects of their spatial surround as mechanisms to enrich and give meaning to their work lives, and in the process, alter the social ecology of work. Thus, the social–organizational and spatial aspects of work settings become closely interwoven over time—constitutinga social and spatial ecology of work—andare best conceptualized as a social system. These ideas have been delineated in a working model of a social psychology of space use in work settings.

The acquisition, nurturance, development, and (finally), the synthesis of ideas from these vastly different domains of thinking into the form of this book, were made possible only through the opportunities afforded to me by several people and institutions who placed their trust and assisted in facilitating my progress on this path; I deeply appreciate their help. The seeds of awareness of the relevance of social factors in the design of urban settings were sown during my architectural graduate thesis project under the direction of the late Daniel Brenner at the Illinois Institute of Technology. Later, George E. Danforth encouraged me in my efforts to keep on the path. Subsequently, the opportunity to pursue social science training at the birthplace of urban sociology—theUniversity of Chicago—andbe steeped in its rich intellectual traditions has been enriching beyond the academic requirements of a doctoral degree; to all my teachers, I am ever grateful.

I would like to acknowledge and express my deep gratitude for the support I have been given by Midwest Survey. Permission to study Midwest Survey was granted through the Office of the Director. Furthermore, I was given all necessary support, unrestrained access, and permission to interview respondents at their workplace. The Director took the time to read and provide a critical review of a prepublication copy of the manuscript, and there was no censorship of any of the material therein. For all the support, and this latitude of freedom and opportunity., I am most grateful.

Without the help of the many respondents at Midwest Survey, this study would not have taken the shape that it has. They afforded me that greatly valued privilege that ethnographers work so hard to achieve—getting close enough to observe and learn the routines, their war stories, the petty contingencies they endure in their work lives, and the indignities to which they are often subject. These "close-ups" were invaluable in helping me understand the ways in which workers use and negotiate with their physical surround and reconstruct their work lives to make them meaningful. The understanding of work life from the perspective of workers, in all its complexity and richness, was only possible because, over time, I was allowed to become an "insider." I am deeply thankful to all the respondents both within and connected with Midwest Survey who took the time to help me see them as they themselves

saw. While their names cannot be mentioned here, it is to them that I owe a great debt and my deepest appreciation.

Many others helped at different stages through discussions, suggestions, and reviews of earlier drafts. To Mildred Schwartz and Judith Blau I am particularly grateful for providing thoughtful and constructive criticisms for improving and articulating latent ideas in the manuscript as it developed into this book; the work is better for their suggestions. Colleagues and friends contributed ideas, observations, and suggestions: Ethel Hanson and Richard Lipinski helped by acting as sounding boards for many of my earlier ideas. Even though the final title is different from her suggestions, Carol Stocking helped me think through titles for the book.

A more basic level of support came from my dissertation committee. Fred Strodtbeck helped me learn, through his own writing, ways of looking at simple examples at a level of abstraction in which concepts from theoretical disciplines (such as anthropology) could be aligned and fused with concepts from such practical disciplines as architecture to provide fresh insights into social ways of constructing the work world. Edward Laumann, Norman Bradburn, and Charles Bidwell each not only gave their carefully thought and thorough reviews of the dissertation but also strongly encouraged and supported the idea of publishing it as a book. For their guidance and encouragement, I am indebted to each one of them.

I want to thank Eliot Werner at Plenum Publishing Corporation, whose enthusiasm for the manuscript encouraged its writing and shaping into a book. Arne Kallelberg and Judith Blau were most instrumental in helping shape the final text significantly; I am indebted to them for their insights. In addition, I have been honored to have Professor Blau write the foreword for this book.

To my parents, Ved and Hari Gorawara, who have been supportive from the very beginning and through all the stages, I express my deepest gratitude. Rishi Bhat helped in his own unique way, allowing me time to do "my work" and, more important, offering technical computer assistance. I am greatly thankful to him. My greatest indebtedness is to Shrikant Bhat.

Contents

1

Physical Space and Social Organization in Work Settings

Human architecture must design for human functions; it has nothing to do with Bauhaus asceticism, letting the plumbing hang out, or the restoration of ornament. Rather it requires attention to the users as social and psychological beings and to design solutions that allow them to live as they want to live—andin buildings they enjoy being in and consider beautiful. Human architecture may not be published in today's architectural journals, but it offers enough design challenges to involve several generations of practitioners, researchers, students, and teachers in an innovative, creative, and socially useful professional endeavor. (Gans 1983)

INTRODUCTION

The crux of the problem, and the issue for this book, lies in the thesis that work settings are impoverished and inadequate when they are narrowly conceptualized and designed by "rational criteria" such as function and cost, and when they are defined solely by their physical parameters. A fuller conception of a work setting entails, in addition to the physical setting, the concurrent inclusion of the social, psychological, and organizational context within which it is embedded, an understanding of the ways in which it becomes intertwined with this social–organizational structure, and consequent meanings for workers. Gans (1983) has forcefully argued (see opening quotation) that the physical implicates the social and does so most significantly through the user; therefore, it is essential that the design of a physical setting be based in the users needs and an understanding of the meaning users construct within, and derive from, the specific physical setting. It is in this spirit that this book attempts to examine a work setting through a working marriage of architectural and social science constructs and, more particularly, to understand the interrelationship between the enclosed and humanized space of a work setting

and the social organizational context by and through which it acquires meaning. The broader intent is to specify the elements of a theory of space utilization and worker adaptation in work settings. These two goals have a basis in the underlying theme in which the practical end of improving worker efficiency is rooted in, and therefore needs to follow from, an overarching theory of space allocation, utilization, and management within the social–organizational context.

To anticipate the conceptual and ethnographic material to be presented in the chapters to follow, this chapter begins with two major strands that underlie my conceptions and understanding of the social, psychological, and symbolic dimensions of the physical work setting. The first strand examines the architectural, or the creation of spaces, as a product; it highlights a sampling of those architectural perspectives that have been responsive to the social climates they were part of and contrasts them with examples of the opposite kind. The nature and characteristics of the context in which the design product is shaped—thatof architectural practice—arehighlighted in a subset of the first strand. The second strand delineates social perspectives in which architecture/space are viewed from the user's perspective as being processual. Specifically elaborated in this strand are the ways in which physical space evolves into social space (social psychology); the ways such environments come to acquire meaning (architectural semiotics), and the consequences for behavior (environmental psychology).

The following brief delineation of the phases and developments of how architectural thinking and conceptualizations of physical space, as well as social perspectives of physical settings, have evolved over time are meant to be illustrative rather than exhaustive.

ARCHITECTURAL PERSPECTIVES ON PHYSICAL SPACE

Architectural theorists have always had an awareness that "(architecture) . . . ought to be supplemented and developed on the basis of a better understanding of psychological and sociological factors" (Norberg-Schulz 1965). This theme was the focus of a Princeton conference, The Social Basis of Design, as early as 1947 (Creighton 1949). But as Norberg-Schulz later pointed out, modern architectural thinking, though rich in allusive suggestions, does not have "a worked out method based upon a clear analysis of functional, sociological, and cultural problems." Jencks (cf. 1973), in his survey of modern movements in architecture, has delineated the problem of recent American architecture (built in the latter half of the present century) as rooted in the superficial values of a consumer society and the consequent banality of architects' building tasks and commissions. Architects generally responded in one

of two equally insipid ways. On the one hand, they randomly substituted functionalist, neoclassicist, or vernacular architecture instead of consciously crystallizing the prevailing social and cultural values by edifying the symbolic and meaningful. And on the other hand, they took an exclusivist position—onein which satisfylng the individual architect's aesthetic sensibilities alone was the requisite for good design. From this standpoint, they reechoed an earlier era .of formalism by conceptualizing space/architecture as narrowly defined by physical attributes in which the user's experience was not of much consequence, since architecture was designed to be experienced along its aesthetic dimension alone and could therefore only be experienced as such by other architects similarly trained in an aesthetic culture. As this exclusivist position began to incorporate a number of architectural characteristics, recent American architecture became a blend of eclecticism in which there was "simply no consensus which could establish propriety, nor technical and functional restraints which could stabilize the norms, nor public myth and philosophy which could sanction the metaphor" (Jencks 1973). Such a climate, known as "Camp" architecture, had no rules; anything was acceptable.

In opposition to this above described chaotic movement of Camp, members of the non-Camp movement removed themselves from the larger issues into working in the confines of more concrete discussions. One of the prominent architects of this movement—Venturi (1977)—socializedprevailing conceptions of architecture by developing ideas such as the relation between the public and private realms and the city as an articulate frame for human action. For instance, in the exteriors of his buildings, he reflected the external public forces, while the interior was made to reflect the individual circumstances of the user: "Designing from the outside in, as well as the inside out, creates necessary tensions which help make architecture." Such a perspective, which aims to be responsive not only to users' needs in the interior but also to the broader public domain through its exterior, is an architecture of "complexity and contradiction" and "has a special obligation to the whole; its truth must be in its totality or its implications of totality. It must embody the difficult unity of inclusion rather than the easy unity of exclusion. More is not less."

This "inclusive architecture" of Venturi that either contradicted or expressed the forces emanating from a plurality of subcultures transcended not only the previously described "Camp," but also its precedent—theexclusivist perspective of purity and restriction based on cycles of taste alone (Formalism) and kept as its focus both the individual and the collective user of design. Because this is one of the few perspectives that is based in the needs of users, it is elucidated here in greater detail.

In articulating and analyzing the architectural shapes of his ideas, Venturi focused on the oscillating relationships among three dynamic elements—form, substance, and/or symbol—initiallyelucidated by Vitruvius in his ten-

volume work on architecture and known synonymously as container, content, and connotation in the semiotic literature (Pelligrino 1994). In fact, even in the present day and age, the dimensions of form, substance, and/or symbol are germane to architectural analysis and thinking. Therefore, this framework is used to understand the ways in which the spatial aspects of work settings intermesh with the social and organizational dimensions. At this point, a brief divergence delineates how these architectural dimensions have been invoked, conjointly or otherwise, to emphasize differential social aspects of architecture.

When the focus is on the organization of material and structure, independent of other considerations, the emphasis is *form.* The direct consideration of relationships between buildings and their users is *substance.* And insofar as buildings are associated with ideas that create, disrupt, or continue traditions, they exist as *symbol.* These elements—form, substance, and symbol—to varying degrees augment and interact with one another in the users response to any given structure.

For example, the fusion of form and substance is notable in Renaissance churches: the interior vocabulary of pilasters, cornices, and drip moldings has a continuity in scale, and sometimes material, with the exterior. Purpose accessible from the outside is reaffirmed within (Gideon 1963). In a more contemporary example—the Holocaust Museum in Washington, D.C.—the exterior form is an architectural embodiment of its symbolic interior—a building in which the architecture expresses the experience to which the building is dedicated (Muschamp, 1989). In another contemporary example, the blending of substance and symbol is eloquently represented in Rothko Chapel, a nondenominational place of worship in Houston, Texas. While a subdued and humanly scaled architectural interior acts as an enveloping membrane, allowing opportunities for meditation, the upward sweeping ceilings symbolize the object of contemplation.

In contrast to this, form is divorced from substance in most modern, multifunctional buildings—some of the most dominating forms of the American urban scape. It is not surprising to find container high-rise office buildings with steel and glass construction in Fairbanks, Alaska, as well as in Houston, Texas, despite the vast differences in the climate and cultures of the two states. The case is similar for institutions designed as container buildings across different countries and/or cultures. For example, the Museum of Contemporary Art in Chicago and the Hamburger Bahnhof Museum for the Present in Berlin, Germany, house nearly identical art galleries, while claiming to respond to the particular history, atmosphere, and architecture of the two places! The architectural vocabulary of such neutral container buildings that can be sited almost anyplace (and housing various functions ranging from institutional and commercial to residential buildings) can be seen as no more than a bland response to contemporary structural, spatial, and programmatic needs.

It is not difficult to understand that in the Modernist drive toward universalism, Venturi's "complexity and contradiction" acted as a stimulant. As Jencks (1987a) asserts, "Not only was it visually dramatic, it also could handle urban reality in a satisfactory way, accepting the discords and discontinuities of use and taste: for instance the different pressures on the inside and outside of a building, which were invariably suppressed in a Modernist architecture."

However, this paradigm of contradiction and discontinuity (found separately in the architecture of Venturi, Stirling, and Dixon [Jencks 1987a, b]), where one language confronts another, where one theme contradicts another, where cultural pluralism is celebrated as an end in itself, and where it is up to the viewer to supply the interpretation, came to be seen as incomplete and in need of a symbolic theme, or a unifying plot. This gap came to be filled through the architectural practice and ideas of architects, among whom Leon Krier (Latham 1987) has been a prominent example. He elucidated a model of integrated grammar, such as a small-scale typology used to individualize a function and break up a mass into discrete units, that had eclectic fragments absorbed into its unity. It was a strategy of "unity in the primary style, eclecticism in the details" (Jenks 1987b); the overarching idea was to capture the variety and symbolic richness of traditional architecture(s) through juxtaposing mixed-use functions but within the confines of a unified grammar of scale.

However, none of these paradigms—the earlier classical architecture and its many stylistic variations, the paradigm of contradiction and discontinuity, or of unity in the primary style—found continuity or prevailed in influencing the design of contemporary work settings. The primary reasons for this had to do with the recent introduction of new materials—iron, steel, glass, and, later, concrete—and new construction techniques on which Modernism depended closely. Furthermore, these new materials and techniques represented a total and welcome departure from the past. The ideological intention of the Modernist movement was to bury any and all historical allusions, making the new aesthetic of Modernism radically and purposefully antihistorical—an architecture for the masses, presented in a language that appealed to a universal culture. More importantly, these new mass-produced materials and technologies afforded the latitude of freeing construction from load bearing walls and thereby ushered in a range of possibilities such as designing "continuous spaces" and dematerialized glass walls that could abolish the antinomies between outside and inside. Thus, the idea of a standardized "existence minimum" and of austere simplicity, symbolized by Mies Van Der Rohe's famous dictum "Less is more," spoke a language that appealed to a universal culture—a language of embodying function through pure, efficient, and useful form. It was this Modernist paradigm that became salient for contemporary work settings. And because Modernist design was so preoccupied with being responsive to new

materials and technology, the user for whom the product was designed for the time being was forgotten in the background.

Contemporary Work Settings

The physical environment of contemporary work settings in the United States evolved and derived primarily from the exclusivist perspective—the Modernist drive toward the aesthetics of integration, which suppressed the tastes of all but those chosen few trained in and sensitive to a common set of aesthetic principles. For example, in the Seagram Building in New York, designed in 1958, Mies Van Der Rohe had the lighting and window blinds automatically controlled to provide a uniform visual effect, regardless of the users' needs. In another instance, in the CBS Building in New York (designed in 1965), Eero Saarinen perfectly integrated the interior architecture for each and every occupant of the building through the precise arrangement of abstract art and bland furnishings, such that it was in perfect harmony with the exterior, simplified architecture of the building. Only the chairman was allowed to display personal memorabilia in his office, decorated with his personal choice of dark-paneled walls; for the rest, the interior setting was maintained as not only perfectly color coordinated but also devoid of any latitude for personalization (Jencks 1973).

While such a prototypical work setting—conceptualized by a "veiled hegemony of a ruling bureaucratic taste" (Jencks 1987a)—was replete with sleek design, latitude for flexibility, and autonomy from the restraints of structure, it was impervious to the diverse social and symbolic needs of its users. In the degree to which they reflected social trends, these work settings usually demonstrated a lag before relevant implications for physical aspects were articulated, translated, and incorporated into the total design. For example, in a critical treatise about design in postmodern architecture, Jencks (1977) elaborates on the issue of architecture's lack of sensitivity and approach to the ways in which social issues are symbolized in structures. He argues that "modern architects have disregarded this level of symbolic detail and particularity. . . . Architects have been too removed from this level of detail, and will be until they are retrained as anthropologists or journalists to understand social reality."

For example, while, on the one hand, Mies van der Rohe was one of the greatest pioneers in facilitating the socialization of technology into architecture, on the other, his hollow glass shells enclosing a form and space that were purportedly "universal" were anything but universal because "important functions were suppressed and constricted into the basement" Jencks (1973). In all his steel and glass designs, the emphasis was solely on the expression of architectural form as derived from the articulation of structure. Noteworthy examples of form following from structure in his designs can be found in diver-

gent functions ranging from high-rise housing in the stereometrical apartment buildings along Chicago's lakefront to academic buildings in institutions of higher learning. In all these examples, aspects of design ranging from basic components such as user functions to energy conservation were not considered to be vital elements for the designs of structures (Hilberseimer 1964). In the words of Lewis Mumford (1964):

> Mies van der Rohe used the facilities offered by steel and glass to create elegant monuments of nothingness . . . but they existed alone in the Platonic world of his imagination and had no relation to site, climate, insulation, function or internal activity; indeed, they completely turned their backs upon these realities just as the rigidly arranged chairs of his living rooms openly disregarded the necessary intimacies and informalities of conversation.

Indeed, it was not until much later, in the seventies and eighties, and only after a societal consciousness of the need to conserve energy, that necessary modifications incorporating energy conservation measures in existing structures, as well as new designs, were made by disciples of the Miesian school.

Social Context of the Production of Physical Space

Gradually, with time and the recognition that the work setting could be designed to be conducive to nurturing creativity, the interior architecture of the work setting came under scrutiny by office furniture designers such as Herman Miller and Steelcase. The result was that individual pieces of furniture such as chairs, desks, work surfaces, lighting, and so on, were specifically designed to meet ergonomic standards of the workplace. However, this focus on the physical dimension alone precluded an understanding of the ways in which physical aspects become melded with social and symbolic aspects of the setting in the creation, sustenance, and change of the total work setting over time.

Therefore, we turn to the social science literature for a search of the ways in which physical symbolisms become part of the cultural givens of the work setting. And while these theoretical perspectives reflect different interests and values, they are drawn from insofar as they contribute to our ways of understanding physical space, both from the social psychological standpoint and from the workers' perspective. However, before the social science perspectives are brought into focus, it is useful at this point to briefly elucidate a set of perspectives that have examined the nature and process of architectural practice and consequent implications for shaping form, substance, and symbolic dimensions into concrete building.

These perspectives have examined the social context—that of architectural practice—in which the design and production of architecture takes place. For example, the structural conditions in which architectural practice is rooted,

and the paradoxical consequences created by these conditions, have been elucidated by Larson (1983). One such paradox arises from the way in which architecture is defined. For Larson, architecture is simultaneously defined (1) as the dynamic tension between *telos* (symbolic intention) and *techne* (materialization), and (2) through the social relationship between patrons who define the functions of buildings, and architects who mediate between patrons and the executants of the building. Thus, architectural practice had been viewed as both the relationship between art and technique and also as a social relationship. These two facets of how architecture is conceived have been separately validated by Blau (1984) and Cuff (1991). In a study of growth, decline, and survival among New York architectural firms, Blau (1984) demonstrated that architectural practice is distinguished by dialectical tensions between and among the many facets that characterize architectural practice, and that no single model of practice could be upheld as a model of success. Cuff (1991) further argued that such contradictory forces that are part of the nature of design practice could be attributed to the nature of the production of architecture, which is an inherently social process.

> A very basic task of architectural work is to collect all participants, both in the office and out, to develop a manner of working with them and to interact with them in order to create a design solution . . . It is from this human constellation that the building's final form emerges . . . This is a broadening of the definition of design as that activity which occurs at the drawing board, usually in the early phases of a project, to include all those human activities that contribute to and shape the final form.

This social process is vital in embodying and concretizing the substantive and symbolic user functions into form. This overarching theme led Cuff to conclude that design itself is a social process, and consequently,

> I define design quality as a phenomenological entity perceived by individuals, not as an inherent quality of the object or building. Thus design quality is dependent upon those who make the judgement of quality. I maintain there are three principal evaluators of any building's quality and these are the consumers or the public at large, the participants in the design process, and the architectural profession.

In contrast to these perspectives (cf. Larson 1983; Blau 1984; Cuff 1991) that focus on the roles of patrons and peers in shaping the practice of architecture, others contend that the ultimate product of architectural practice should be controlled by the user and not motivated by the approval and respect of peers and colleagues (Gans 1983). Gans takes architects to task for their

> professional imperialism . . . (that) involves "telling" and "giving" actions, rather than "listening" and "responding" actions. . . (and whose) interpretations are governed by aesthetic and social norms that are not

> informed by the diverse meanings and behaviors of the heterogenous urban class of users.

We gather from this that the shaping of the design product into its final *form* requires the functioning of several diverse entities in tandem as well as at defined times, including the following:

1. Patron
2. *Substance* and *Symbol* (symbolic intention, or *telos,* as Larson calls it)
3. Execution of the symbolic intention by the builder *(techne,* as Larson refers to it)
4. *User*

While matters related to seeking the patronage (1) and the execution of the design product (3) are beyond the scope of this book, the focus here is on the substantive and symbolic dimensions of the design product (2) and the understanding of the processes invoked as users construct them to become a meaningful part of everyday life (4). An understanding of how the social perspectives have examined physical design in process oriented ways from the users standpoint is elucidated in the following section.

SOCIAL SCIENCE PERSPECTIVES ON PHYSICAL SPACE

So far, our background literature has been concerned with the product—the architectural design—morespecifically, the varied perspectives invoked by architects in creating spaces and architecture; and the social context in which the design of the product takes place. In this section, we shift focus and examine three processes: (1) Physical space becoming social space, (2) the ways in which this space gets encoded with meaning, and (3) how physical space influences behavior. The first consideration involves social variables; here, the work of Goffman (1959) best illustrates how physical space is used as a mechanism in furthering individual goals in the social milieu in which one is embedded. The second theme invokes the literature on semiotics, for example, the work of Eco (1979); and the third aspect focuses on the work of environmental psychologists who have theorized and examined the influence of the built environment on behavior (cf. Altman and Rogoff 1987; Stokols 1987).

Transformation of Physical into Social Space

The spatial aspect of settings has been explicitly conceptualized as part of the social mesh in the dramaturgical perspective of Goffman (1959). He has argued that individuals are motivated to create and sustain a definition of the situation that conveys their desired impression of reality; this they accomplish

through a "performance." That part of the individual's performance that regularly functions in a general and fixed fashion to define the situation for those who observe the performance is labeled as "front," and takes place in the "front region." A standard part of the "front" is the "setting," comprising furniture, decor, and physical layout. In contrast, the "back region" or "backstage," among other functions serves as a place where the performer can relax, drop his of her "front," forego speaking lines, and step out of character. In other words, it is the place where action occurs that is related to the performance but may be inconsistent with the appearance fostered by the performance. The most prominent "sign vehicles" facilitating the identity of the "front" and "back," and defining the situation, include attributes of the physical setting, fixed or movable. It becomes apparent that beyond the functional role that physical settings play in daily life, they perform a more complex and interactive role by and through processes of becoming interwoven with the unfolding social dimensions within settings. In residential settings for example, the status symbols displayed in individuals living rooms have been shown to be the most important piece of sign equipment associated with social class (Laumann and House 1979). Thus, in the daily routine of living, the physical setting/architectural accouterments come to be defined and used not only for their specific functional use, but also beyond that as a means to facilitate social processes that are invoked through the unfolding of the particular functions. As setting, function, and process unfold, they come to be conceptualized and defined by users not as solitary aspects of the environment but as an amalgam–based in and derived from physical and social elements–constituting a meaningful environment.

Encoding Social Space with Meaning

What are the processes through which workers in a work setting construct social meaning in and through a physical setting? The somewhat amorphous field of structural semiotics offers a framework for understanding this question. And while it is beyond the scope of this book to explain semiotic theory and its complexities, for our purposes, two tasks are important. First, a brief sketch of two major paradigms is provided—basically, an earlier and a later version—explicating the ways in which aesthetic experience has been conceptualized; second, those key terms that are relevant for understanding how workers construct social meaning in and through their physical work setting are delineated.

The basic difference between the earlier paradigm of conceptualizing aesthetic experience and the later evolved version is that while the earlier model was rooted in the premise that aesthetic experience depended on direct individual perception of objects/artifacts/spaces, the later version evolved to be

responsive to, and address, the social and cultural context of architecture. Constituents of the earlier paradigm included the following: the designer; the process of creation; the product of creation, such as the physical setting of work; the aesthetic experience; and the user. The notion was that the autonomous, individual user would recognize and appreciate this physical setting, not unlike an art object, in the "right way" and primarily for its aesthetic perfection. The cases of individual users' divergent assessments of the physical setting were explained by a failure of individual perception, or the lack of skills on the user's part, and called for particular individuals to develop the necessary skills for "adequate aesthetic perceptions and experiences." This model, however, excluded the supraindividual determinants of the creation and reception of the aesthetic product (i.e., there was no latitude in it for capturing the social and historical aspects of aesthetic behavior and phenomena.) In other words, in this paradigm, the aesthetic product was apprehended in the epistemological perspective with individual users' perceptions as the core of aesthetic experience. The drawback in such a model, invoking aesthetic experience only at high levels of culture, was that it left outside of its concern the many residual levels of culture (constituting the greater majority), their modes of negotiating the aesthetic product, and their own peculiar values that were the bases for the created product.

Beyond the user, the object of experience, such as the designed physical setting in this early model, was conceived of as possessing inherent properties: "The properties, or at least some basic range of them, are objectively its own, and should be recognized by the user " (Rosner 1988). Although Rosner is here concerned exclusively with art creation and reception, the same argument can be made for architecture that was conceptualized as the art of building, with architects defining themselves primarily as artists. A model with such a conceptualization of the designed setting became inadequate in time because of new situations and patterns of reception that arose as societies changed their structures, or as new phenomena appeared in the domain of building technology. Moreover, the subject (the user) and the object of experience (in our case, the physical designed setting of work) were being conceptualized as existing in a cultural and social vacuum.

Beyond these–subject (the user) and object (the object of experience—the designed work setting)–the notion of creativity in this paradigm was conceived as the exertion of uncommon, gifted individuals, and as such it was "opposed against regular work which is collective in the sense that it is carried out within collectively elaborated technologies so that each participating individual can be replaced by another one" (Rosner 1988). However, such a consciousness of the individual creator engrossed in creating a product was misconceived when applied to the modern and evolving mode of the increasing reliance on technology and creating through collective efforts. Furthermore, the socialization

of the product of creation (the designed setting) by and into technology, among several other aspects, exerted influence not only on the final form of a designed setting, but had an even greater impact on its meaning in the aesthetic experience of the user.

Among others, the primary limitation of this early paradigm of aesthetic experience was rooted in the fact that social meaning was dependent mainly on individual users' perceptions. With the recognition of this drawback, this early model yielded to a reformulation in which the object of experience—the designed work setting—was conceptualized not as an object, but as a meaningful structure for its users. In this later version all cultural behaviors, including experiencing the design of spaces, were conceptualized to be essentially semiotic; that is, a designed setting was conceptualized and experienced not through individual perception, but rather was collectively conceived as a structure, meaningful in specific ways to the users of the community in which the setting was embedded. In other words, the relation between the designed setting and the user of the setting was not primary and absolute, but in many ways was constituted and involved in assumptions derived from the society and culture in which it was situated, and which logically preceded it. It follows, then, that neither the designer nor the physical form of the setting fully controlled the meaning or the aesthetic experience for the user of the designed setting. The process of use and negotiation among the individual user, the collective user, the organization, and the designed setting highlighted the possibility of the same physical setting being used in different ways, not just by individuals but by groups and organizations. And it was the culture and community of the organization that provided the "code" allowing users of the setting to make the transition from the perceived object to the message communicated by it.

The concepts of "code" and "sign" are at the core of how the message gets communicated to users. While there are three most commonly discussed types of signs—symbols, icons and indices—in this work, we are concerned with the most conventional type—the symbol. A sign or symbol is understood to be the relationship between a sign vehicle (such as some specific attribute of the physical setting) and the content conveyed by the sign vehicle (Barthes 1967). The link between sign (or its expression) and content (information conveyed) is intersubjective in that it is based in, and emanates from, the group to which the signs user belongs. Signs and symbols as meaningful structures sustain their function only inside a given cultural subsystem. In other words, the same expression can signify alternative contents, and similar contents can be conveyed by different expressions depending on the conventions of the group that interpret the sign. Furthermore, the basic unit is not a single sign but a semiotic system. Therefore, we can meaningfully talk about signs (or expressions), their meaning, information conveyed by them (i.e., content), the rules

for coupling expressions to contents, and user responses contingent upon the combination only if we identify the system bestowing such meaning (Eco 1979).

Therefore, according to the more recent model in structural semiotics, the starting point for the description of aesthetic experience is better understood as not being the designed physical setting, nor its sign functions, but rather these as being preceded by complex semiotic structures (such as the culture in which the organization is embedded) that include multiple subsystems (e.g., the organizational culture) encompassing all social human behavior. These subsystems of culture bestow meaning on artifacts/attributes of the designed setting and control creative as well as receptive behaviors through the use of signs and symbols, as well as project an interpretation of codes embedded within the symbols. For example, Barley (1983) presents an example of the way in which funeral home directors use codes for the construction and communication of a reality—in this case "the flawless funeral" (one without mistakes, gaffes, or intrusions to disrupt the impression of a dignified, decorous, well-managed ceremony). Creating the impression of "naturalness and normality" is achieved through a twofold process. The first involves the spatial and temporal separation of the "mortician's work" (backstage activities, as Goffman would describe them) from the "funeral director's work" (frontstage work); second, a series of codes used both backstage and frontstage communicate the impression of "naturalness," specifically invoking codes of restoring the body through aspects of clothing, position, posed features and use of cosmetics.

In summary, the discernment of discrete objects—their colors and shapes—implies that a network of various systems of culture is superimposed upon individual sense perceptions. In other words, the way in which the individual articulates the world in any domain of activity is controlled by the historically determined system of culture and by its appropriate subsystems. Thus, architectural experience becomes a means of participation in collective life; and it is the community/organization within the community that provides the code allowing for the interpretation. Over time, with technological advances, restoration processes, and/or diversity of user groups, designed spaces come to be socially reconstructed within the system that they are part of and thus acquire new meanings.

Physical Setting and Behavior

This leads to the question of how designed spaces—that may carry differential meanings for different groups of users—influence behavior. With a problem-centered approach, the *hybrid perspectives* of (1) *Applied Organizational Psychology* and, (2) *Environmental Psychology* have focused on the impact of the immediate spatial environment on behavior. The applied organizational per-

spective conceptualized space from a utilitarian orientation. For example, the need for harnessing the differential aspects of the physical environment to boost efficiency was paramount in the *scientific management* approach, as exemplified in the Hawthorne studies (Roethlisberger and Dickson 1939). It is only when workers failed to react in the predicted manner to changes in illumination that researchers were forced to recognize that factors such as interpersonal relationships, informal groups, and prevailing supervisory practices were prominent in shaping employees' attitudes and performance on the job. And while the "informal" elements of organizational life—the *human relations perspective* (cf. Homans 1950)-did not possess the rationality touted by scientific management theorists, they nevertheless had to be reckoned with for the efficient operation of the organization. Despite this seeming difference in orientations between the scientific management and human relations perspectives, with the latter recognizing the importance of the psychological and processual elements such as workers' needs and perceptions, both were managerially oriented, and both sought to implement techniques of manipulation to boost efficiency. From the evolving perspective of *systems theory,* the physical working conditions represented one of the many interrelated components of the workplace that could, under varying conditions, determine a worker's satisfaction (von Bertalanffy 1950). The ways in which the immediate physical and ambient environment are related in a dynamic balance to individual worker satisfaction have also been studied from the *human factors perspective* (cf. Louis Harris & Associates 1988).

The examination of straightforward, unidirectional effects of the environment on behavior were conceptualized in early *environmental psychology* studies, in which individuals were conceived of as passive recipients of their surrounding environment. For example, early studies of crowding examined the direct influence of different forms of population density (social and spatial density, people–room ratios) on psychological functioning (cf. Epstein and Baum 1978). In a different camp, research in the ambient quality of settings was structured to understand how concrete elements of the environment had an impact on individual behavior (Glass and Singer 1972; Rotton, Frey, Barry, Mulligan, and Fitzpatrick 1978; Cunningham 1979; Sundstrom 1987). From yet another perspective, researchers examined the ways in which social attributes of the physical setting come to shape behavior. For example, the influence of personal space (Sommer 1969), latitude for privacy (Altman 1976), territoriality (Altman 1975), physical proximity (Festinger, Schacter and Back 1950), and, spatial layout and architectural arrangement (Strodtbeck and Hook 1961; Leavitt 1951; Bavelas 1960) in regulating interpersonal relations has been well documented. Along the way came the recognition that, how an individual perceives an environment is a key factor in determining the extent to which that environment affects the individual (cf. Lewin 1964) .1 These perspectives

had limitations, though, as expressed aptly by Ittelson (1973): "Man is never concretely encountered independent of the situation through which he acts, nor is the environment ever encountered independent of the encountering individual. It is meaningless to speak of either as existing apart from the situation in which it is encountered."

Gradually, the shift was made from a narrowly deterministic framework, focusing on direct antecedent and consequent variables, to one that began to examine person and setting qualities (e.g., demographic factors, personality dispositions and cultural differences) as interacting variables (interactional approach). For example, later crowding research examined joint and interactive effects of physical density, person qualities, and interpersonal qualities on psychological outcomes (Baum, Calesnick, David, and Gatchel 1982). The focus came to be on holistic, molar systems (Barker 1968; Moos and Lemke 1984); that is, person and environment components were conceived of as related by complex, reciprocal relationships in which the most crucial aspect was the overall pattern of relationships between elements and not the characteristics of elements considered in isolation (organismic approach). Barker's ecological research (1963,1968) exemplifies this position. From the standpoint that behavior is inextricably linked with the physical and social environment in a continuous flow, Barker propagated his central concept for understanding the dynamic quality of person–environment relationship as the "behavior setting." The behavior setting was conceived as the confluence of actions (in relation to places and things) that are organized in systematic temporal sequences and patterns. Aspects of the behavior setting are defined by, and define, one another and lend a collective unity to the stream of behavior within the setting.

The next step in the evolution of environmental design models (from deterministic models to those invoking the social context) came with what has been termed the "transactional or contextual perspective" (cf. Altman and Rogoff 1987; Stokols 1987). Because this framework incorporates aspects of contextualism—both situational and spatial—as well as perspectives of the actors involved, it is amenable to the ideas advanced in this book about the way in which work settings can best be understood; therefore, this framework will be elaborated in more detail (see also Chapter 7 for the delineation of the contextual approach and its evolution in psychology).

Within this framework, an environmental entity is not composed of separate elements, as in earlier research, but is a confluence of inseparable factors so intermeshed that the definition or understanding of one aspect requires simultaneous inclusion of other aspects in the analysis. Furthermore, transactional approaches "focus on the changing relationships among aspects of the whole, both as a tool for understanding a phenomenon and because temporal processes are an integral feature of the person–environment whole" (Altman and Rogoff 1987). And while both organismic and transactional orientations

emphasize the study of holistic person–environment units of analysis, they differ in how the two systems are composed and operate. In the organismic approach, the system is made up of separate elements whose patterns of relationship comprise the whole, while in the transactional view, there are no separate elements or sets of discrete relationships; rather, the whole is composed of inseparable aspects that conjointly define the whole—a complex, organized unity. In other words, actions of one person can only be understood in relation to the actions of other persons and in relation to the situational and temporal context in which the actors are involved. At the core of this approach is the "Phenomenon," which is partly defined by the quality of the observers, thus making even differentially located observers aspects of the event. As such, observers are inseparable from the phenomenon; therefore, their roles, status (location), and phenomenological viewpoints are best understood as integral aspects of the event. Furthermore, origins and directions of change occur as a result of shifting goals, purposes, and motives that are part of the psychological and contextual properties of specific events. In summary, the goal of the transactional approach is to understand the patterns of relationships among persons, processes, and context as they mutually define one another and serve as aspects of the whole, not as separate elements. While this contextual approach has received support (cf. Gergen 1982; Stokols 1987), these ideas have not as yet been widely translated into empirical work. The present study is an attempt in this direction.

Salience of Social Context for Design

These reviews of architecture and the social sciences exemplify the divergent postures in scope and language used by each in how they separately conceptualize the physical setting. Two major reasons why they retain widely disparate postures toward the physical setting of work are (1) the diverse approaches to knowledge, and the terminology with which architects and social scientists describe their work—the one being a practical discipline in which practitioners interpret their subject, and the other being a theoretical discipline that calls for a dissection of the subject matter; and (2) the lack of a continuing research tradition in architecture—except in the areas of history, materials, and structures, and more recently in the sociology of architecture (cf. Larson 1983; Blau 1984; Cuff 1991)—which requires the need for turning to the behavioral sciences for an understanding of the influence of the designed environment on people (see also Sommer 1987). This stance often results in precepts from one discipline being draped over the other to arrive at a satisficing solution for the design of workplaces. A situation in which concepts are layered one over another as opposed to being knitted along specific themes does not

guarantee that the assumptions and/or epistemologies of the two disciplines will be parallel on common themes, and often leads to discordant or less than satisfactory outcomes.

Despite their disparate postures toward scope and research traditions, both the architectural and social science perspectives, as they evolved separately, converged on a common conclusion: invoking the social context of the designed setting is crucially salient for the understanding of behavior in that setting. For example, we have seen how architecture evolved from a concept of design as addressing the functional and symbolic needs of individual users to being responsive in form, substance, and symbol to individual users, as well as beyond that, to societal needs.

Along similar lines, the ways in which architecture was experienced also evolved from the individual being at the root of aesthetic experience, to the cognizance that architecture was preceded by semiotic structures and the multiple subsystems from which it derived meaning, and therefore, evoking the social context came to be salient in the experiential paradigm. In other words, spatial layouts come to be imbued with social meaning when the group collectively identifies it with reference to some specific theme(s) emanating within the given social and cultural context.

Analogously, in the environmental design field, early deterministic models demonstrating how specific attributes of the environment had a defined positive or negative outcome on behavior gradually yielded to more refined ways of conceptualizing these univariate models as part of a social context, where behavior came to be conceptualized as transaction with the environment in which the individual was embedded (cf. Altman and Rogoff 1987; Stokols 1987).

Also, from a sociological perspective, Goffman elucidates the ways in which individuals use physical attributes of the setting to define the social situation, thereby highlighting the interconnectedness of the physical and social milieu.

Pulling together the strands from these delineated social science perspectives, one gathers that the system and subsystem of the social context of the setting precedes the physical work setting, the user, and the designer. These specific system and subsystems generate codes that evolve through processes of production, sustenance, and transformation and impart meaning to the setting over time. Such collective modes of understanding, interpreting, and experiencing have generally evolved from antecedent individualistic ways of conceptualizing the physical as well as the social dimensions of settings, as seen in the architectural, semiotic, and environmental design perspectives. The present study is intended to be responsive to the subsystem context of the organization, as well as to the larger context of the work society that envelopes the organization.

SOCIALLY CONSCIOUS DESIGN

It is relevant at this point to elucidate the experiential precursors of the present volume that have made this a significant case for the author. The importance of socially conscious design came into focus for me during a research study I did in my graduate architectural program. The study proposed an alternative to authoritarian jails in the form of community based, residential-type structures that were anticipated to facilitate opportunities for "reformed criminals" to be constructively assimilated back into society. The proposed design of the correctional community[2] (Gorawara 1974) was based in the overarching theme that it is only when physical design and social factors are conceptualized jointly that the resulting designs of incarceration systems best serve the state/ community, as well as the offender.

This recognition of the deficiency of architectural design in addressing and incorporating solutions to social concerns in a continuing design repertoire increased during my career as a working architect on a design team in an architectural office (1975–1978), and then, more pointedly, as I taught undergraduate architectural design studio at a large land grant university in the Southwest (1978–1980). Furthermore, a two-year summer fellowship (1979 and 1980) to reconstruct and document the architectural, structural, and mechanical systems of Adler and Sullivan's landmark Auditorium Building in Chicago[3] brought an awareness of the modifications of buildings through time and the consequent relevance of integrating social and physical factors into the initial design. In this particular case, the original Waterfront Hotel and Symphony Hall had been transformed over time to serve different uses, ranging from an army base to its present use as an urban university. The ensuing physical changes in facade treatments, as well as in more involved structural and mechanical modifications, reflected the functional and social transformations heralded by societal and urban pressures. The scope of the summer project[4] allowed for the tracing of the structural changes in the building. It was not, however, equally feasible to re-create the continuing torment with which changing social organizations adapted to the reuse of the building or the ongoing physical modifications reflecting continuing social changes.

Because of this dissatisfaction with the way architecture ignores the multiple social adaptations that are essential to permit the continued utilization of major buildings, and with the continuing inert engagement of social issues with physical building, subsequent to my training as an architect, I undertook graduate study in social psychology. A pilot research study (Gorawara-Bhat 1987) showed the ways in which physical space was a salient dimension of work life in the Dean of Students' offices: change in the use of space had affected the existing patterns of informal interaction, technical interrelations, and the relative status claims of workers. The study also demonstrated the

errors inherent in reading reactions to environmental settings as if the environment were all that was involved.

Besides these experiential precursors that motivated the present study, several social trends in work settings underscore the salience of the present study. It is a well known fact that workers commit their most alert, creative, and productive hours to work (Hutchinson 1989); in fact, they spend more time at work than with their families (Liles-Morris 1989; Kerch 1998) and put in long and irregular hours (Allen 1998). And organizational ecologists have begun to view the market as a socially constructed phenomenon (Carroll and Hannan 1995). It is no surprise, therefore, that corporations are showing a recognition of these factors by gradually shifting to a whole new way of approaching the work setting. For example, they are moving away from a relatively authoritarian set of management practices to a more egalitarian stance in which management seeks the help of workers in identifying the optimum solutions to their problems (Kleiman 1992), making the work setting more like the home in terms of physical comforts,[5] and being responsive to upcoming themes in office design, such as ”community planning’’ (Allen 1998).

Beyond the trends of adding more comforts to the workplace and creating environments that foster community and teamwork, the trends have moved to make such environments instantaneously available to busy, traveling workers for whom the boundaries between work and home are becoming ever fuzzier. While conference and meeting spaces are commonly found in public areas such as airports, individual workspaces are now becoming increasingly available in many public areas and are no longer limited to the stereotypical office. Such a posture is based in the recognition that creativity does not happen only at the office workspace. It is not surprising, then, to find that ”instant workspaces” are becoming available in almost every public area. An example is the comfortably furnished, autonomous, and prototypical workspaces in transit lounges (e.g., St. Paul–Minneapolis Airport; Chicago Amtrack station; Chicago O’Hare Airport[6]) that meet the demands of the business traveler and facilitate work, meetings, and creativity even during transit. These modular, self-contained, private, ten feet by twelve feet workspaces—ziosks—are usually built with demountable, soundproof walls, housing within them cable provisions for television, video, phone, facsimile, and computer hookups. A ziosk goes beyond providing a carrel-type space for work: It is typically carpeted and well furnished with informal furniture—such as a sofa/lounger and coffee table—anda formal desk with two or three office chairs and a clock radio and alarm. One of the walls comes equipped with a combination writing/tackboard surface and shelving. Generally, these instant conference, lounge, work, and/or think spaces are accessed and rented from dial-in phones in transit lounges.

The underlying notion in the proliferation of “instant workspaces,” as

well as the move to make the work setting as comfortable as the home, is based in the theme that the work setting as a whole needs to be conducive to nurturing creativity. And suggested ways include making symbolic statements via facets of the workplace. Such changing trends in the work climate make it tantamount that workplaces be conceived not only on the basis of functional criteria, as stipulated by management, but also from a perspective wherein workers and their work become the focus, and the settings become facilitators for use and/or negotiation.

The present study documents the ways in which workers use facets of the workplace in their adaptations, negotiations, and the building and sustenance of an ongoing and changing work culture. In doing so, the study sheds light on the visual symbols that become important to workers over time, on the ordering of these in the organizational context, and on the ensuing dialectical interrelationship between the organization and behavior as mediated by and through the workplace. These ideas and goals are consonant with the overall prevailing trends of planning socially conscious design for workplaces and of reusing structures as original functions cease. As such, this study adds a unique perspective to the role of the physical along with the social in a work setting.

Organizations have traditionally viewed the physical setting as providing the necessary envelope for their facilities and as a resource to be molded and controlled in the services of their goals. Workers, on the other hand, are affected by various aspects of the physical setup in ways that enhance interpersonal communication and cohesiveness (Roethlisberger and Dickson 1939). Proposed herein, and the underlying theme of this book, is that change can take place not only in response to fluctuations in external environments (Aldrich 1979; Katz and Kahn 1978; Kaufman 1985; Thompson 1967), or from the informal internal processes within (Homans 1950; Whyte 1943) but also from a subset of informal negotiation processes—the social psychology of physical space. The present study explicates the processes by which workers attempt to negotiate their situations with the organization through creating, sustaining, or altering their physical spaces. In addition, it initiates the task of securing a theoretical ground for the social psychology of space usage in work settings .

MIDWEST SURVEY

The work setting chosen for the understanding of these processes is a nonprofit, established, survey research organization affiliated with and located on the fringes of a large private university. In the interest of protecting the identity of the respondents, all names have been changed to fictitious ones, and all

individuals are represented in the female gender. In this book, the survey research organization is referred to as Midwest Survey, and the university with which it is affiliated is referred to as Midwest University.

Midwest Survey is an internationally known social science research center. While it does not delve into consumer market research or political campaign polls, Midwest Survey has been effective in gauging the national opinion on major issues of the day, such as education, health care, AIDS, mental illness, and homelessness. Through these and other studies, Midwest Survey has constantly updated and expanded survey methodology to refine the quality of the data fed back to various U.S. government agencies. While Midwest Survey does not act as a decision maker, the surveys and analyses it has made available to the government have been crucial in how the government spends our tax dollars.

Since its inception and affiliation with Midwest University in 1947, there has been a tremendous growth in both grants and contracts at Midwest Survey (e.g., during the period 1947–1997, Midwest Survey's staff increased from thirty to approximately two thousand members, and its annual volume of business spiraled from less than half a million to about $56 million). This unprecedented growth necessitated that Midwest Survey reconsider its organizational and space needs, resulting in several moves to different locations on the campus of Midwest University; the move in 1986 is the subject of the present study.

It has been demonstrated that when organizations are under stress, their linkages (internal and external) become accentuated, making these the most conducive circumstances for studying organizational life in an unaffected state (Coleman 1982). As has been succinctly stated by Hannan and Carroll (1995): "There is a tendency for operating procedures and task allocations to become infused with social value—they become understood .(over time) as the "right" way of doing things in an organization." An imminent physical move from one location to another, then, temporarily suspends routine functions in internal interchanges as well as external transactions. Such strains on everyday work routines can highlight the contrasts between what the organization aspires to and the prevailing organizational reality. Studying organizational life at such a stage of potential stress for its structural and functional components would supposedly afford a glimpse into its true reality.

Therefore, in the summer of 1985, when I learned that Midwest Survey was in the process of planning a move in September 1986—a period of upcoming potential stress—I saw this as the most opportune time to study an organization in all its complexities. To begin this study of space utilization at Midwest Survey, I began observing and interviewing in the summer of 1985 at Midwest Survey's previous location on the campus of Midwest University, and continued well after the move at its present location, also on the campus.

PLAN OF THE BOOK

Concomitant with the beginning of fieldwork, the research shifted from the spatial to the sociological and social organizational literature, as it began to be apparent that the unheralded and perhaps underspecified study of space utilization had a major component at the contextual level of the organizational. This insight carried with it the requirement to conceptualize organizational features of Midwest Survey that had not been problematic so long as it was simply the locus that structured individual adaptation—hence, the brief revisit to the theoretical conceptions on space usage from the architectural and social science perspectives in the present chapter. A description of the research methodology, the interview protocol, and the coding of the variables is elaborated in Chapter 2. Subsequent chapters move from the broader social context of the work setting (Chapters 3 and 4) to focusing on the workspaces themselves (Chapters 5 and 6). Specifically, Chapter 3 examines the nature of the organizational relationship of Midwest Survey to its immediate external environment, Midwest University, and the implications this has for its internal environment. In a detailed examination of the internal environment of Midwest Survey, Chapter 4 draws from social organizational theory to understand the ways in which the smallest core component of the physical setting—the workspaces—come to be linked in a symbiotic relationship with Midwest Survey's organizational functions. The perspective of status/role adaptations in Chapter 5 makes a complex use of the ethnographic specifics and helps conceptualize related phenomena that may be sought in future studies. Chapter 6 elucidates the ways in which elements of workspace get interwoven with the social psychological aspects of interaction to render the scaffolding for the making and sustenance of an informal communication system. Chapter 7 summarizes the major findings of this study and lays out a framework for a social psychology of space use in organizations. It suggests that for the study of organizational space adaptation and utilization, an ongoing time unit of decades may sometimes be desired because rational interest for space allocation can be distorted with time, as it comes under ever-changing pressures. Physical interventions (e.g., movable partitions, incandescent lighting, etc.) alone provide only the crudest insights into making work settings conducive to working. It is only when the design and planning of workspaces symbolize organizational policies and go beyond them to understand, translate, and incorporate substantive issues of work and worker culture that a significant step is taken in bringing together the form, substance, and symbol of work settings in ways that have meaning for users.

NOTES

1. These various perspectives have been categorized and delineated in an exhaustive review by Altman and Rogoff (1987). The four major perspectives have been labeled as the trait, interactional, organismic, and transactional worldviews in psychology.
2. The impetus for designing a "correctional community" came from two persisting problems with the correctional system. First, authoritarian jails did not prepare "reformed criminals" for life and work in society. The result was that the "reformed," when back in society, had no other means to survive on the outside than by "tricks" they had learned on the inside. Further crime was committed and the cycle repeated itself. And second, authoritarian incarceration systems did not necessarily deter further crime and reduce recidivism rates. In these cases, the physical design and the social conceptions underlying the design of existing correctional institutions had been thought out separately, and one overlaid over the other for a satisficing solution.
3. The scope of the documentation project, sponsored by the Department of Interior, Historic American Engineering Record, included a written historical report and the graphic documentation of the structural, mechanical, and ventilation systems of the building as initially designed by Adler and Sullivan in 1889.
4. The documentation of the systems of the Auditorium Building in Chicago is now archived under the aegis of Historic American Engineering Record and Historic American Building Surveys at the Library of Congress, Washington, D.C.
5. Office ecologists who implement principles of organizational ecology into the workplace consider the present standardized work stations to be deficient in supporting businesses' current emphasis on teamwork, communication, and the exchange of ideas. Therefore, along with making the workplace more accessible, they propose the domestication of the workplace through personalizing and customizing it to the needs of the individual (Patton 1992).
6. For example, Chicago's O'Hare International Airport has more than two dozen furnished conference spaces, accommodating up to ten people, and equipped with audiovisual, facsimile, phone, and computer connections. These spaces can be reserved in advance and rented on an hourly basis.

2

Work Setting at Midwest Survey

Physical Attributes and Social and Psychological Perceptions

Social actions are comments on more than themselves: that where an interpretation comes from does not determine where it can be impelled to go. Small facts speak to large issues, winks to epistemology, or sheep raids to revolution, because they are made to. . . . It makes it possible to think not only realistically and concretely about them (the mega-concepts with which contemporary social science is afflicted), but, what is more important, creatively and imaginatively with them. (Geertz 1973; emphasis in original)

INTRODUCTION

It has been argued that organizations are best understood as vehicles for maintaining and reproducing the social structure in which they exist (Carroll and Hannan 1995). In contrast, the present study looks within the organization to understand the ways in which internal contingencies shape and come to be reproduced in their physical settings and the consequences these have for the organizational culture. Thus, this study is about workers' perceptions of their work life, and more specifically, about the work, the spaces allocated for its execution, the ways the space is managed, and the ways in which it comes to be used by the incumbents. To understand these various facets of work, the most appropriate method was for me to be in the field, at the workplaces. Also, my conception was that hypotheses and explanations should emerge from the data and develop out of the fieldwork. Therefore, I chose the ethnographic method for this study.

While the details of the research methodology employed for eliciting data are described in the next section, the data collection method included the following:

1. In-depth individual interviews and observations over time at the two locations of Midwest Survey (see Chapter 1).
2. Participant observation at selected official and social events (e.g., attending and observing meetings involving space allocation, field coordination, middle management training workshops, and lunch lecture series).
3. The use of unobtrusive measures such as sketches and drawings of pertinent spaces.

As indicated in Chapter 1, this study was initiated at the time when Midwest Survey was in the process of moving to a new location on the campus of Midwest University. While interviews were conducted at both the new and previous locations, the primary emphasis in this chapter is on describing the physical settings and workspaces for Midwest Survey's new location. The next section delineates the methods used in the ethnographic research, followed by the description and classification of the variables derived from the interview protocol.

RESEARCH METHODOLOGY

The four years of ethnographic work at Midwest Survey started in the summer of 1985 with an introductory letter from the Director of Midwest Survey to the senior management of the Survey Operations arm, stating that I was working on a research project to understand physical space in work settings and assuring them of the confidentiality of their responses to my queries.

To facilitate easing into the culture and surround of Midwest Survey, I decided to commence the project on a low-key approach. I was first introduced to a few key personnel—staffwho had been with the organization for a number of years—who offered information about current projects, recent happenings, and other members of the staff of Midwest Survey. Through these sources, I learned of the biweekly space allocation meetings whose main agenda was to ascertain broad space divisions for ongoing and planned projects in the Survey Operations arm and other departments of Midwest Survey as they related to the move (slated for September 1986) to a new and bigger space on the campus. I began my fieldwork by taking a great deal of notes at these Wednesday morning meetings, the first of the group events that I was a part of at Midwest Survey. It was here that I was introduced to key individuals at Midwest Survey and where they had an opportunity to ask me questions about my research project. Thus, while I was observing and assimilating many facts about Midwest Survey, potential respondents also had the chance to observe me in their work setting.

The activity of observing at Midwest Survey was guided by the general principle explicated by Weick (1985), in that it was the perspective of the respondent that was sought for the purposes of this study. Weick has aptly summed up this model for observing: "The model for an observational statement is not 'If a person is confronted with situation X, he will do Y,' but rather 'If a person is in situation X, performance Y will be judged appropriate by native actors.' The perspective of the actor is crucial (p. 572). Therefore, while observing meetings and training workshops, not only did I note the subject's statements and sentiments, but also the statements of those coworkers who responded to the subject's statements. In addition, when there were gaps in establishing validity, their colleagues/supervisors were asked to cross-validate the accuracy of the statements, situation, or events. In brief, I was trying to gather a holistic picture of organizational life rather than simply the perceptions of isolated individuals.

Interview Methodology

From the several models to follow in conducting interviews, (Fine 1987; Gold 1958; Van Maanen 1988), the style that seemed to best fit the present study was to present myself as a friend, and as one interested in learning from the respondent being interviewed. My previous experience interviewing workers and their clients in a service-oriented organization (Gorawara-Bhat 1987), teaching, and supervising a team of architecture undergraduates on a research project (Department of Interior, Historic Architectural and Engineering Record 1979, 1980) had provided the necessary opportunities for developing the necessary skills in maintaining rapport with working individuals, singly or in small groups. Consequently, in approaching the respondents at Midwest Survey as a friend,[1] I found myself comfortable in the situation and thus fulfilled the basic requirement for a participant observer (Johnson 1975). I tried to talk the "language" of the respondent, show interest in similar issues, accommodate to the respondent's sometimes changing schedule, and structure the interview more as a social exchange or "discourse" than a series of scaled or forced-choice questions. Particularly helpful had been Homans's (1986) list of five "nondirective interviewing techniques"[2] that had been handed down to him by Elton Mayo, who had used them to interview thousands of workers at the Hawthorne Plant.

With time, as I learned more about the organization, I began interviewing individuals in different departments. I found that when people were acquainted with me from the space allocation meetings, previous introductions, and/or social or other gatherings, they were generally more than willing to let themselves be interviewed (the business of assessing identity and value had been circumvented). These pilot interviews were used to determine the kinds

of questions relevant for workers in a survey organization and thus functioned as a necessary responsive background from which I refined the questionnaire for subsequent interviews.

The questionnaire (see Appendix 11) gives only the major introductory questions posed for each issue. In every interview, a large number of probes were employed and numerous additional questions were raised. At times, the wording of the questions had to be changed. While extensive notes and sketches were taken down during the interviews, respondents' statements could rarely be taken down word for word. Though the statements are very close to what was actually said, they are not always verbatim. Some informants gave their permission to tape record the interview; in these cases, their transcribed statements could be used in the verbatim. In addition, interviews conducted with individuals connected with Midwest Survey at an earlier time, or in some administrative capacity, did not follow any standard set of questions; they were adapted to the particular informant. Therefore, no standard guide for these interviews can be reproduced.

Each individual I interviewed referred me to several other potential respondents in the organization, either at the same or at a different level from him- or herself. As the nominations accumulated, the most frequently mentioned persons were asked, in turn, to identify other individuals. This "snowball" method of sampling enabled me to learn about the informal social networks of the workers in an unobtrusive way. It should be noted that the snowball sampling technique was augmented with additional interviews, which ensured that all the different levels at Midwest Survey were represented in the sample. None of the individuals selected in this manner refused to be interviewed. The interviews were assigned a number (see Interview Contact Sheet in Appendix I), transcribed the very same day and supplemented with notes and early interpretations.

The interviews were conducted to elicit data of three sorts:

1. Information concerning demographic composition, such as race, sex, age; years of service with Midwest Survey, rank, affiliation within Midwest Survey (i.e., Academic, Survey Operations, Administration or field staff) and, if necessary, departmental affiliation (e.g., Phone Shops, Accounting, Computer Support, Personnel).
2. Sociophysical attributes of the workspace,[3] including type of workspace occupied by incumbent (a plan/view of the workspace was usually sketched before, after, or during interruptions of the interview).
3. Respondents' attitudes and perceptions with reference to their orientations to work (intrinsically or extrinsically motivated); understanding of the structure and goals of Midwest Survey; pride in and personalization of workspace; as well as satisfaction with workspace,

opportunities for social interaction afforded by the overall layout, and work in general.

The typical interview was both structured and open-ended. Whether the interview started with the structured or the open-ended component depended very much on the way the conversation flowed. There was no set order to the topics covered; the mode of questioning was "open" in the sense that I tolerated and recorded special interpretations of the questions, the retelling of old war tales, or the display of special antipathies and loyalties. Nonetheless, a general scheme was used as a rough blueprint for structuring the sequence of eliciting information. In general, respondents found it was less formidable when the interview began more like an ordinary "conversation." This method allowed them to be in the driver's seat, and the opportunity for me to retrieve relevant demographic data would often come up sometime during the conversation. The substantive content of this first phase of the interview focused on matters that were only mildly anxiety provoking, such as the respondents' history in the organization, or the perceived advantages and drawbacks of working at Midwest Survey. In the second phase, the focus shifted to questions concerned with respondents' work and workspaces, their suggestions for improvements, and their conceptions and visions of an ideal space layout for their organization. It was anticipated that such topics would afford them the opportunity to relax and voice their opinions to an interested third party. In the third phase, issues with a high anxiety-provoking potential, such as those pertaining to race and gender, among others, were brought up. The tail end of the interview was reserved for questions with the lowest anxiety-provoking potential, such as general organizational matters, the future of Midwest Survey, and suggestions and comments that might identify salient questions for future respondents in the study. Despite this underlying organization, as most interviewers know, some of the most significant responses came after the notebook was closed and/or tape recorder was turned off. Respondents comments were noted immediately after the interviews and if all topics did not get covered on a certain day, I was flexible and willing to come back at another time that was convenient to the interviewee.

During the fieldwork, I encountered several difficulties, not insurmountable, but difficulties nonetheless. The fact that I had been introduced to the staff through a letter from the Director of Midwest Survey must have given the impression that 1 could be an agent of the upper administration, covertly eliciting information from workers that could be used against them. This was, no doubt, a valid fear with which I had to deal. I tried to convince them that my intention was to use the interviews for the information contained therein and for the purposes of a research study. I assured them that the names of the informants would not be disclosed at any time to any agency or to the Admin-

istration, and that my goals were entirely academic. I am not sure if it was in response to this assertion or because of the earnestness of my role as a "friend" that I found myself overcoming most resistance from the respondents to share their information with me. In fact, I was soon receiving candid answers to my questions and a great deal more beyond that. Many respondents confided that they felt so comfortable "talking" to me that they had shared more information than they had initially anticipated. Many became friends and kept me informed of ongoing events and happenings at Midwest Survey that they felt were pertinent to my work. With time, I had become very comfortable with just about everyone from Midwest Survey. In fact, I was pleasantly surprised to learn at more than one interview that I was understood to be perhaps a new worker in some other department. All in all, my initial difficulty turned into an asset over time, and the majority of the interviews went smoothly.

The second difficulty had to do with the perceived differential "kid-glove treatment" given to students from the University who came to "learn" either at Survey Operations or at the Research Centers. This perception was most prevalent at the lower- and middle-management levels of Survey Operations and Administration. The thought was "Why should someone be held by the hand, shown all the steps of survey research, be accorded a flexible schedule, allowed to come in "dressed as if for the beach, and then bear no burden of the routine tasks? . . . Why should doors open for them (students) and not for us . . . we put in a hard day's work, more than they do" (Interview 36). They themselves had devoted years to the routine tasks before learning the "tricks of the trade." In light of this fact, it did not seem fair to them that someone else should get any kind of preferential treatment.

At one point during the interviewing phase, at the start of an interview, I was bluntly confronted with a form of the forementioned statement. The respondent put forth the argument that I was a student, and so why give me the time or cooperation for which I was asking? I sympathized with the tedious, routine tasks that this person often had to deal with; however, I emphasized that I needed this individual's help not only in answering questions for me—information that only this person could give me—but also for shedding light on the perceptions of the group, of which this person was a leader. Somewhere along the line, the respondent must have been persuaded, or perhaps I was persistent enough; not only was I offered data pertaining to that individual, but I noticed that the person had been most helpful in many other matters in furthering my cause while I was "in" the organization. Significant resistance of this type surfaced only this one time. This informant was an informal leader and "took under the wing" a large group at the lower and lower-middle echelons of Midwest Survey. I feel certain I was well received by others only because I had passed the scrutiny of their leader!

Additional Sources of Information

Besides the space allocation meetings and the interviews, the third set of events I have drawn from were the middle-management training workshops. The workshops were organized such that a member gave a presentation on a subject of interest/relevance to the group each time they met. At the suggestion of one of the senior management staff, I initially sat in as an observer on these workshops and, indeed, found this a helpful way to learn about the norms and culture of Midwest Survey. Besides, they presented an opportunity to glean their informal interactions (e.g., who interacted with whom, the nature and type of interaction, etc.). As the workshops progressed, the leader who was aware of my earlier study on space usage (Gorawara-Bhat, 1987) invited me to make a presentation at one of the meetings. I viewed this as a suitable opportunity to make myself a visible part of Midwest Survey, and since it could also help in validating my credentials with the organization, I accepted the invitation.

I also attended three field coordination meetings, in which the national field staff came in from all parts of the country to the corporate office for several days of briefing sessions. Observing these sessions in progress was extremely useful in affording me a better understanding of the total picture of the steps involved in the production of a survey. In addition, I took the opportunity to interview several field staff while they were visiting headquarters. These interviews have been an invaluable source in providing yet another perspective from individuals who were affiliated with and yet removed from the predicament of adjacency, tensions, and space usage at Midwest Survey.

Among other congenial gestures extended to me during the fieldwork, the growing number of invitations to attend Midwest Survey's official and social events made me feel increasingly accepted by the respondents. I gladly accepted these invitations, which ranged from seasonal events such as Christmas and midsummer parties,[4] to a once-in-a-lifetime event such as a wedding! These invitations validated my perceptions that people had begun to view me as one of their group, and they made certain that I was kept updated on information on current organizational events. For me, these bits and pieces of information were very useful in cross-validating observations from the field and other sources. In addition, the parties, besides affording an ideal opportunity for informal meetings with the respondents individually or in a small group situation, provided yet another perspective on Midwest Survey. It was in the context of these social events that I was introduced to and subsequently interviewed several people not affiliated with Midwest Survey at the time, but who had in the past held responsible positions at Midwest Survey. I learned through these informal interviews that even though respondents' job titles were often narrowly defined, their responsibilities encompassed a di-

verse range of duties. For example, I was informed that "everyone did everything" and this enabled individuals who were part of the organization at that point in time to become indispensable to Midwest Survey. To the extent that these informal interviews provided yet more information, thus affording a fuller picture of Midwest Survey, and inasmuch as they were useful for the purposes of validation of information from other sources, they have been invaluable.

Somewhere along the way, during the fieldwork, I was being perceived as, and given the status of, an "unofficial" member of Midwest Survey. At least two factors facilitated this perception: first, my frequent visits and interaction with the staff at and outside of work, and second, my unrestricted access and movement to all parts of Midwest Survey during regular business hours, made possible through the use of a security keycard. However, my position was different from that of my respondents: my work, including the opportunity to access and study their organizational life, was self-initiated as opposed to theirs, in which they were assigned certain roles and responsibilities in exchange for a salary. This opportunity to interview personnel, make systematic observations, and have the latitude to photograph/sketch places of interest has been of the greatest help in collecting the data necessary for the completion of this study, and for which I remain indebted to the administration and staff of Midwest Survey. The following section describes this data.

DESCRIPTION OF DATA. CLASSIFICATION AND CODING OF INTERVIEWS

For the purposes of this study, a work setting is characterized in terms of its physical and social attributes and the social and psychological perceptions and attitudes of respondents regarding their work and workspaces. A work setting is conceived here as a total work environment, one that may comprise a number of workspaces as well as circulation and other common supporting areas. The interview solicited responses about the work setting and sought opinions about specific aspects of the workspace. While the characteristics and types of workspaces are elaborated in Chapter 4, suffice it to mention here that they are an essential constituent of the work setting—the smallest analytic unit that better engages the physical with the social aspects of work. The present section comprises a description of the classification and coding of the interview data. Seventy-three open-ended interviews were conducted with all levels of the staff at Midwest Survey, however, not every interview could be used for every aspect to be coded. Inferred data from the interviews are broadly inclusive of the following:

1. Demographic data
2. Sociophysical attributes of the workspaces
3. Psychological perceptions and attitudes
4. Satisfaction with workspace, overall layout, and opportunities afforded for interaction and work in general

(See the Code Sheet in Appendix III for a complete list of variables and brief descriptian.)

In the first stage of work, the open-ended interviews were transcribed and supplemented with related notes from field observations. In the second stage, the interviews were deconstructed according to environmental attributes that surfaced most often (e.g., personalization of workspace, perceived control, etc.), and in keeping with the most common psychological, attitudinal, or behavioral themes that were subsequently categorized and rated on an ordinal scale as described below.

Demographic Data

The demographic variables noted during the interview and subsequently coded included age, race, sex, rank, and years of service. In addition, the organizational unit affiliation of the respondent was also included as demographic data, because it helped describe the population of Midwest Survey.

Sociophysical Attributes of the Workspaces

The sociophysical attributes that surfaced in the interviews encompassed mainly the dimensions of (1) aesthetic appeal of the workspace; (2) privacy and quiet afforded by the workspace; (3) centrality of the workspace from the core; (4) perceived control of the ambient environment in the workspace; (5) pride in, and personalization of, the workspace; and, (6) satisfaction with social interaction opportunities afforded by both the workspace and the overall layout. A selection of verbatim quotes for each of the categories is used in two ways: first, as defining the coding scores on the stated sociophysical attributes and psychological dimensions, and second, as a substantive collection of speech segments drawn from the culture of Midwest Survey. The reader is invited to review the situational specifics before proceeding with the analysis.

Aesthetic Appeal. The perceived appeal of workspaces was built from a fusion of such elements as the adequacy of square footage, furniture, lighting, and number of windows. The continuum ranging from *Satisfied* (4), *Moderately satisfied* (3), to *Moderately dissatisfied* (2), and *Dissatisfied* (1) is illustrated in the following examples:

	Score
My office is spacious, well-lit, and tastefully decorated with adequate furniture, and a new carpet. (Interview 8).	4
I have a nice room, a window, my own computer. . . . It's okay. (Interview 37)	3
Whoever was pushing for us, for our space, perhaps, should have pushed more. We'd have got windows and other conveniences like Accounting has. . . . I've adapted, but I'm not crazy about this space. (Interview 5)	2
This whole section has been designed wrong, I can sit my desk only in a certain direction to take advantage of the (ceiling) light. (Interview 3)	1

Privacy and Quiet. The degree of privacy afforded at Midwest Survey was coded as follows: *Complete* (4), *Moderate* (3), *Fair* (2), and *None* (1).

	Score
I have a very nice, big office. I'm very conscious about that. I can close my door when I need more privacy. (Interview 30).	4
As far as I'm concerned, it's been okay for me. I have a relatively quiet space to think and organize meetings away from the routine distractions . . . but how space gets allocated is all willy nilly. (Interview 42).	3
I'm happy my space is stationary now, but if I had to improve things, I would do something to alleviate this constant flow of traffic. (Interview 24).	2
It's very disturbing. People are passing behind your back. There's no privacy and the noise is a nuisance. It's like I'm in the middle of a marketplace and it doesn't help me concentrate on my work. (Interview 33).	1

Centrality from Core. For the various organizational units within Midwest Survey, the offices of the Director were considered to be the central core, because this is generally conceived not only as the source of all power but also as the repository of all problems needing a solution. A workspace on the same level and in the same general corridor space as the Director's offices was given a score of 4. These workspaces were considered to have more centrality than those farther away because they housed more powerful organizational actors and departments. A workspace on the same level but not adjacent or in proximity to the Director's offices was given a score of 3. Workspaces on a floor other than that housing the Director's offices were considered moderately far

and scored 2. A workspace in another building was considered a remote location and given a score of l.

Perceived Control of Ambient Environment. Generally, respondents' perception of control over the ambient environment ranged from *Significant* (4), *Moderate* (3), *Fair* (2), to *None* (1). Some examples follow:

	Score
I'm generally satisfied with the new setting. There are mechanical problems with the AC and so on, but Midwest University Physical Plant has been very good about fixing whatever problems seem to arise. (Interview 1)	3
Most of us like this building, but elevators don't stop on all floors, washrooms could be duplicated around a corner after a long corridor, and the heating and air conditioning never work quite right. (Interview 9)	2
It's hot and cold erratically (in this office). These windows don't open. There's no way to control the temperaturet. . . . You see me with my heater on in the summer, and it's ninety degrees outside. (Interview 17)	1

Psychological Attitudes and Their Manifestation

This set of variables comprised two dimensions: a cognitive-behavioral dimension and an affective dimension. For the respondents, the former encompasses (1) the meaning of work, (2) understanding the organizational structure and goals, and (3) the degree to which incumbents display pride in, and personalization of, the workspace. The affective dimension probed respondents' perceptions and feelings about their satisfactions with their workspace, their opportunities for formal and informal interaction at work, and their work.

Meaning of Work. Respondents were judged to be in one of three categories: *Extrinsically motivated* (1) workers perceived work as a source of money, and nothing beyond that; in contrast, *Intrinsically motivated* (3) workers viewed work as an end in itself; workers in the category *Partly intrinsic and partly extrinsic* (2) were motivated by factors that could stem from both the monetary rewards offered and the intellectual stimulation afforded by the work. Some examples follow:

	Score
It's a job for me, nothing more. . . . it's as good a place as as any. (Interview 5).	1

If I had a choice, I probably would not work at Midwest Survey. I'm just doing it as a means for something else. (Interview 19).	1
I wanted to have a steady source of income and something different from the academic world. . . . This seemed like a good place, . . . I have common interests with some of the staff but I've been able to keep myself detached from the job. (Interview 6)	2
There's intense pressure to produce. . . . It's also an exciting place to work: the diversity in projects, the contact with clients. It's a good place to build my career. Operationalizing theory and working through a problem is exciting to me. (Interview 8)	3
I have high standards and I believe in professionalism, but I also believe work has to be fun. (Interview 38).	3

Understanding of Structure and Goals. Some individuals manifested a clear understanding of the organizational structure and goals of Midwest Survey, along with a conception of their own role relative to the different components. I was curious to learn if such competence enhanced satisfaction. Scores assigned were as follows: *Individuals with significant understanding* (3); *Somewhat of an understanding* (2); and *No understanding* (1). Some examples of the responses and their scores are given below.

Individuals with superior contextual orientation had responses along the following lines:

	Score
Midwest Survey is a hybrid, a semiacademic entity, and the present atmosphere seems conducive to creativity. . . . There is a hierarchy present, but it's not rigid. (Interview 25).	3

In other instances, while there was *some understunding* of the structure and goals, there was no subsequent appreciation of the nature of this relationship translated on a day-to-day level.

	Score
The Research Centers (at Midwest Survey) bring in 10 percent of the total revenue, while the Survey Operations bring in 90 percent, as well as providing Midwest Survey with a level of detail over what the Research Centers provide, and yet the Research Centers choose to go about their own business with little or no communication and give and take between them and us. (Interview 30).	2

Some respondents placed in the category of No understanding. For example:

	Score
For Midwest Survey to reinforce its philosophy of fairness and equity, it has to cut the cord to the University, otherwise it will never be able to develop any independence and foster its own growth. (Interview 36).	1

Pride in, and Personalization of, Workspace. The interviews were routinely conducted at the individual's workspace, at which time I observed and took notes on the arrangement and display of personal items such as family photographs, certificates, diplomas, and so on (e.g., paintings, reprints, sculptures), if at all present. In addition, the organization and layout of the workspace was noted and evaluated in terms of its ability to facilitate or inhibit the work duties of the occupant. The working hypothesis was that "personalization" would relate directly to the individual's taking pride in his or her workspace. A *Significant degree of personalization* scored 3; a *Moderate degree* scored 2; and *No personalization* scored 1.

Significant pride and personalization is reflected in some "upbeat" responses:

	Score
I've been moved to this space and I've needed to rethink and rearrange the physical workspace to complement my method of working. (Interview 34).	3
I've come to believe an office should be fun and neat. To make it work, it has to be set up in a way to facilitate my goals. 1'11 explain the graphics and how they add to the dramatics of my office. (Interview 38).	3

Tolerance, without showing pride, is the intermediate category:

	Score
In the old building, nobody cared about what you put up. Here nothing can be hung up without being framed. . . . So you see my office looks like nothing. . . . For the time being I'm happy here though. (Interview 37).	2

The final category is for negative, passive, and alienated responses:

	Score
I think it's [*referring to the physical environment as a whole*] a depressing place to come to work. (Interview 6).	1

General Satisfaction with Workspace. Without pausing to evaluate the individual factors such as aesthetic appeal, centrality, privacy, and quiet afforded by workspace and the work and social interaction opportunities afforded, it was possible to elicit reports of general satisfaction. Some examples of *Satisfied* (4), *Moderately satisfied* (3), *Moderately dissatisfied* (2), and *Dissatisfied* (1) responses follow. The most clearly satisfied respondents (4) had positive reports that articulate how their space was instrumental in furthering their goals:

	Score
I have suggested that a chair, a desk, and two bookcases be the minimum amount of standardized furniture given to a managerial worker. See, this is what I have, and it's okay. (Interview 36).	4
This [shared space] is nice for a grad student. It's not sterile, and we're sealed off from disturbances by this security card system. (Interview 22).	4

Ambivalent respondents were not displeased with their workspaces but were able to identify an advantage in their situation:

	Score
I could use more privacy, but there has been the opportunity for developing friendships here [in the open plan workspace]. (Interview 19).	3

Ambivalently dissatisfied respondents acknowledged improvement over previous accommodations yet were clear about flaws that needed to be sorted out in their present workspace situation:

	Score
It's okay here. In the old building it was a corner of a space and the desk was manually moved about everywhere. Now, I'm happy my workspace is stationary. . . . If I had to improve things, I would alleviate this constant flow of traffic through here. (Interview 24).	2

Finally, there were articulate but unmitigatedly dissatisfied respondents:

	Score
Not only mine [workspace], this whole section [partitioned workspaces] is designed wrong—it's too dreary, the carpet color is awful, there's no privacy. I can only position myself in a certain direction to take advantage of the light from the	1

ceiling, and then the lighting has too much glare. . . . It's created problem for me. (Interview 35).

My situation is very disturbing. . . . After a while you get this feeling you've been put in the middle of a marketplace and it doesn't help you concentrate on what you're doing. (Interview 33). 1

Satisfaction with Overall Physical Layout with Respect to Work and Interaction Opportunities Afforded. The attributes of the overall physical layout with which I was concerned included but were not limited to ease of access to one's own workspace as well as easy access to other project personnel and departments; accessibility to other areas of the organization for one's own work efficiency; and opportunities afforded by the layout that facilitated social interaction. Satisfaction scores were as follows: *Satisfied* (4); *Moderately satisfied* (3); *Moderately dissatisfied* (2), to *Dissatisfied* (1).

	Score
This building is a lot better than the previous, it works much better. . . . We're a little further from mainstream Midwest Survey, which has been a big plus. . . . Here we have our own privacy. (Interview 16).	4
This is a much better space. . . . It has more room, access to computers. The old place was small, crowded, hot, no kitchen space, no cafeteria. (Interview 14).	4
It (this layout) works better, people are more accessible here, circulation is better. (Interview 42).	3
It's a much better space—pleasanter, cleaner, but then there's always a cost. (Interview 12).	2
It (the building) is too large and unwieldy, for example, in picking up and distributing mail. . . . The functioning and distribution of core services like mail could be streamlined much better. (Interview 10).	2
A building layout such as we are in is not conducive for casual and frequent interaction with others (in the organization). You set up relationships with people in spatial proximity. . . . Exchanges could be facilitated through the space. (Interview 34).	1
This is a horrible building. . . . Each section is so far apart from the other, we [people on one project] sometimes don't see each other for days, then, you've got to walk a block to everything—the library, cafeteria. (Interview 38).	1

In the other building [previous location] I knew every other middle manager. I think it was a function of that building space [layout]. . . . Here I don't know who to ask what, each separate entity is separated by a lot of space in between. (Interview 35).	1

Satisfaction with Work. This variable encompassed, but was not limited to, dimensions of collegial support, supervisory support, the work responsibilities, and respondents' monetary compensation. On the four-point ordinal scale—*Dissatisfied* (1), *Moderately dissatisfied* (2), *Moderately satisfied* (3), *Satisfied* (4), the respondent's feelings were coded along the following lines:

	Score
I'm quite satisfied with the way I relate to my work. The way I relate to my work is my main contribution. I plan well, use human resources well, look at assignments as a challenge, and feel like my part will make a difference in this big effort. (Interview 34).	4
I like working here. It is loose and unstructured, allows for individuality as opposed to regimentation, I appreciate the flexibility. (Interview 16).	4
In spite of all the drawbacks of working at Midwest Survey—the money, the racism, and things like this, the pride and happiness in what we accomplish reduces our frustrations. (Interview 15).	3
It's a place to work for me. What else is there to say. (Interview 13).	2
For me, this is not a career, it's a job. (Interview 36).	1

SUMMARY

To understand the various facets of work in all their complexity and to facilitate the emergence of hypotheses from the data, the ethnographic method of collecting data has been used in the present study. This chapter delineated the ethnographic method, followed by the classification and coding of the interviews. Inferred data included demographic variables; sociophysical attributes of the workspaces; psychological perceptions and attitudes, and satisfaction with workspace, interaction opportunities afforded, and work in general. The coded data elucidated respondents' individual reactions to the physical, social, and psychological setting of work. However, the ways in which these re-

actions come to be experienced in the organization are also a function of the (1) structure of the encompassing social context (elucidated in Chapter 3); (2) the ways in which symbolic meaning is constructed in, and decoded through the physical dimension; and (3) the ways in which meaning becomes intertwined with social–organizational aspects such as in status/role (elaborated in Chapter 5), in social interaction (Chapter 6), and in implications for the social–organizational structure of the work setting (Chapter 7).

NOTES

1. The "friend" role for the interviewer carries with it neither any expectations nor any demands; on the contrary, it is accepting of whatever the respondent needs to present on a certain day.
2. The five techniques are as follows: (a) The interviewer should listen to the speaker in a patient and friendly but intelligently critical manner; (b) the interviewer should not display any kind of authority; (c) the interviewer should not give any kind of advice or moral admonition; (d) the interviewer should not agree with the speaker; and (e) the interviewer should take or ask questions only to help the person talk or relieve any fears or anxieties; to offer praise for accurate reporting of thoughts and feelings, and to veer the discussion to some topic that has been omitted or neglected.
3. The majority of interviews were conducted at the respondents' workspace.
4. These "Beginning of Winter" (Christmas party) and "Beginning of Summer" parties, as they were called, were hosted by one of the most trusted, loyal, and long-time staff members of Midwest Survey. In this ongoing tradition, literally "everyone" from Midwest Survey was invited, in the way, more or less, one is at an open house. And almost "everyone" came, even those who had left Midwest Survey for other positions. It was the perfect social setting: the drinks flowed; the food was sumptuous; and there were people from different political camps rubbing shoulders in the crowd.

3

Midwest Survey

Adjacency, Tensions, and the Physical Setting

While any human phenomenon is worth studying closely, if at all, it is never to be completely understood in terms of itself. Its peripheries must be explored. (Hughes 1971)

PERCEPTIONS OF WORKERS

Most earlier studies and descriptions of nonprofit survey research organizations have focused on the organizational, administrative, historical, and policy aspects of these centers (Lazarsfeld 1962; Prewitt, 1983; Russell 1979; Rossi 1964; Converse 1987). In contrast, the present study shifts the focus from what it means to be part of the organization to an acknowledgment of the workers' perspectives on satisfaction with work and their physical setting. From the coding of variables in Chapter 2, it becomes apparent that respondents' satisfaction with work is determined by their subjective perceptions about various social, organizational, and physical dimensions of work, including workspace. Therefore, this chapter accesses workers' perceptions (ascertained through interviews described in Chapter 2) about Midwest Survey as a means to describe their organization. The three dimensions that seem to be of utmost significance to the workers at Midwest Survey are the focus of this chapter.

First, Midwest Survey is a sheltered organization. It is a nonprofit, social science research center, one that is structurally as well as physically adjacent to its parent institution—Midwest University. Aside from having ramifications for the structure and goals of Midwest Survey and its relationship with the University this factor also has repercussions for the internal processes that affect the routine of workers in the organization. Second, and related to the structural arrangement alluded to earlier, is an inherent and ongoing tension between the two adjacent organizations. Third is a perpetual dearth and inadequacy of sufficient workspaces. This condition results in the constant juggling of workspaces and makes physical space one of the most sought-after resources, after the organizational and personnel resources. Salient to the

present study are the ways in which the putative issues of adjacency and ongoing tensions between the two organizations are connected with the allocation and utilization of workspace. These concepts are elucidated in the following pages. The next section begins with a description of the internal structure of Midwest Survey.

INTERNAL STRUCTURE OF MIDWEST SURVEY

> Midwest Survey is a hybrid, a semiacademic entity, and the atmosphere seems conducive to creativity. It seems to free us to focus on work. There is a hierarchy, but it is not rigid. . . . I find it a congenial place to work. (Interview 25)

> [Midwest Survey is an organization] housed in a university having some of the best and most productive research scientists. (Director of Midwest Survey, Brown Bag Lunch Series, Midwest Survey)

These two quotes, one from an incumbent in the Operations arm, and the other from the Director of Midwest Survey, aptly describe the organization. Both these perspectives substantiate the image of Midwest Survey as a bureaucratic organization influenced by and in adjacency to a collegiate body (Midwest University). Weber (1978a) described the characteristics of organizations in adjacency to collegiate bodies as follows: "A bureaucratic organization may be limited and indeed must be by agencies which act on their own authority alongside the bureaucratic hierarchy." Furthermore, the nature of tensions between such adjacent organizations has been elucidated in various historical examples (Weber 1978b). Midwest Survey fits this definition: it is a large social science research center, autonomous of, but affiliated with and in adjacency to, a prestigious private academic university; related to the adjacency, there has been ongoing tension between the two organizations.

As Midwest Survey was being established, Midwest University made the decision that Midwest Survey should be integrated with the university for its research and teaching via foundation grants, but that it should be autonomous for the purpose of pursuing contract research—the work that paid for the maintenance of its national field staff. This relationship with the University continues to this day, despite ongoing tensions and a widening rift between the two organizations. To fathom and understand this dissonant relationship with the host university, it is imperative that we first comprehend Midwest Survey's internal structure.

Midwest Survey can be conceived of as mainly two organizations under one roof (1) the Academic arm and (2) the Survey Operations, with an Administrative arm servicing both (see Figure 3.1). However, during the coding of the interviews Midwest Survey was divided into four suborganizations—(1)

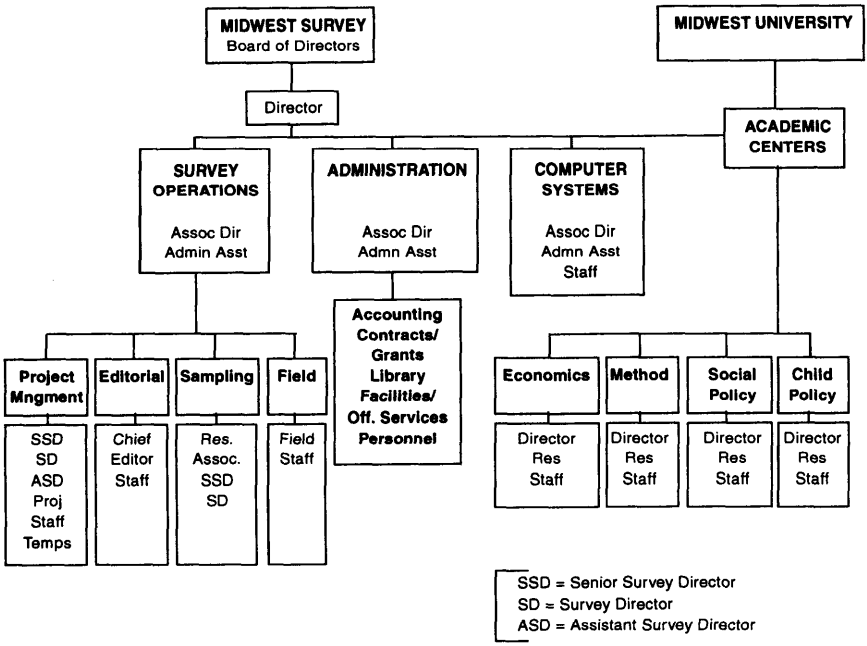


Figure 3.1. Hierarchical structure of Midwest Survey.

Academic, (2) Operations, (3) Administrative; and (4) field staff—todistinguish between the administrative and field staff interviews. One longtime administrative staff member reminisced about Midwest Survey when it was not so differentiated and specialized:

> Midwest Survey was a small cohesive group. If a proposal had to get out everybody worked and got it done. . . . It was a team. . . . The Director, the treasurer, everyone. . . . Not so now. Now each group has its own clique and may not be bothered with other's needs. . . . That's the attitude now—we'vebeen hired to study this, that's not our job. (Interview 10)

However, it is currently perceived as "truly a giant social research center, but there is a constant pressure to get things done on time. . . . Maybe that's the reason there's no plan" (Interview 7). The structural division between the Academic and the Survey Operations arms has, to a large degree been a function of decomposing the activities involved in large scale surveys into those parts that are mainly intellectual in character—survey design, analysis and publishing—and those that are primarily managerial in character—sampling, questionnaire construction, data collection, and processing. The former are executed

through the Academic organization, and the latter are under the jurisdiction of the Survey Operations.

The Academic organization is comprised of four Research Centers: Economics, Methodology, Social Policy and Culture, and Children's Policy. The incumbents are essentially a collection of scholars, faculty, and students from Midwest University, as well as members of other academic institutions drawn from all over the world. "Most of the staff here are research associates (i.e., faculty), and their research assistants (students). . . . they have flexible hours. They're usually here in the afternoons and evenings after their classes [at the University]" (Interview 16). Their work is minimally integrated in a division-of-labor sense; rather, one might think of the centers as "loosely coupled" organizations (Weick, 1976). Their intellectual activities are generally not broken down into segmental tasks, with each member taking a component as his or her contribution to a common research project. As one research assistant in the Methodology Center put it,

> The Center hardly has any organizational structure, our faculty sponsor tells us about the project, and we do whatever work is assigned. . . . Money from a grant is simply allocated to a center when an RFP [Request for Proposal] is funded, and Midwest Survey administers the project. (Interview 22)

Consequently, there is very little supervision over the ways in which goals are achieved. This is the arm of Midwest Survey that earns "prestige" for the organization. A respondent in one of the centers said, "It's exciting and stimulating to be working with someone who's known at the local, state, and national levels, but there's an intense pressure to produce. . . . You have to be good. . . . or you're thrown out" (Interview 8).

From another perspective, though, the centers are perceived to be elitist:

> It [the academic organization] has different clubs with clumps, and people in the different centers don't seem to interact much with one another. . . . You get the sense through the newsletter that they're concerned about keeping people together. People here on the other hand are very atomized. . . . They don't seem to interact with each other. (Interview 22)

In contrast to the foundation and grant research brought in through the Academic organization, Survey Operations is responsible for bringing in contract work—generally through obtaining contracts for the collection of large data sets. One of its chief goals is to make money, not only for its own operating expenses but also for those of the grant research activities in the Academic organization (Adams 1977). It is an important cog in the wheel of the total Organization:

> We're the top survey research organization.. . . We do quality work. (Interview. 11)
>
> Midwest Survey will survive for a long time because it's got the reputation. . . . What it needs is an organizational consultant to tell them (management) what people need in a job environment, (Interview 36)
>
> The University last year (i.e., 1987) got $80 million in research money. We got one third of that. . . . $26 million, Now that's significant. . . . This very survey group brings in 92 percent of Midwest Survey's money. . . but we're treated like the cash cow—be content, keep grazing, and keep bringing in the money is their attitude. (Interview 30)

Survey Operations is three times larger in size and generates four times the dollar volume as compared to the Academic organization (Interview 30). Both these factors support task specialization in which the division of labor and lines of authority are clearly defined, and the focus is on building a reputation for "responsibility" (i.e., producing data sets "within budget" and "on time"). Most researchers in the Academic organization shun these administrative responsibilities because they interpret them to be antithetical to scholarship—constricting creativity and forcing them to relinquish control over their research enterprise.

These two disparate entities (Survey Operations and the Academic arm) fulfill different goals of Midwest Survey (viz. gaining prestige and earning money) and through different means—grants or contracts (Adams 1977). It is no surprise, then, that these organizations foster two different cultures with their own respective languages. One of these is the elitist language of universities, in which knowledge for its own sake is the goal, the language that "produces creativity;" the other is the language of getting business—requests for proposals, costs, overhead, project maintenance, budget management systems, and "creatively producing." In the Academic organization, the incumbents are intellectually motivated, their professional patterns of interaction are collegial, and they take pride in personal autonomy in work. Quite in contrast, the Operations arm is a bureaucratic system in which "individuals do not enjoy occupational autonomy, but are subject to orders passed on by their superiors in the system" (Blau 1955). While their work requires a certain expertise, the tasks are related to a particular location in the bureaucratic structure rather than to a body of knowledge. Their actions are governed by a system of impartial rules and regulations that are at their optimum when there is "precision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs—these are raised to the optimum point in the strictly bureaucratic administration" (Weber 1946).

MIDWEST SURVEY: AN ADJACENT ORGANIZATION

The literature on centers, bureaus, and institutes has highlighted the origins, structures, and functioning, as well as the issues of adjacency and tension between them (cf. Converse 1987; Rossi 1964; Kerr 1964). For example, in their study explicating the relationship between institutes and universities, Ikenberry and Friedman (1972) suggest that the goals of institutes should complement rather than displace the functions of universities. Sieber (1972) has highlighted issues of the marginality pertaining to social research agencies vis-a-vis universities. In two separate case studies, Adams (1977) and Sheridan (1979) draw out the causes and effects of being labeled a marginal bureau or center adjacent to a prestigious academic institution. These studies have two features in common. First, they highlight adjacency, tensions, and marginality inasmuch as they influence management issues, policy, and the role of centers within the university; and second, they do so looking from outside the organization to gauge impacts on policy. In contrast, the focus for the present study is the inner pulsations of worklife at Midwest Survey, thriving and growing in the shadows of Midwest University.

Midwest Survey's physical proximity to and structural arrangement with Midwest University have been salient in characterizing it as an adjacent organization to Midwest University. Since this topic is discussed in a later section of this chapter, it suffices to mention at this stage that Midwest Survey's spatial adjacency with Midwest University has continued throughout its recent history' either on or at the fringes of the university campus. In contrast, the structural adjacency has its origins in several factors. First, the Board of Trustees and the Executive Committee Members for Midwest Survey continue to be comprised mainly of faculty members from Midwest University. Second, Midwest Survey actively participates in survey research and methods training[2] for pre- and postdoctoral students. And third, data produced by the Survey Operations arm are often used by the Research Centers staffed by Midwest University faculty and students.

The adjacency of Midwest Survey to Midwest University generates two diverse situations from respondents' viewpoint. On the one hand, they are attracted by the proximity to an academic setting and the many perceived benefits it entails, which seem to far outweigh the downside, as seen in the following sampling of responses:

> We are respected; we've made some solid contributions to the field of survey research. We're the tops in what we do; we have some very big names (university faculty) with us. (Interview 6).

> It's an academic setting, not too formalized, no dress code. We produce good quality work. There are articles about us in the *WaIl Street Journal.* (Interview 15).

> It allows a lot of flexibility and is accommodating to employees needs. That's been very nice. (Interview 37)
>
> From the 1950s Midwest Survey has been an intellectual force in the area of survey methodology. That makes it a challenging and intellectually stimulating place to work. (Interview 30)
>
> It still is, as far as the research they do, one of the best in the country, and so you really get to see what things are considered in producing good data on a good research project. (Interview 43).

While the adjacency to Midwest University is appealing for the relaxed, semiacademic setting it affords, the downside of working in the Operations arm of Midwest Survey involves doing "busy work" in the shadow of the substantive learning and work of academia. Senior as well as lower management felt the frustration:

> We (senior management) are survey professionals, besides being managers. . . . It would be so nice if we could just have 10 percent of our time allocated to write on methods, surveys, and so on. (Interview 30)
>
> I'm very disillusioned [with Midwest Survey]. It's just a business, it's not research oriented as I thought it would be. . . . Even though I'd be getting paid less, I think I'd be happier working at the centers . . . but I'm not happy with "Just do what is necessary to get the job done." . . . There's no time to look at the data or see the results, and that's very frustrating for me." (Interview 40).

Some members the lower management were articulate about their ambivalence and even the possibilities of moving to the Academic arm:

> It's been a good experience in data collection, but I'm not happy when I'm taken advantage of and thought of as labor got at a bargain rate, or as being categorized as "one of the bodies upstairs on the fourth floor"– their [senior management] connotation that we're not an important part of the organization. I'm very competent, sharp, and motivated. My reviews are very good. . . but I would like to work for the Methodology Center. . . . It's a very demoralizing place here. (Interview 44).

Others hypothesized why they continued to stay on in the "pretty stressful environment, a crisis management organization":

> Here [at and below the lower management levels], you just do what you're told to do, and when you're told to. You get into this mindless kind of way of working. . . .I think it creates a sluggish type of inertia problem. . . . After a while you get to being this way, and then it's easier to stay than to go, even though you might be happier if you left. I definitely won't stay here very long. There's no meaning for me here. I have a really hard time generating pride in my work. . . but even though I'm not

> satisfied, I don't have a bottom line attitude, and there are a lot of people here who take pride in their work and work hard in spite of the fact that they're being managed strictly for the benefit of the organization. . . . It's sad. They're [Operations] part of the university, but they don't encourage you to know anything about anything, except the Brown Bag Lunch Series. That's the only thing they do to connect their employees to the bigger picture of research. (Interview 43)

In contrast, the perspective of the incumbents of the research centers is tinged with academic antipathy to the "busy work" of survey research such as data collection and survey management. For example, a typical response is "Someone's got to collect the garbage (the data) from out there . . . and manage it. They do it well" (Interview 57). Such divergent perspectives of the incumbents of the Survey Operations and the Academic Research Centers are at the root of the tension between Midwest Survey and Midwest University.

TENSIONS BETWEEN MIDWEST SURVEY AND MIDWEST UNIVERSITY

The tension between collegiate and administrative bodies goes far back in history. For instance, Frederick William I of Prussia, whose actual influence on the administration was very significant, almost never attended the collegiately organized sessions of the cabinet ministers. William I is known to have rendered his decisions on written presentations by means of marginal comments, or edicts, delivered to the cabinet by his personal servants. By doing so, he not only sought refuge from expert knowledge but also from the impersonal and functional routinization of administration (Weber 1978b). The tension between adjacent organizations with different values is ubiquitous. For example, a defense contract research organization, affiliated with a major West Coast university and mainly in business with the government, experiences tensions and discord with its collegiate affiliate, not unlike the tensions between Midwest Survey and its host university (personal conversation with a senior scientist at the above-mentioned research organization, December 26,1990).

The reasons for the endemic tension between universities and their affiliated survey organizations have been the subject of speculation from different perspectives and by many scholars (cf. Ikenberry and Friedman 1972; Rossi 1964; and Sheridan 1979). Cited reasons include the different phases of academic teaching demands and the survey organization's research activities; the rudimentary division of labor in the Academic Department versus the elaborate line of authority in the Survey Organization; the prestige of being in an academic setting in contrast to the second-class citizenship of the staff in the Survey Center (Rossi 1964), and antipathy to the different values of the other

(Marcson 1972), such as "producing creativity" and "creatively producing."

Yet another contributor to the tensions between the two organizations lies in the "marginality" hypothesis.

> An organization could be considered marginal if it is on the periphery or outside the normal structure of its parent organization with but little power, its legitimacy suspect, its prestige within the parent organization negligible and its purposes looked upon by the parent organization as non-essential to its mission. (Sheridan 1979)

More importantly, any of the several characteristics of marginal organizations,[3] individually or in tandem, could also become instrumental in augmenting tensions between the parent and the marginal organization. Midwest Survey fits this definition on several counts. For example, although affiliated with Midwest University, it is financially autonomous and therefore on the periphery of the parent institution; also, its broad goals—procuring contracts for "survival" and grants for "prestige"—arenot exactly parallel to the teaching and research goals of Midwest University. Concluding from this, Midwest Survey, existing on the fringes of Midwest University—structurally, functionally and physically—is thereby conceived as a "marginal organization."

The lag between the functional differentiation and the structural modifications within universities is another common reason for the marginal status in which survey research centers often find themselves (Kerr 1964). Universities have grown to have multiple purposes (e.g., research, development, and training) in contrast to their original single function of teaching. Despite this differentiation in growth, their organizational structure continues to reflect the original and sole function of teaching. In contrast, survey research centers rely on outside agencies for funding. This delegation of power to an outside agency becomes a centrifugal force in the overall organization of survey centers consequently, disrupting the decentralized decision making that is unique to the institution of teaching (Wallis 1964). Therefore, in a traditional university setting, it is common for survey research centers to be treated as "marginal organizations" both literally and figuratively (Sieber 1972).

In the case of Midwest Survey, for example, an initial structural arrangement between Midwest Survey and Midwest University, made by the Division of Social Sciences, stipulated that faculty within the division of Social Sciences would oversee Midwest Survey, which should function outside that Division. Matters did not quite converge so smoothly. Midwest Survey's understanding was that (1) it would receive from the host institution a fixed yearly contribution, (2) some university faculty would be involved in its work so that aspects of survey research could be integrated into the regular university program, and (3) Midwest Survey was to do mainly research and not service—that is, seek foundation grants rather than contracts (Converse 1987). Interestingly,

this arrangement, made in the late 1940s, continued in some form for almost four decades. However, over the years, survival issues forced Midwest Survey to seek contract funding. At that point, Midwest University refined the structural goals such that Midwest Survey would be integrated with the Division of Social Sciences for its research and teaching, via foundation grants, but be autonomous for its contract work. This newly forged, two-pronged role of Midwest Survey, with one arm in the "grant world" and the other in the "contract world" (Adams 1977) has been the continuing source of tensions between the University and Midwest Survey even to this day. The resulting management of tensions between the Operations arm (responsible for contracts) and Academic arm (responsible for grants) had, so far, been handled through the relative segregation of the Research Centers and the Survey Operations; each to their own business. In 1987, a concerted effort to foster a greater exchange of ideas between the Academic and Operations Arms of Midwest Survey by bringing the two in close spatial proximity to each other, by housing the major parts of both in one physical location, came to fruition. The underlying theme was that the intellectual culture and prestige of Midwest University could benefit Midwest Survey, allowing it to develop and flourish into a broad range university research center. For the University, there was the possible advantage of a wide range of opportunities for interdisciplinary research with the large data sets made possible by the Survey Operations. As one respondent put it,

> Midwest Survey is an organization of parts, the four Research Centers and the Survey Operations. Integrating these has always been a challenge. This building [the new corporate location] was laid out [the interior layout] to promote the cross-fertilization of survey and research. . . . We still worry if communications are taking place. That's anyone's guess. (Interview 25)

Despite its new location on campus and the juxtaposition of the academic alongside the Operations arms, the tensions at Midwest Survey seem to have increased rather than dissipated. Several instances highlight the reverberation of tension between the university faculty and the senior administration of Midwest Survey. In one of several interviews, a senior administrator divulged that at one time their Director did not feel any obligation or need to attend the annual meetings of survey researchers, even to "put up a united front to the outside world" (Interview 30). The reason cited was that perhaps he felt a greater affiliation to Midwest University than to Midwest Survey, and this gesture became a patent symbol of the cleavage and tension between the Academic Organization and the Survey Operations. The same administrator cited other instances highlighting the tensions between the two organizations:

> We have Project Planning Committee [PPC] meetings every Tuesday morning. The Research Center people rarely ever come to these meetings.

> Let me give an example. The Center for Methodology writes its own grants/proposals. They could very well involve us through their contracts. . . . It is a known fact that we collect data, implement surveys. . . . I have a great deal of respect for the people in the Research Centers, but I would certainly prefer more communication and give and take. (Interview 30)

> They [Academic Arm] think Survey Operations is just busy work, or why wouldn't they let us in on the survey methods courses given across on campus? They're actually surprised that we (senior survey management) might be interested in teaching them. (Interview 30)

Candid remarks by lower management personnel unveil the deep schism between the two arms:

> You may notice there is an automatic resentment to anyone from the university, including you [the author]. . . . You are being given this opportunity to conduct a study. Do you think I'd ever be given this preferential treatment. . . . I tell you, the summertime students are given the kid-glove treatment and we [Survey Operations] certainly resent it. By giving them this great experience of working here, they're taking our jobs away. I'm sure if this were a business organization, things would be handled differently. We [Survey Operations] do the things that are important to the University, like providing this climate of protection to the students . . . but there's no time and money to do the important things, like giving feedback to our respondents, like boosting our interviewers, because the relationship Midwest Survey sets up with its respondents is most important. . . . There's no other way out, it [Midwest Survey] has to cut its ties to the University. (Interview 36)

The nature and substance of everyday work life cited in this quotation, however, are not consistent with the goals of Midwest Survey as elucidated by the Director. The goals are defined as follows: (1) collecting data for the production of surveys; (2) training of pre- and postdoctoral students; and (3) providing the support of infrastructure for scholars and researchers (Brown Bag Lunch Series, Midwest Survey). The important goal of initiating and maintaining the financial autonomy of Midwest Survey is made possible by the data collection and survey production through the Operations arm, also responsible for providing services such as training students for data collection and survey methods. In contrast, the substantive goals of researching, analyzing, writing, and providing scholars with the infrastructure for these functions are based in the Academic arm of Midwest Survey. In other words, the nucleus of Midwest Survey's goals lie in the Academic arm and the periphery is spread over the terrain of the operations arm. Because it comprises mainly of their faculty and students, the above nucleus (Academic arm) emanates from and is a microcosm of the host—Midwest University. This leads one to

conclude that the tension between the Academic and Operations arms of Midwest Survey stems from (1) the underlying structural connections between Midwest Survey and Midwest University, and (2) the Academic arm of Midwest Survey being an extension and a microcosm of Midwest University.

For most workers in the Survey Operations, from the clerical to the top administration levels, the positive aspect of being a part of Survey Operations emanates from the adjacency with Midwest University and the vicarious sharing of the "prestige." On the other hand, the tedious nature of the routine and unchallenging work of contract research, when viewed in juxtaposition to the seemingly "flexible" work in the Academic arm, becomes a preemptive cause for the inherent and ongoing structural tension between Midwest Survey and Midwest University.

Interestingly, this tension seems to be exacerbated when the parent institution and the marginal organization are in close structural adjacency and cordial in situations when no institutional cap exists. For instance, a branch office (East Branch) of Midwest Survey located in the East was organized much along the same lines as its corporate location in the Midwest—ina semiacademic style. The staff worked on a flexible schedule on contracts or subcontracts that were designed, analyzed, and reported by principal investigators (faculty) affiliated with a major university (Eastern University) in the same city as East Branch, and in a role corresponding to what Midwest University had vis-à-vis Midwest Survey. According to one respondent intimately affiliated with East Branch, on many of the several ongoing projects, the relations between their production staff and the principal investigators from Eastern University had been "cordial and friendly."

> I remember they [faculty from Eastern University] came into the office so often with their students just to see how the data were coming in, if there were any problems, and to discuss the questionnaire, and what not. . . . The production people seemed to like and enjoy these visits and the mutual feelings were always cordial. (Interview 73)

This evidence suggests that tension between the parent and the marginal organization seems to be present only when the institutional cap embraces both organizations. Clearly, this hypothesis needs to be tested in other settings before it can be generalized.

SPACE: A VALUABLE RESOURCE AT MIDWEST SURVEY

Workspace issues, which are known to be a common problem in survey tenters, have only been briefly mentioned as such in all the studies cited in the sections on adjacency and tension. In contrast, interviews and observations at

Midwest Survey show how everyday work life at Midwest Survey evolves and grows around workspaces and related physical aspects in the organization. On this basis, I contend that workspace is an ordinary and easy way for workers to concretize the issues of tension and adjacency. Therefore, in the pages to follow, workspace is used as a means for discussing the tension and adjacency issues at Midwest Survey, beginning with a historical perspective on space allocation for and within Midwest Survey.

The location of Midwest Survey, whether it has been on the physical margins or on campus, has depended on the nature of the structural adjacency with the host university over the years, Its earliest location, for instance, was about a mile from the center of campus. Over the next few years, as Midwest Survey began to collaborate in graduate training, research, formal and informal teaching in statistics, survey methods, and data analysis, it was moved to a location about a block away from the main center of campus. With an increase in the volume of research, however, it ended up overflowing into additional temporary offices on campus (Interview 1). Midwest Survey continued to provide the University with the expertise of a complex research facility: consultation in technical design and analysis; use and instruction in early IBM equipment for tabulation and analysis; and on-the-job training for students in survey research methods. These endeavors brought Midwest Survey recognition of its value to the University. The University in turn showed its appreciation primarily through two gestures: (1) its contribution of a land site for a new headquarters on the southern border of the University campus (in the late 1950s), and (2) the provision of a large loan for the construction of a new building on the aforementioned site. Overall, the University's investment was 50 percent of the entire expense, a stance that represented a new level of integration between Midwest Survey and Midwest University.

Over the next three decades, Midwest Survey grew and overflowed its newly designed headquarters, spilling into several locations on and off campus. The direction of growth was more in the area of contract research than in foundation grants, and a new settlement between Midwest Survey and the University was imminent. A new and larger location, also on the southern border of the university, was proposed. In contrast to its prior moves, this proposed move (set for September 1986) had a twofold intent: first, the larger space would hopefully bring all of Midwest Survey (at the time, housed in temporary locations on and off campus) under one roof; and second, and beyond this, was the broader vision of facilitating the cross-fertilization of ideas between the Academic arm and the Survey Operations by having them strategically juxtaposed in one central location (Interview 38). The original tenant of the aforementioned building had moved, and its interior had been renovated to accommodate the functions and specifications of the diverse needs of the two arms of Midwest Survey.

The new location of Midwest survey is a four-story, distinguished, gray limestone structure, sitting on the southern border of the university campus. The layout can be conceived as consisting primarily of two wings: one is in the shape of a ring around an open-air, landscaped atrium, and the other, adjacent and sharing one side with the aforementioned wing, is a U-shaped wing, overlooking a flower garden (see Figures 3.2, 3.3, and 3.4). Some respondents felt the dignified setting to be an advantage: "I come to Chicago [field staff from California] for briefing sessions every three/four months and I'm pleased Midwest Survey moved to this building. . . . It is at least 50 percent better than the old building, it has more room, a better appearance" (Interview 31) Others were ambivalent: "We're part of the University, we have the Computation Center, the (Research) Centers. . . . The sign on the exterior reflects that, but I'm not so sure that we're as together on the inside" (Interview 36).

In terms of space usage, the workers at Midwest Survey can be classified into two main categories, with differential levels in each type. First are the incumbents for whom physical space provides but the physical enclosure for working on substantive matters of greater interest. These are the people affiliated with the Academic arm of Midwest Survey—mainly students or faculty, usually coming in the afternoons after their day's classes, dressed casually, the

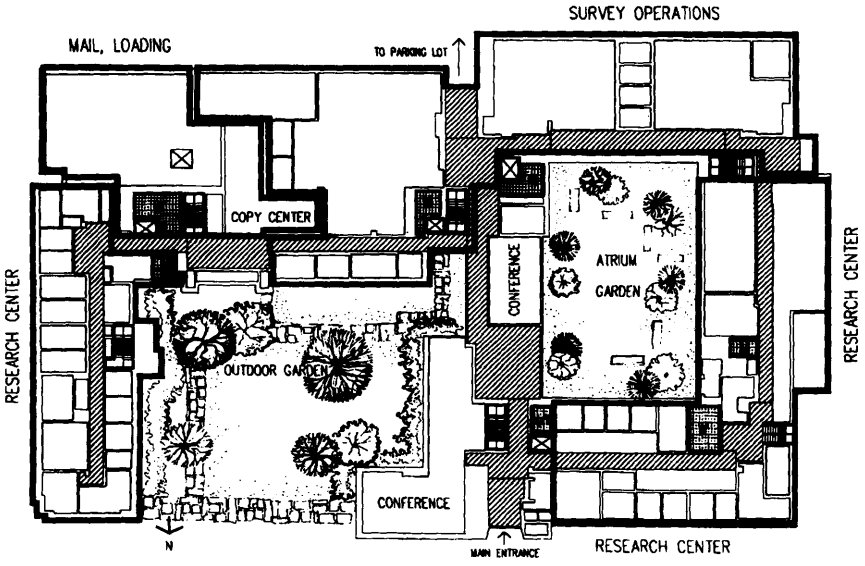


Figure 3.2. Midwest Survey: First-floor plan.

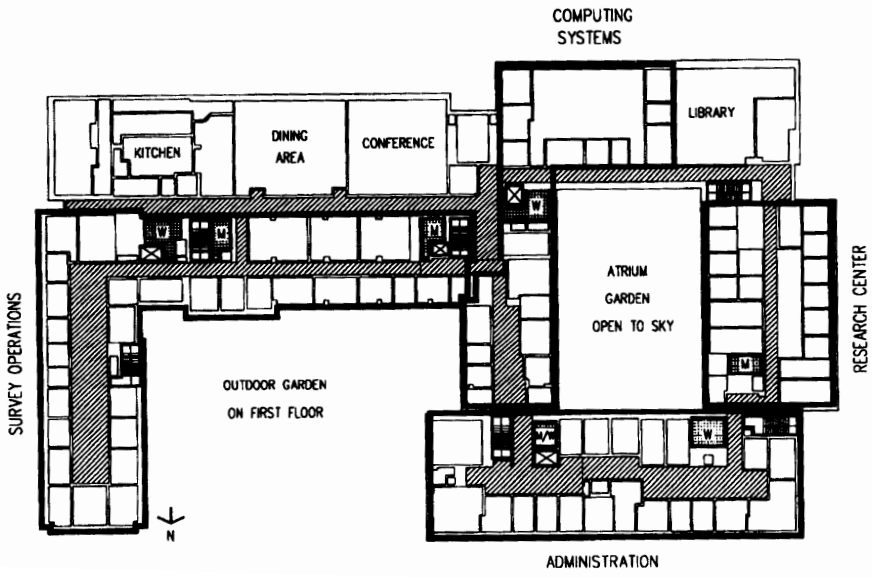


Figure 3.3. Midwest Survey: Second-floor plan.

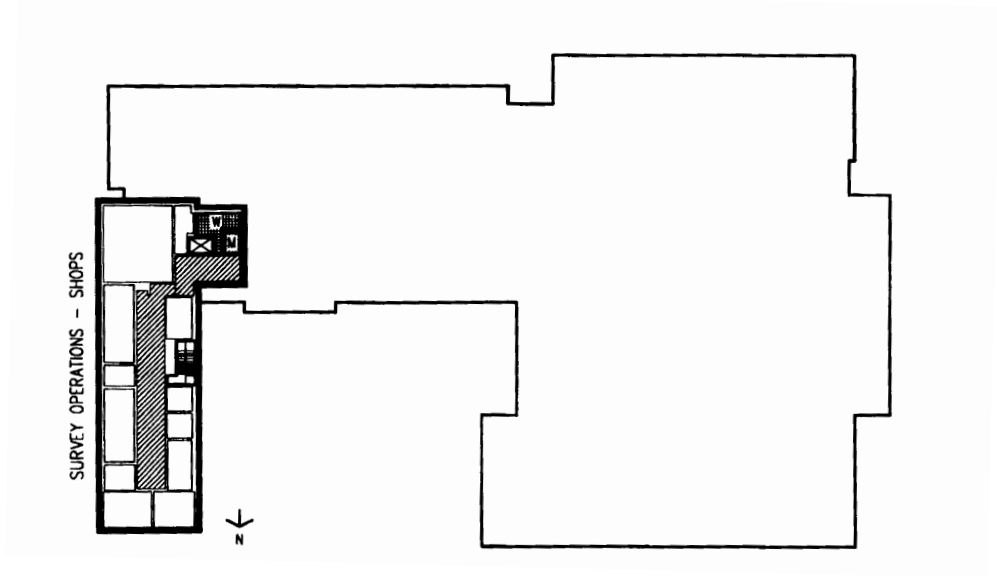


Figure 3.4. Midwest Survey: Fourth-floor plan.

way they would for class. According to one Operations staff member, "They come in dressed like they're on the beach. . . . They should wear clothes and shoes. This should be a business, not a resort area" (Interview 36). Their work at Midwest Survey entails an extension of their academic thinking skills. For the students, this training complements the body of knowledge being sought at the University. For these reasons, the job is not much different from being a student at the University. As such, space here is as accessible as it is on campus—at the libraries, the classrooms, and coffee shops—a space to open up a backpack and temporarily set up shop next to a terminal. Students usually have either a partitioned workspace or a table set up in an open-plan area. But what the physical setting constitutes makes no difference to them; it denotes the same hierarchy as that at the university; what is more important is to be part of an elite group of scientists, as some respondents noted:

> Working with someone known at the national, state and local levels. . . . It's a good place to forward my career goals, but you have to be good, or you'll be thrown out. (Interview 8)

> [I was] hired by a faculty member when I was a student. Now we're good friends. . . . I'm privileged to be working on a study to be presented at a conference in Russia (S.U.], and going to be used as a pilot project to satisfy graduate program requirements in poly sci. (Interview 22)

> We have faculty associates from Northwestern, Loyola, Penn State, everywhere. . . . It [the Research Center] has a tentativeness in commitment to nonworkers. (Interview 14)

These quotations clearly depict the value attached to the honing of academic skills during the students' tenure at the research center. Space for them is a mere backdrop to be used as a means, if necessary, in the quest for achieving career goals.

The case for faculty is not much different. Most faculty—with their primary affiliation to the University—have offices on campus. Their schedules are usually divided between their teaching and office hours on campus, and research hours at one of the centers of Midwest Survey. Not surprisingly, their workspaces at Midwest Survey, second offices for them, constitute no more than a background for the greater and more substantive goals of research and teaching, and as long as they do not impede these goals, the workspaces fulfill their purpose.

To the second set of incumbents of Midwest Survey—the workers affiliated with the Operations arm of the organization—space becomes salient in terms of the dimensions of symbol and substance. To better understand these linkages between the symbolic and substantive utilization of space in the Survey Operations, we briefly diverge to take a close look at the work encompassed and the personnel involved in the production of a survey.

The main sequences involved in the production of a survey, as graphically represented in Figure 3.5, indicate the stages, the time frame required, the level, and the ratio of personnel at the differential levels.

Midwest Survey conducts most surveys by mail or telephone, and only when the nature of the information to be collected is more complex and personal does interviewing become the preferred means. The production of a survey requires the execution of the "real work"—like carrying out the clerical and computer operations necessary to process the survey instrument—for example, the mailing out of questionnaires, their receipt, coding, entering of this data into the computer, cleaning it, validating it, and finally putting the ready data onto tape (Interview 34). All these steps require the coordination and simultaneous operation of several support staff in the various "Shops" to get the raw data in a format ready for analysis. This is the "back"—wherethe actual work of producing a survey is carried out (Goffman 1959):

> We're really a job shop [referring to the Survey Operations], and we don't think of the nicety of things. We have no time to think of these things. We like them, but we just don't have the time for them. (Interview 1)

> We [Survey Operations] are in a very high-pressure situation most of the time; questionnaires have to be mailed, gotten back, cleaned, coded. . . . There can't be much concern for neatness with all this going on. (Interview 2)

> We need tables laid out in long lines to set up Mail-Out Shops. . . . All of Operations needs to be in one place. . . . Now the supervisors have no partitions and it's causing tension. (Interview 11)

The "Shops" doing the real work would be less than functional if it were not for a highly coordinated and collaborative effort involving the close and sustained interaction of shop personnel, along with the assistance of the many service departments. And the prime function of the negotiated physical arrangement in these shops has to do with keeping alive this vital interaction.

In contrast, the "front" (Goffman 1959) has the function of planning, designing, and developing the survey instrument as well as the management of the "back." Here, the technical staff design a survey, submit requests for proposals, determine the sample design, develop the questionnaire, and supervise the collection of data. According to a lower-level supervisor. "they [upper management] have contact with the client, take all the credit for the success of a project, and concoct fine-tuned answers when things fail, which is not seldom" (Interview 20). In the case where a "front" has to be put up—for the client and the prospective client—space, beyond fulfilling the incumbents functional requirements, needs to symbolize the status of the incumbents. This notion was expressed in several instances by the management of Midwest Survey: "I have the biggest office next to the Director. I'm very conscious of

Stages in the Production of a Survey							
	I	II	III	IV	V	VI	VII
	Designing Survey Determining Sample Design Developing Questionnaire Staffing Financial Management	Pre-testing Questionnaire Planning and Developing Methods	Hiring interviewers Setting up Shops Supervising Data Collection	Mailing Out Questionnaire Training Interviews	Questionnaire in Field	Data Preparation Data Retrieval Editing Coding Validation	Data Summary
Time Frame	October	November-December	January	February	March-April	May-September	
Staff	Technical/Managerial Senior Management		Supervision Mid/Low Management		Field Staff	Support Staff	Senior Management
Approx. Number	20		80		80	150	
	"The Front"		"The Back"				"The Front"

Figure 3.5. Sequence of the main stages in Survey Production.

that" (Interview 30). And the responsibilities of this respondent included "new client contacts. I love that. . . . I am a good designer of [survey] research and thinking through the planning stage. Here, I make good use of what I have a talent for" (Interview 30). Synonymous with one's progress on the career ladder are the prospects of a better shared or private workspace. For example, "As an SD [Survey Director], I'm entitled to a private space. . . . Everyone below an SD was moved around all the time in the old location" (Interview 34). An accounting staff person revealed, "Even though I'm in a service department [Accounting], it has been kept respectable [referring to the acquisition of the present space for the department] by the efforts of the leader" (Interview 11).

These three examples point to the use of space as a symbol to signal status or hierarchical rank of a department. Space here can be seen as a prized resource—something to bargain with and for—used in the construction of an image for the presentation of the "front" to the outside world. In contrast, space for the "back"—while it plays an essential part in the execution of the work—uses open workspaces planned in a layout that is reflective of the work flow. As one respondent aptly put it: "Much of what we do in survey research is to construct pictures that miss a lot of details, like this impressionistic painting on the wall. . . . The best space needed to do this kind of exacting work is an open setting" (Interview 38). We learn that in the "Shops," image is not important. All that is needed is a series of uncluttered spaces set up to facilitate the routine and repetitive functions. To the degree that such a space facilitates sustained interaction, it may be conceived as having a substantive function.

An internal source of tension within the Operations arm emanates with the periodic expansion and decline of the steps involved in the collection of data. Typically, on an ongoing survey, the in-house production period balloons from April through September. Questionnaires begin to be mailed back in-house and this is the time frame for receiving, cleaning, coding, entering and validating the incoming data. During its slow period, from October through March, Operations does its pretesting of questionnaires, developing of survey methods, planning for the next survey, hiring of interviewers, and mailing out the questionnaire (Interview 34). This shrink-and-swell cycle undoubtedly has implications for space allocation and utilization at the shop levels. For example, workers occupying shared and open workspaces get more crowded during the peak months (April through September). This situation creates a predicament in which the allocation and utilization of space by the organization and its management by the individual is in constant tension.

Conceptualizing the substantive space at the shop level (Survey Organization) to be at the core of the real work of surveys, and the symbolic space (having managerial incumbents) to be at the periphery, one can understand

why the lower-management level is the hardest hit. Their status is somewhat ambiguous; they are part of the management yet their spaces—usually partitioned—are in the "Shops," so as to facilitate close supervision of workers. Consequently, they receive ambiguous messages when the shop personnel are referred to in a derogatory way by the upper management such as "the bodies upstairs on the fourth floor" (the workers doing the dirty work; Interview 44).

This is a typical example of differential space allocations being used to manifest expressions of the tension between the levels within the Operations arm. Despite such articulations of tension via nuances involving physical space, Midwest Survey, like its interviewers who continue their interviewing despite the intrusion of sensitive issues,[4] is "moving right along."

In summary, space is an essential resource for the Survey Operations. The "back" spaces support changing shop functions for support staff; however, these spaces (in their layouts; see Chapter 4) serve an important social function—that of facilitating interaction between the occupants. "Front" offices symbolize status and project an image for the outside world. While the spatial and functional demarcations in the two forementioned cases are clear, the spatial message for lower and lower-middle management is not a clear case. It is no surprise, then, that they are also the most dissatisfied[5] in the Operations arm. In contrast, space in the Academic arm is considered a background, nonessential resource for the creative endeavors of the incumbents.

SUMMARY

Midwest Survey's structural and physical adjacency to, and ensuing tensions with, Midwest University have implications for its organizational structure. The spatial structure in most instances is an indicator of its organizational structure. As such, spatial and organizational structure, linked at the surface, have their roots intermeshed with the adjacency and tensions between the two institutions. Therefore, as we examine the connections between the physical setting and status (Chapter 5), and workspace and interaction (Chapter 6) at Midwest Survey, our aim is to keep the broader organizational context of adjacency and tensions between Midwest Survey and Midwest University as underlying themes for the contextual orientation it affords.

NOTES

1. Midwest Survey moved from another large university and became affiliated with Midwest University in 1947 (Midwest Survey Report 1981–1982).

2. Midwest Survey's research into methods, especially in areas of question wording, sampling techniques, research into and standardization of interviewer performance, has been an ongoing effort in order to monitor its own quality (for which it is known in the survey world), and more importantly, to establish its scientific credibility and respectability in the academic world.
3. Other institutional factors cited as promoting the "marginality status" of Survey Research Centers are: (a) the low priority assigned to goals of the center; (b) the professional status of center personnel and departmental faculty not being at par; (c) a minimum value assigned to empirical social research and the training of social scientists in this area; (d) the lack of communications between the two camps; (e) the consequences of contract funding in contrast to grant or foundation money; and (f) the dearth of disseminating publications to the research community outside the university (Sheridan 1979).
4. In observing the pretesting of the AIDS questionnaire from behind a one-way mirror, I noticed how one respondent broke down when stating that she had cancer. The interviewer kept calm, kept her gaze fixed on the questionnaire, and with a nondirective statement of "Moving right along" went on to ask the next question on the list. I was struck by the frigid social situation of the interview.
5. See Chapter 5 and 6 for an elaboration of the dilemma of the lower-management staff.

4

Workspaces at Midwest Survey

By any measure, office is where you live during work (Kerch 1998).

CONCEPTUALIZING WORKSPACE

Two early national surveys of a sample of about one thousand office workers identified seven features perceived as salient to workers for "getting the job well done" (Louis Harris & Associates 1978, 1980). Not surprisingly, all were weighted heavily with elements of the physical environment, representing commonsense elements the interviewer could anticipate in advance. The seven features identified by workers were as follows: (1) access to tools, equipment, and materials with which to work; (2) ability to adjust the work surface, chair, and storage space to suit work requirements; (3) storage space for working materials; (4) comfort of the chair; (5) working surfaces; (6) back support of the chair; and (7) storage space for personal things. About a decade after these surveys, workspace was still generally conceptualized as defined by its physical parameters. For example, Sundstrom (1986) defined a workstation as

> a place designated for an individual to work, such as a desk and a chair in a office. . . . The term workspace is more restrictive; it refers here to a workstation assigned to a specific individual. Workspaces and workstations include furniture, machinery, equipment, supplies, decorative items, and other things that occupy the area designated for the person who works there.

This definition, while strong on the physical characteristics of the workspace, gave limited recognition to the organizational characteristics in which the workspace is embedded. In contrast, Becker (1981) has been sensitive to the notion that work is carried out in a social situation and at a physical setting, and that the physical setting of complex organizations is:

> a socially constructed environmental-support system and communication medium . . . created by several interdependent processes which occur continuously over time. These include the selection and organization of

> environmental elements; selection and organization of time/use patterns; personal characteristics and circumstances; and the overall social context within which each of these processes occurs.

Becker has further made the case for a phenomenological approach for studying the physical setting of work, because when the physical environment is abstracted and considered in isolation from the social and historical context within which it is embedded, it is not terribly meaningful:

> Physical settings—simple or complex—evoke complex human responses in the form of feelings, attitudes, values, expectancies, and desires, and it is in this sense, as well as by their known physical properties that their relationships to human experience and behavior must be understood. . . . The object of study is not the environment as it is, but as it is experienced.

The present study presents some empirical evidence to support Becker's theorizing. It is my opinion that the physical design and placement of the different components of the workspace vis-à-vis each other, and relative to other workspaces, must be interpreted before an inference about their reflection of the organizational values and structure can be made. In other words, the physical context of settings serve symbolic and expressive purposes as well as instrumental ones (Sommer 1972). The task envisioned in the present study is to broaden the scope of understanding work settings as being comprised of the study of the physical setting alone to include the search for symbolic meanings.

A suitable definition of a workspace must combine visually patent themes with those that are organizationally inferred. In other words, a workspace is envisioned as a space that comprises the necessary furniture, equipment, and facilities, where workers conceptualize ideas related to work, and one that constitutes a node where workers congregate for action and interaction. Over a period of time, these three aspects—physical, organizational, and social—come to contribute collectively to the social construction of the workspace. The process wherein this transformation of physical space into workspace takes place invokes to different degrees the individual worker's role and status in the organization, the patterns of interaction within and between groups, the organizational values, and the symbolic meaning of these for workers. Therefore, in this treatise, workspace is defined *as a place assigned to an individual that comprises the physical accouterments necessary to execute the role and reflect the status that is recognized by others in the organization as that specific individual's place to work.* In this definition, although workspace comprises an immediate physical environment, it also symbolizes an underlying legitimacy of the job in the structure and values of the organization.

The transformation of physical space into workspace is being conceptualized here as a process in time and space rather than as a singular event; there-

fore, we need to elucidate the ways in which workers/work groups discharge their roles, and act/interact with each other in the group, in the organization, and with others outside the organization. In any organization, the social structure of a work group/team both arises out of the differential roles of the workers in the group, and the action/interaction of the individual workers, and is formed by them. Once formed, the interaction of the work group constitutes a part of the framework within which further interaction proceeds. Furthermore, the individual worker's action(s) or interaction(s) with other individuals always occurs within and is enveloped by the physical space that comprises the concrete situation of action for the acting individual. The social structure of a work group, then, is constituted primarily by (1) the worker acting out his or her status and playing the assigned role; (2) the individual worker's action/interaction(s) with other individuals; and (3) the physical situation surrounding the action/interaction (Bales 1951). Of course, the physical context of work includes workspace as an essential element of the work setting.

In other words, the way in which physical space becomes transformed into workspace goes beyond the singular event of laying out and aligning a work desk, file cabinets, and desk chairs, and so on. Rather, the ongoing social process entails the action/interaction of the worker as the ontological predecessor, becoming over time woven into the constraints of the physical space and contributing to the transformation. As indicated in Chapter 1, the architectural definition of workspace encompasses its form, substance and symbol. While the dimension of form entails the design aspect, the substance, and symbol dimensions invoke the social, psychological, and symbolic dimensions—the formal and informal action/interaction aspects, the role dimensions related to the worker, as well as the ways in which workers deconstruct the meaning of the work situation. Differently said, the properties of physical space beyond fulfilling functional requirements provide both conditions for, and symbolic representations of, different types of social interaction. Thus, physical space becomes conceptualized as a "social position" within the hierarchical system of an organization. This intricate engagement of the social and organizational issues with physical space is the key factor that leads to the transformation of the physical setting into "workspace" and is the ingredient that contributes to the idiosyncrasies of workspaces in different organizations. Thus, the workspaces at Midwest Survey are best understood in terms of their physical, social, and phenomenological dimensions that encapsulate them.

The present chapter highlights the physical aspect of the social structure of work, specifically, workspaces in the context of the social, phenomenological, and organizational dimensions. Later, Chapters 5 and 6 focus on the substantive and symbolic aspects, primarily the "role" and "interaction" aspects that also comprise the social structure of work.

MELDING OF THE PHYSICAL, SOCIAL, ORGANIZATIONAL, AND PHENOMENOLOGICAL AT MIDWEST SURVEY

The evolution of physical space as an architectural product and the processes by and through which physical space is transformed into social space, acquires meaning, and has consequences for behavior have been delineated in Chapter 1. In addition to these perspectives that shape the work setting, the earliest studies have demonstrated that the organization that embeds the work setting—the immediate context—also plays a major part in the definition of the work setting and, more specifically, the workspace (Roethlisberger and Dickson 1939). Thus, beyond being influenced by attributes of the physical, social, and phenomenological milieus, behavior and perception are also guided by the goals and purposes of the organization within which they are embedded. Therefore, for a better understanding of the workspaces at Midwest Survey, in addition to invoking the social and phenomenological dimensions, the organizational dimensions are delineated here.

In fact, the theoretical interconnections between the physical setting and social behavior can be traced back to the early social theorists. For example, Durkheim (1947), Needham (1963), and Simmel (1971) propagated the concept of space as being imbued with symbolic meaning, and Levi-Strauss (1963) documented the ways in which space came to be invested with meaning.

All organizations need to discharge at least four types of functions that are executed in differential degrees by the various work groups/teams in the organization. These are primarily functions of **A**daptation, **G**oal orientation, **I**ntegration, and **L**atent Pattern Maintenance (AGIL; Parsons 1951). It should be noted that these dimensions typify the most generalized features of the process of action/interaction in a work group. In this AGIL typology, the first two dimensions—adaptation and goal orientation are conceptualized as formal/instrumental, and the integration and pattern maintenance functions are understood as the informal/expressive aspects of the organizational functions.

The adaptation and goal-oriented functions, serving the formal and instrumental needs of the organization, are steered by a cognitive stance that, in anticipation of future consequences, emphasizes the manipulation of symbols. In other words, in executing their adaptive and/or goal-oriented functions, organizations generally invoke symbolic ways of conveying meaning. For example, there was a recognition of this concept even among the early social theorists with the propagation of the view that properties of physical space provide both conditions for and symbolic representations of different social interactions (Simmel 1908), and, furthermore, that "spatial relations not only are determining conditions of relationships among men, but are also symbolic of those relationships" (Simmel 1971).

In contrast, the integrative and pattern maintenance functions are char-

acterized by those informal and expressive needs of an organization in which, for example, states of emotion or motivational tension are brought into balance, generally involving the "affective" aspects of behavior. It is useful at this point to diverge briefly and consider an early study and its bearing on the current argument for the organizational salience in understanding the work setting. In an early study, Levi-Strauss (1963) explained a discrepancy in the native accounts of the same spatial layout of a Winnebago village in the following way:

> These forms as described do not necessarily relate to two different organizations. They *may also correspond to two different ways of describing one organization* too complex to be formalized by a single model, so that *the members of each moiety would tend to conceptualize it one way rather than the other, depending upon their position in the social structure* (emphasis added).

And furthermore,

> the taxonomic clarity of Moiety A and its position of superordination are what enables it to perceive the relations between the moieties as symmetrical; the classificatory fuzziness of B, and its position of subordination are what leads it to perceive the relations between the moieties as hierarchical and symmetrical. These opposing positions (of superordination and subordination) give rise to two discordant ideological maps of geographical and social space.

Broadly read, Lévi-Strauss says that if hierarchy is present in a social organization, despite a deemphasis in daily use, there will ever be strata differences in ways that the different levels of an organization conceptualize organizational reality. Extrapolating from this early study at a macro scale to the organizational level, the instrumental arm of an organization (i.e., comprising the adaptive and goal-oriented functions), is likely to view reality in ways that may be systematically different from the arm that serves the expressive needs of the organization (i.e., executing the integrative and latent pattern maintenance functions).

The social structure of the work group, then, is best understood as a system of solutions to the functional aspects of action and interaction within the context of the work group, and within a given physical context. In contrast to the organizational level at which Parsons elaborates the AGIL typology, I propose extrapolating this approach to the microlevel—the ways in which these organizational functions get carried to the "workspace" in a symbiotic relationship; that is, the functions dictate the types of workspace the individual gets allocated and the workspace then comes to dictate the types of tasks and the ensuing nature of interaction that can be enacted with other workers. Because Parsons' AGIL typology allows the latitude for understanding the ways

in which the smallest core components—interaction and the workspace—relate with and become integral elements vis-à-vis the structural/functional elements of the organization, it is useful to use this framework to elucidate workspaces in the context of both their instrumental and expressive dimensions (to be discussed).

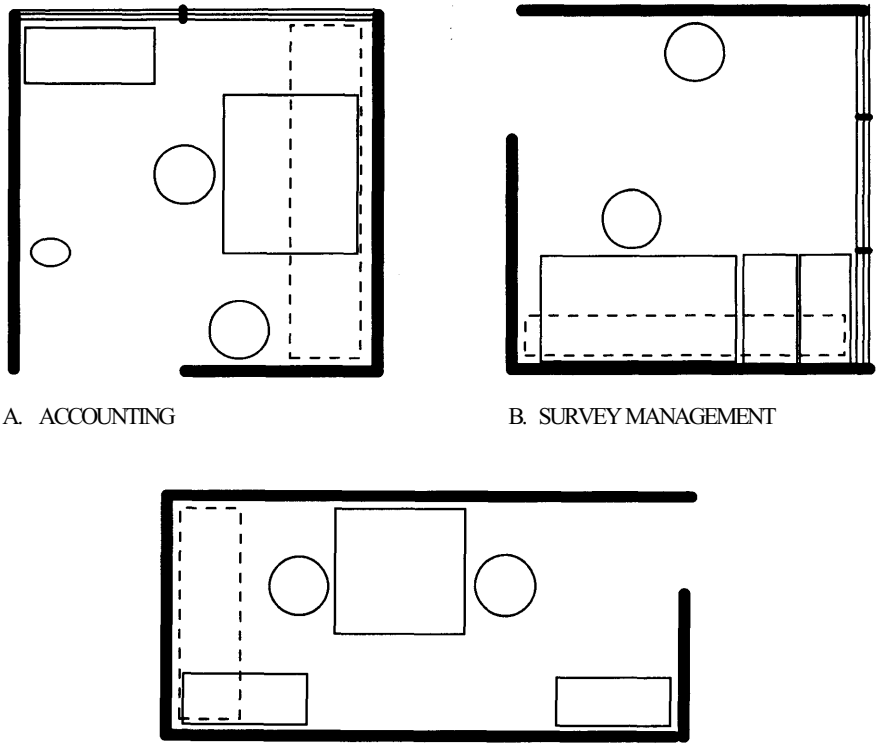
TYPES OF WORKSPACES AT MIDWEST SURVEY

Broadly categorized, an individual could occupy one of four types of workspaces at Midwest Survey's corporate location: private, shared, partitioned or open. These workspaces are discussed here in more detail. The description of each type of workspace includes a discussion of (1) the physical characteristics, (2) the degree to which the physical characteristics support the occupant's role requirements and interaction patterns, and (3) the organizational functions (AGIL) served by the workspace via the degree to which it supports incumbents roles and interaction(s) at their workspaces.

The Private Workspace

Private workspaces at Midwest Survey are occupied by a single worker and range from 100 square feet to around 400 square feet—the bare minimum to the ostentatious (see Figures 4.1 and 4.2). They are most commonly allocated to and used by senior and middle management in the Survey Operations Center, by management levels in the Administrative and Computer Operations Departments, and by faculty in the Research Centers. The physical characteristics of the workspaces in these different departments are largely influenced by the status and role of the incumbents. For example, one Senior Survey Director who had been assigned extra administrative duties describes the workspace: "You can see mine is the biggest office here in this section" (Interview 30). Furthermore, the differential technology, furnishings, and equipment provided by each department and the ways in which incumbents of these various departments lay out their workspaces become the bases for differing symbolisms.

The private workspaces allocated to the lowest rung in middle management include the basic furniture and amenities such as a desk and chair(s), generally one or two file cabinets (the exact number depends on the role/task of the incumbent), and a work surface accommodating a personal computer and/or printer. Their minimal furniture barely supports the incumbent's primary role functions of supervising workers who perform routinized tasks such as interviewing, coding, mailing of surveys, and so on. Moreover, not much thought is given to the arrangement and layout of the workspace, because "it's



A. ACCOUNTING

B. SURVEY MANAGEMENT

C. ADMINISTRATION

Figure 4.1. Configurations of Private workspaces, approximately 100 square feet.

[Survey Operations] really a job shop . . . and we have no time to think of the nicety of things. . . . We like them, but we just don't have the time for them" (Interview 1). While a door to the workspace provides latitude for privacy, often the overflow of survey materials that need to be accessed by the group gets stacked either inside, outside, or within the workspace, making it cumbersome to close the door except for the duration of the one-on-one meetings with other staff members.

In contrast, an executive private workspace comprises, in addition to the basic furniture, added shelving and storage cabinets, informal lounge seating and carpeting (either wall to wall or area rugs), and physical characteristics that afford some latitude for personalization and opportunities for expression of the symbolic. Individuals occupying these private workspaces in the Survey Operations arm of Midwest Survey are required to interface with both the

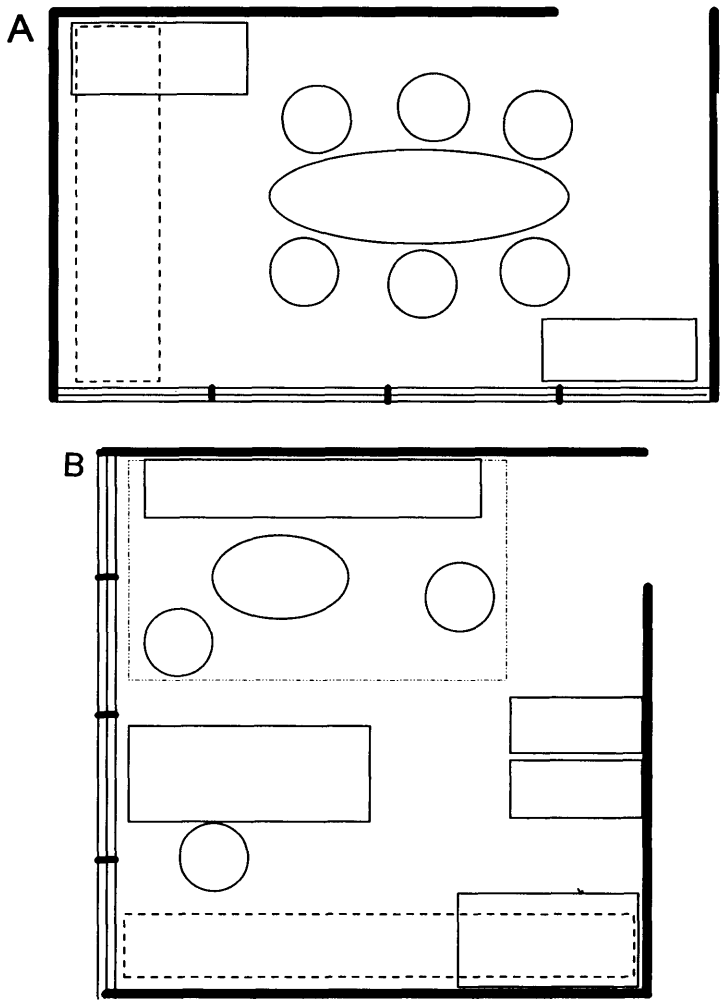


Figure 4.2. Private workspaces of Senior Survey Management.

external and the internal environments of the organization. At the external level, they meet with clients and prospective clients to confer and discuss the design/development of new contracts, the elaboration and clarification of ongoing contracts, and/or perhaps the feasibility of future contracts. At the internal level, they could be involved with any or all such organizational duties encompassing supervision, planning, and survey design. These tasks entail consultation and coordination with computer specialists, field staff, bud-

get monitors, and administration. The general overall impression evoked by these private workspaces is that they go beyond pure function; these are areas where comfort and aesthetics are the defining features.

When compared with incumbents of all other workspace types, incumbents of the entire range of private workspaces shared one common characteristic: they took pride in their workspaces and made efforts to personalize them (86 percent of those in private workspaces, compared with only 44 percent in shared types, 25 percent in partitioned types, and 14 percent in open types of workspaces). Incumbents' awareness of the fact that their private workspaces embodied many sociophysical attributes that the other types of workspaces did not offer could conceivably be the reason for the special efforts to personalize and embellish and further concretize the distinction between the role and the status signaled by the private workspace type and the other types.

Private workspaces afford privacy by demarcating a boundary and allowing their incumbents to "have a quiet space to think and organize meetings away from routine distractions. I prefer that" (Interview 42). However, they are not as easily conducive to facilitating visual and acoustical accessibility and, thus, communication between or within the levels of Survey Operations. Thus, this type of workspace is more useful for private work than for serving the collective needs/requirements of the group. Another reason for the lack of communication between incumbents of private workspaces and workers occupying other types of workspaces in Survey Operations lies in the fact that almost all the senior and middle management are located in one area—the east wing of the second floor, also known as "the senior survey ghetto . . . [on] the second floor. . . and that may create some of their [Senior Survey Management's] ignorance about the interviewers and their attitudes" (Interview 43).

A senior manager voiced concerns along parallel lines: "This physical separation of departments has broken down all communication [between senior management and the shop workers]. . . . I think it's been a mistake to put most all of us [senior management] in one cluster. . . . Say if things were organized within projects, it could be better" (Interview 30).

Another senior manager had some suggestions about an ideal layout: "It does make much more sense for space to be designed around projects. . . because staff learn from each other. There are role models . . . or, you know, support. . . . I say that that's absolutely ideal, and it is not ideal to have a ghetto of senior survey directors in one corridor" (Interview 54).

In summary, the physical attributes of private workspaces at Midwest Survey are supportive of incumbents' role functions entailing management–client interchanges and management/supervisory duties, thereby supporting Adaptive and Goal oriented functions for Midwest Survey. However, private workspaces are not equally able to serve their incumbents' communicative

and group needs, thus falling short on the integrative and latent pattern maintenance dimensions of Parsons' AGIL scheme.

An exception to this description lies in the Research Centers at Midwest Survey. In contrast to the "product"-driven work of the Survey Operations (a set of data to be collected and delivered in a specified format within a specific budget and time period), the nature of the work being carried out in the Research Centers is "process" oriented. More specifically, the "process" entails generating ideas, developing and crafting them, and writing and refining the ideas—tasksand skills that are honed in a small-group setting, in a small group working over time on this process of "doing research."[1] The function of the private workspace in this case is to bring the group together. In other words, the workspace needs to support the integrative, communicative, and cultural dimensions of the organization. The ongoing development and the honing of the craft of research hardly necessitates any grounding in a defined symbolic place of power; ideas do not necessarily surface at the private workspace. Thus, the shared meaning that the workspace type evokes varies with the context; in the case of Midwest Survey, it varies with the departmental affiliation of the worker.

The Shared Workspace

A single office that accommodates two or more workers is defined as a shared workspace. Most shared workspaces in the Survey Operations of Midwest Survey had furniture arranged such that there would be minimal or no eye contact between office mates when seated at their desks. Where possible, furniture had been used to define boundaries between the workers, and to enhance the level of privacy. As an example, one such shared workspace is described here.

A typical shared workspace housed Gina and Gwen, in-house staff in charge of coordinating field administration, who occupied an office space approximately 14 feet by 18 feet (252 square feet) (see Figure 4.3). It comfortably accommodated them both and had storage space for the extensive files and paperwork needed for the coordination and administration of the survey field work. The workspace had two doors facing each other on opposite sides of the space; one of these doors opened into a corridor adjacent to the area accommodating the senior management, and the other opened into a corridor leading to the cafeteria. This second doorway had now been blocked off by the placement of a file cabinet in front of it, so as to prevent it from becoming a through passage to the cafeteria. The office had adequate fluorescent lighting but no windows or any other source of natural light. The desks of the occupants were arranged such that they faced away from each other, which allowed the latitude for some degree of visual privacy. In addition, the strategic

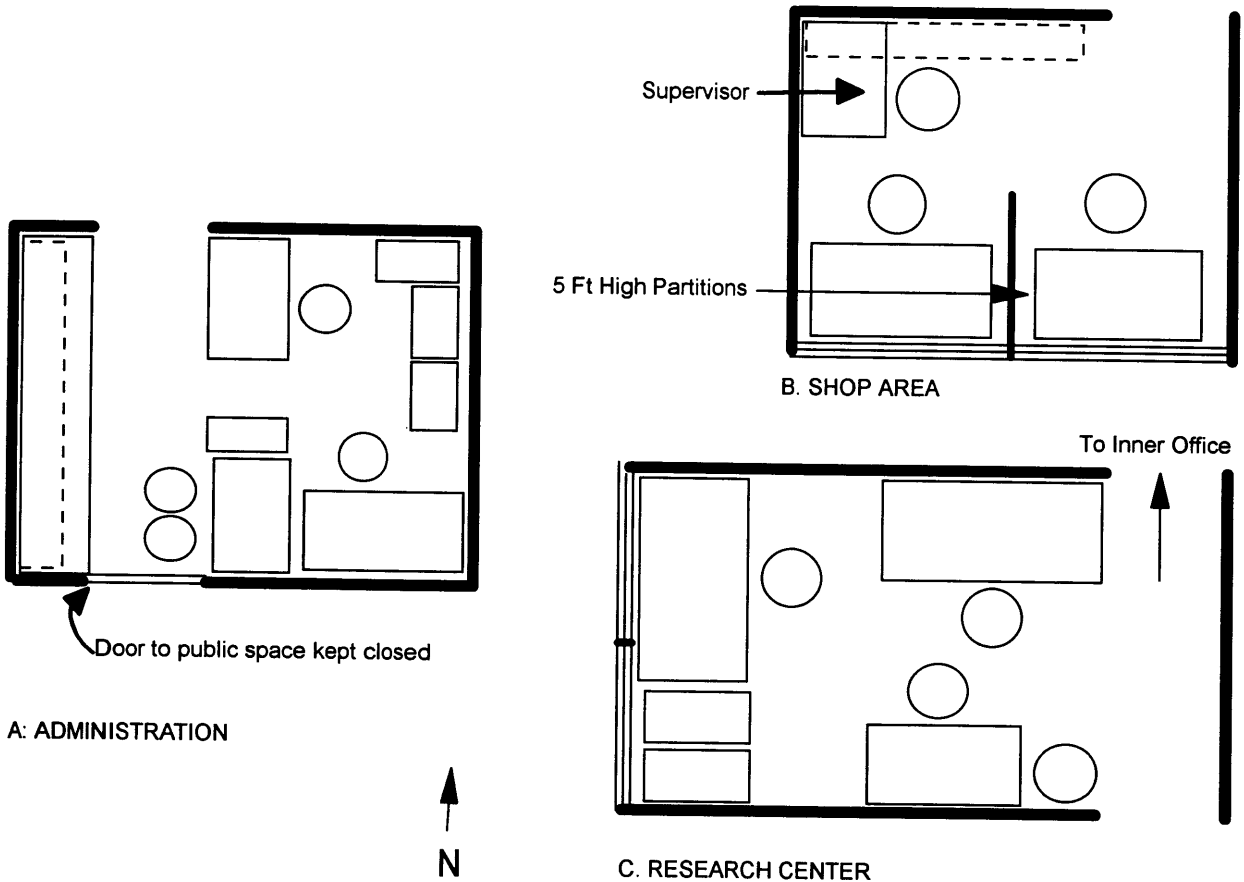
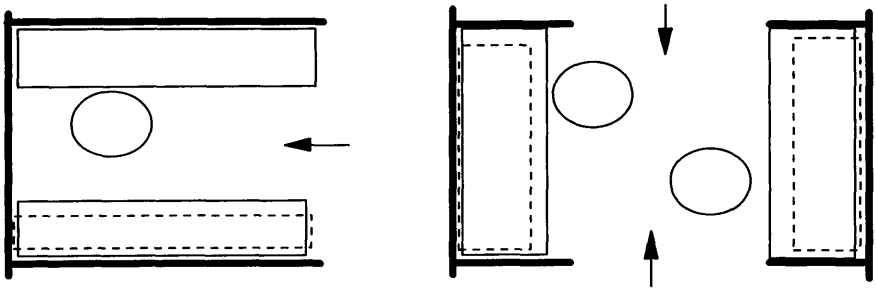
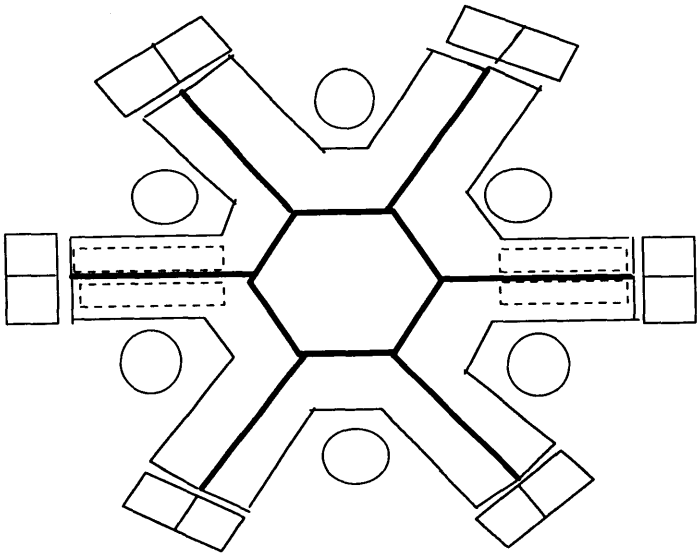


Figure 4.3. Shared workspaces.



A. Used by 1 person
e.g. Supervisor

B. Used by 2 persons
e.g. in Shops



C. Used by a maximum of 6 people
e.g. in Survey Operations

Figure 4.4. Modular Partitioned workspaces.

positioning of file cabinets and a plant positioned between the two desks not only enhanced privacy but also helped to define the boundaries between the two workers. Their individual workspaces had also been personalized, thereby underscoring the occupants' individuality and work identity; for example, one of these workspaces had a few family pictures on the file cabinet near the

desk, and, the other had a green flowering plant.

Usually, workers in shared offices are assigned internal responsibilities ranging from lower-management duties to routine tasks such as coding, cleaning, and retrieval of data. While the tasks themselves are important, they are nonetheless repetitive and routine. It is common knowledge that the ingredient of utmost salience for executing routine tasks is acknowledgment and support from coworkers. In other words, opportunities for informal social interaction often facilitate individuals' daily routine (Homans 1950; Roy 1979; Whyte 1948). When workspaces amplify the opportunity for interaction for bored workers, when they act as interaction nodes so workers from other departments can feel comfortable stopping by to share experiences, seek confirmation, and get recharged for the work at hand, these workspaces fulfill an important informal function. It is the latitude for informal and impromptu social interaction afforded by the shared workspaces of Midwest Survey that alleviates the stress of the banal tasks. Thus, while these workspaces may not allow the incumbents the privacy afforded by a private workspace, they are better able to serve the informal and expressive functions of the work setting.

The relationship of the physical setting of the workspace to the incumbent's satisfaction can be explained from a psychological perspective: the notion is that the symbolic content of artifacts in the physical environment can evoke dormant or manifest aspects of the self and ones goals (Csikszentmihalyi and Rochberg-Halton 1981). Our conception here is somewhat parallel: shared workspaces provide greater latitude for informal and expressive functions, more so than private workspaces. In such a setting, therefore, when workers surround themselves with certain artifacts and/or objects, these may have the capacity to cull forth memories that help in the sustenance of an idiosyncratic work identity. The physical setting of shared workspaces becomes a fertile ground for facilitating the evolving, sustaining, and transforming of work identities over time. The grounding of work identities, as we see in the shared workspaces of Midwest Survey, can make the difference between a worker staying on for a long time with the organization versus using the job as an interim opportunity. The data support this view; many old-timers who now occupy private offices, started out in shared workspaces. One budget monitor reminisced about the times at Midwest Survey more than a decade ago: "Everyone was doing everything. . . . We didn't have much space then, we shared . . . and there was a cohesiveness. . . . Midwest Survey used to be socially oriented, a place where you could grow. Now it has become only work focused" (Interview 39). The budget monitor continued reminiscing about the factors that most contributed to the evolving role at Midwest Survey: "I used to share an office space, and that was great . . . I didn't get as much work done as I do now [in my private workspace]. . . . but then you have to understand, I'm very compulsive. I don't need to be . . ." (Interview 39).

In the Research Centers, shared workspaces, used mainly by research assistants to a faculty member and by visiting fellows on a research project, also enhance the integrative/bonding functions for the group as they do in the Survey Operations. Shared workspaces then, lend themselves to facilitating two important functions for Midwest Survey: (1) informal interaction among workers, and (2) the evolving, sustaining, and transforming of work identities over time.

In summary, while shared workspaces do not allow the latitude for privacy, they afford their occupants a significant degree of leeway for informal social interaction. From this perspective, shared workspaces serve Midwest Survery's expressive and informal functions, the integrative and latent pattern maintenance dimensions on the AGIL scheme.

The Partitioned Workspace

A partitioned workspace, usually located in large, open plan rooms or areas, comprises a desk, a chair, and a work surface, along with the necessary functional accessories (see Figure 4.5). These workspaces are 30 square feet or thereabouts (approximately 5 feet by 6 feet) and are divided by demountable

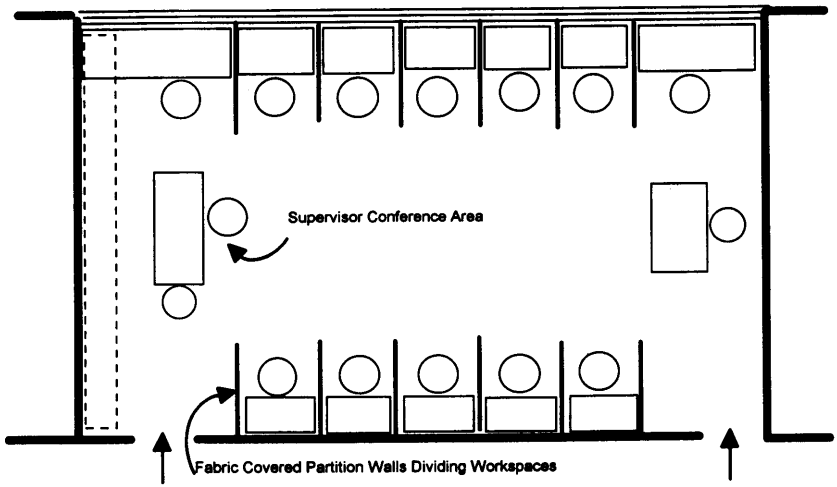


Figure 4.5. A Phone Shop with Partitioned workspaces.

partitions, 5 feet high (covered either in neutral fabric or plastic laminate). In the most common configuration, they are enclosed on three sides and open on the fourth. A less popular style has them enclosed in the front and back, with both sides opening into aisles. A third configuration has several workspaces arranged in a hexagon, with each workspace facing the core. Consequently, in this case, workers face the partitioned half, with the passageway or common circulation space behind their backs.

Partitioned workspaces are generally assigned to workers in the various “shops" of Survey Operations (e.g., Phone Shop, Mail-Out Shop, etc.) and the secretarial and technical support staff in Survey Operations, Administration, and the Research Centers. In discharging their tasks, the incumbents of these workspaces require acoustical privacy because of the confidential nature of the business and some degree of visual privacy so as to avoid distractions for workers who are "supposed to conduct about seven interviews in an eight-hour work day" (Interview 19). Partitioned workspaces partially support these requirements of acoustical as well as visual privacy. At the same time, the partial openness of these workspaces affords incumbents the latitude to become part of the group on an ad hoc basis and almost instantly. From this perspective, a worker can "get the work done" as well as share in the group camaraderie. And from management's viewpoint, workers in such workspaces are relatively easily monitored because of the ease of visual and acoustical access.

The Phone Shop provides an example of the typical partitioned workspaces in the Survey Operations. The layout is planned not only to facilitate the instrumental function of meeting the minimum privacy needs of the phone operators but also to allow the latitude for workers to carve out some sense of work identity by providing a semblance of a separate niche via the partitions. It houses twelve phone operators in partitioned cubicles laid out along the two long walls of the rectangular room (see Figure 4.5). The Supervisor's workspace, situated at the front of the room, is without partitions and comprises only a desk and chair. Each phone operator has a work surface with a phone and a chair. The workspace, separated from adjacent workspaces by 5-feet high, fabric-covered partitions, provides partial visual and acoustical privacy for conducting telephone surveys. The partitions serve to minimize distractions and interaction with fellow workers, and afford the semblance of a separate workspace, thereby affording the perception of some degree of control. One supervisor feels the use of these partitions in the Phone Shop is justified: "We do the most important work of Midwest Survey. We collect the data from out there. I take this work very seriously" (Interview 13). Another advantage is that they facilitate worker efficiency: "Phone operators are expected to complete a certain number of calls in a work day; therefore, distractions have to be minimized" (Interview 13).

From the perspective of the incumbents of these workspaces, the work entailed is of a naggingly routine nature, like the phone operators' routine task of calling respondent after respondent, asking formatted questions in the given sequence, no more, no less, the very same questions hour after hour, day after day, until the allocated number of questionnaires is completed. One longtime administrative staff member astutely points to the importance of supporting good interaction between workers and further adds that the partitioned type of workspace (she was occupying at the present time) was at best conducive to small talk, and small talk among colleagues did not have much value: "Such talk is not conducive to making any long-term friendships, and that's a bit frustrating" (Interview 17). Partitioned workspaces at Midwest Survey are rather limited in the latitude they offer for interaction; in fact, as gleaned from the previous quotations, they discourage social interaction. After all, the nature and the extent of a conversation at a cubicle, with one worker sitting and the other standing in full view of the entire Phone Shop, can neither be very involved nor have any great depth to its contents. The frustration of working at routine tasks, added to the sparse opportunities for informal social interaction at the partitioned workspaces (existing facilities for supporting informal social interaction were sparse, being limited to the vending machine area in the second floor cafeteria and a small vending area on the fourth floor) brought forth nonsurprising worker reactions such as boredom, fatigue, and the uninvolvment of any creative faculties in performing their tasks. According to one incumbent, "Even if we had taller partitions that might be better, or a brighter color, say maroon. . . and then the lighting has too much glare. This has created a problem for me. . . . I have to constantly face Kim while I do my work, . . . I have to face only in one direction because of this fixed lighting" (Interview 35). This evidence corroborates the literature showing that even if it does not totally alleviate the burden of the routine task, the opportunity to interact with fellow workers and colleagues on some sort of continuing basis provides the needed respite from never-ending routine tasks (Roy 1979).

Even workers from other departments identified partitioned workspaces as spaces where "they (incumbents of partitioned workspaces) could not be doing anything of great importance for Midwest Survey" (Interview 58). In addition, there were several other cited disadvantages pertaining to these workspaces: for example, lack of control over ambient conditions; minimal opportunity to personalize workspaces (25 percent of the incumbents in partitioned workspaces personalized their workspaces); and minimal privacy.

Besides their specific physical shortcomings, partitioned workspaces located in the "Shops" of Midwest Survey were physically removed from the core of the organization (92 percent were far or moderately far removed). And to the extent that they constituted the "shop" where the nitty-gritty work of surveys was done—the "backstage" (Goffman 1959)—in contrast to the "front,"

as embodied in the private workspaces of senior management, they signaled a less important role in Midwest Survey (refer to Chapter 1 for a more detailed discussion of "front" and "back" spaces at Midwest Survey). As one lower-management worker divulged: "By segregating different sections as we have [at Survey Operations], people can get isolated from the major happenings, and it can consequently affect a lot of things . . . including their career" (Interview 40).

While partitioned workspaces are narrowly instrumental for the functional role of the phone operators (e.g., in supporting privacy and providing latitude for individual work identity), they are also only generally supportive of the informal interaction needs of their incumbents at the workspace, thereby serving the expressive–integrative functions of Midwest Survey.

The Open Workspace

The open workspace is more or less self-explanatory: basically, it comprises a desk and chair, personal computer, phone, and a file cabinet (if needed by the worker) situated in an open plan area with no dividers or partitions to isolate the worker from the surrounding local activity. While the Survey Operations have few open workspaces, they are generally assigned to the lowest level in the hierarchical structure–the production shops. For example, in Questionnaire Mail-Out Shops, workers are given individual chairs but share a common work surface area in the form of long rectangular tables set up for the continuous-line production of the questionnaire package to be mailed out to the respondent. The relative positioning of open workspaces, whether in a corridor or in a room, is usually arranged in such a manner that existing traffic circulation patterns are retained where possible. Incumbents of these workspaces usually position a planter or some other furnishing to define a boundary around their workspace (see Figure 4.6), that helps shield them from potential interruptions and disturbances caused by circulating traffic.

Open workspaces fostered a strong sense of community and togetherness among the workers. This feeling was further strengthened when the open workspaces were clustered in a group rather than individually. In one instance, when the personnel for a project had been moved from the former to the present corporate location, all the workers, including supervisors, irrespective of rank, occupied the same sort of workspace–the open workspace. As the project progressed, the workers saw themselves more or less as part of a "team." With the winding down of the project and personnel shifting to other projects, a differentiation of space occurred (partitioned workspaces) and, I learned, attitudes changed to "It's just another job" (Interview 54).

However, given the changing demands of survey research, there is no guarantee for the incumbent of the open workspace that the space will be

available at the same spot on the following day. The inability of the organization to provide these workers with a workspace that they could call their own gave rise to discordant attitudes: these workers came to see Midwest Survey as a place of organizational uncertainty, with unpredictable career prospects.

In the Research Centers the temporary allocation of open workspaces was made to accommodate the work study students engaged in ongoing projects. Such areas served mostly as a space to lay down a backpack and temporarily open "shop" for the work at hand. For them, however, the temporary nature of open workspaces did not seem to be a significant issue, since their own tenure at the Research Center was fluid; the bigger issue for them involved "learning."

Through their support of informal interaction, open workspaces can enhance the informal organizational culture of Midwest Survey. However, because of their lack of privacy and inaccessibility to any means for personalization (only 14 percent of these incumbents personalized their workspaces), they are not equally able to support the formal—instrumental and symbolic functions of Midwest Survey. On the AGIL scheme, both partitioned and open workspaces serve the informal–expressive functions as compared to the pri-

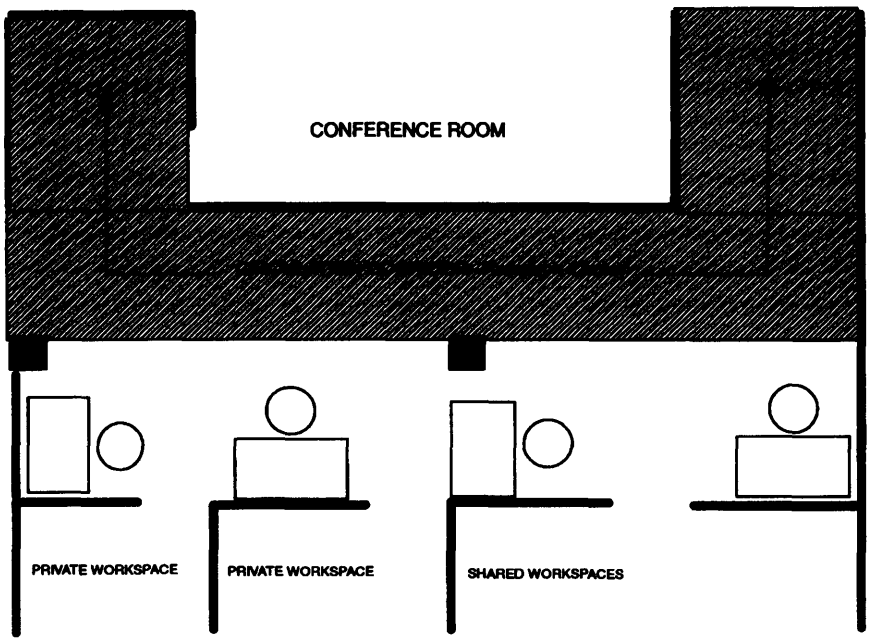


Figure 4.6. Layout of Open workspaces in a corridor.

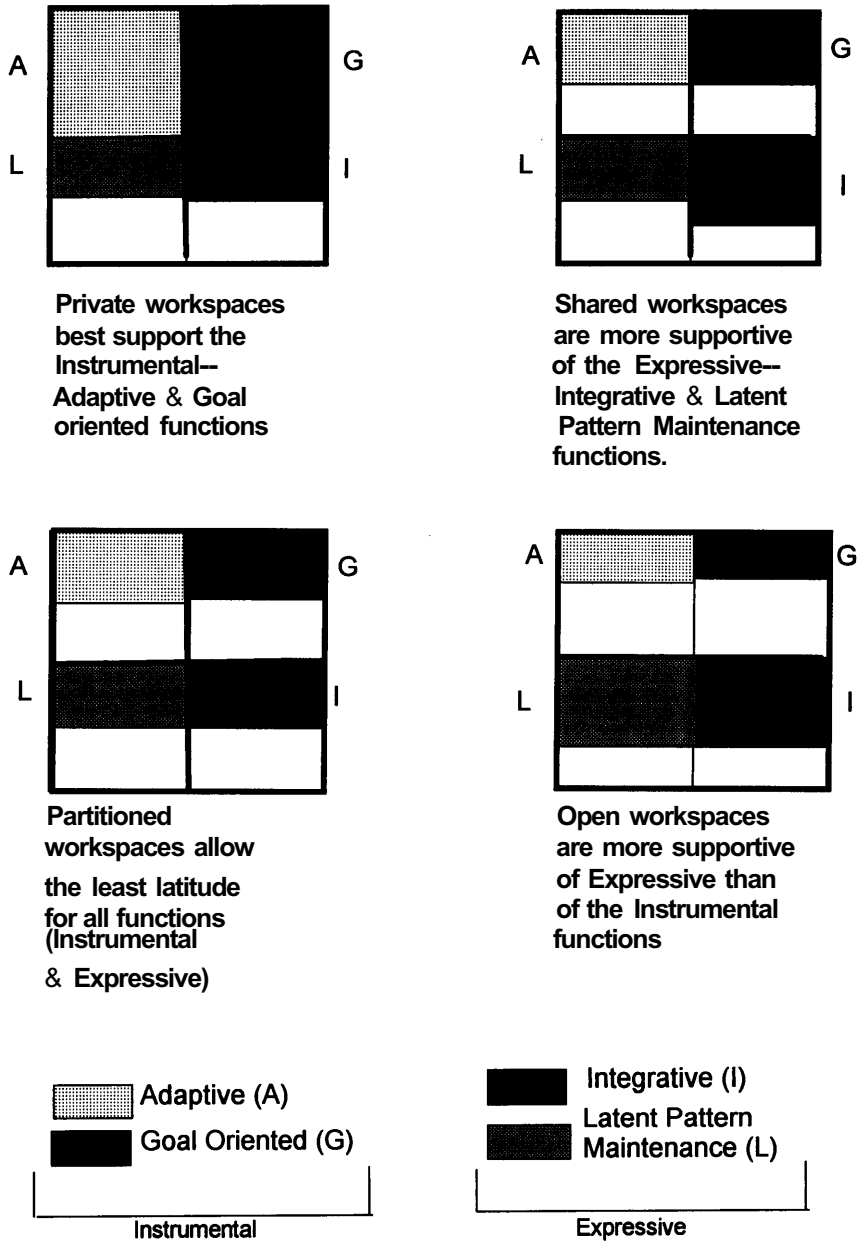


Figure 4.7. Schematic comparison of the four types of workspaces based on AGIL typology.

vate and shared workspaces that promote the adaptive–instrumental functions of the organization (see Figure 4.7).

In summary, a schematic depiction of the functions best supported by the four types of workspaces is shown through invoking Parsons' AGIL typology, as depicted in Figure 4.7, which indicates that there are trade-offs for each type of workspace, whereby even less desirable workspace types are perceived to be useful. It shows, for instance, that while private workspaces have a greater role in the facilitation of formal organizational functions, shared workspaces are perceived as having a relatively greater latitude for informal social interaction, thereby fulfilling informal and expressive functions of the organization. By supporting informal interaction, open workspaces are perceived as beneficial in facilitating a sense of cohesiveness, while partitioned workspaces are salient in mitigating distractions and promoting efficiency.

CONSTRUCTING WORKSPACES

Early conceptualizations of workspaces were limited to their physical characteristics. Defining workspaces by functional criteria, no doubt, is the initial step for facilitating workers' performance. However, with the recognition that workspaces are a reflection of their broader context, their organizational structure and their function, these early conceptualizations were broadened to include the enveloping social and organizational context in which workspaces were embedded. Alongside the sensitization to the social–organizational parameters came the understanding that no physical setting is meaningful to workers unless viewed from a phenomenological standpoint. Interview data on workspaces at Midwest Survey were found to be abundant with incumbents' experiences and social relationships. Therefore, the present delineation of the workspaces at Midwest Survey includes, in addition to the physical attributes of the workspaces, the social–organizational and phenomenological dimensions in which they are embedded. The ways in which these workspaces serve instrumental needs of Midwest Survey—become a stage/backdrop to enact roles, and act as symbols of status—is elucidated in Chapter 5. And the ways in which workspaces facilitate or impede the expressive needs of Midwest Survey in the creation, sustenance, and perpetuation of cultivating informal bonds are delineated in Chapter 6.

NOTE

1. As mentioned in Chapter 3, this 'process of doing research" is motivated by the desire to generate "prestige," in contrast to the Survey Operations' "product-oriented" goals based in the motivation for "bringing in the money."

5

Status, Role, and the Physical Setting at Work

When one individual enters the presence of others, he will want to discover the facts of the situation. . . . To uncover fully the factual nature of the situation . . . that is rarely available. . . the individual tends to employ substitutes-cues, tests, hints. . . status symbols-as predictive devices (Goffman 1959).

INTRODUCTION

It is 9:10 A.M. on a Wednesday morning, time for the biweekly organizational meeting on space allocation at Midwest Survey to begin. The setting is a tastefully decorated and comfortably furnished section of an executive office. The space decision-making committee members representing different departments have begun to filter in and seat themselves on sofa chairs arranged in an informal grouping around a coffee table. After some cordial exchanges, the committee gradually settles down to more substantive matters. A representative from the Survey Operations arm brings to the attention of the group the start-up of a new project that would initially need around ten to twelve workspaces to accommodate additional staff personnel. After some discussion, someone makes a proposal that some space could be eked out if Accounting could temporarily squeeze and abdicate one private workspace that could accommodate at least five Operations staff. The proposal seems a feasible one but is met with resistance from the Accounting staff, because this would mean the displacement of the Accounting leader.

This scenario could be from any organization. For example, according to March and Olsen's (1976) model of decision making, "Choice situations are not simple occasions for making substantive decisions. They are also arenas in which important symbolic meanings are developed. People gain status and exhibit virtue" Thus, organizations generally tend to go from working on one matter to the next, often in the interest of solving the most crucial problems of

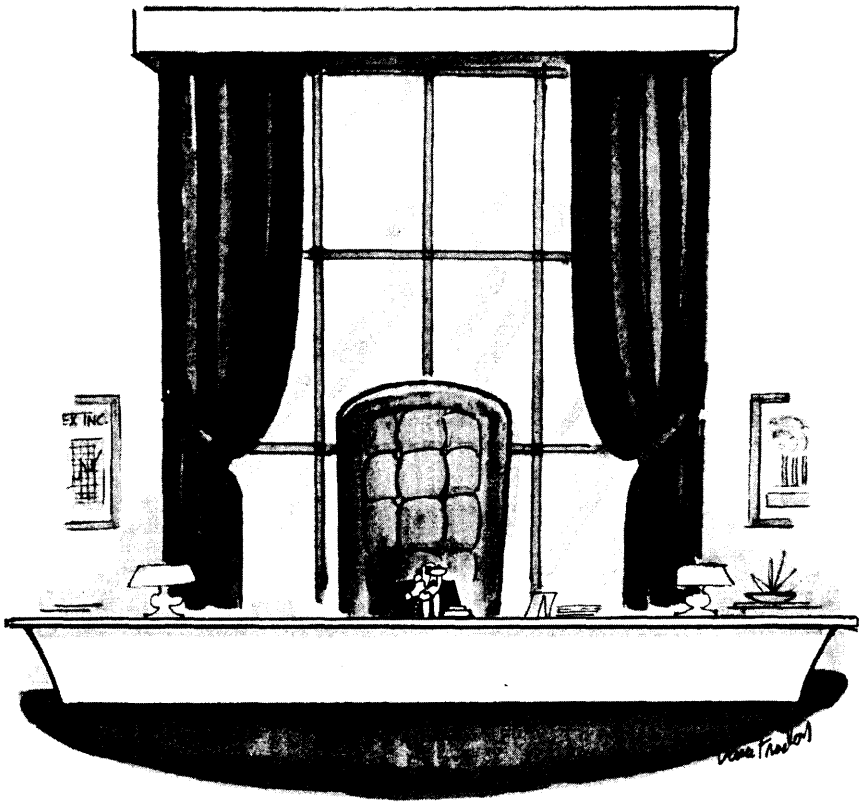
the day. In doing so, they may not always be aware of how the social organizational attributes and physical attributes of workspaces become interwoven. For example, this idea has been aptly articulated for the macrolevel:

> Ecological siting in physical space is always present for social action, which continues to come into existence, and fade, in part as irritation from and spinoff into the erratic in biophysical space-time. Biophysical ecology shapes empire and tribe alike. (White 1992)

In the example of Midwest Survey, for instance, at the present time, even a temporary abdication of space resources and a displacement of the Accounting leader, besides entailing consequences for the status and role of their department in the organizational structure, would jeopardize claims to space resources in the future. Many organizations are not aware—until brought to the foreground through either some conflict or a change in their physical setting—that aspects of organizational structure, such as status and role, are mirrored in, and with time become part of, the physical settings in which they unfold. The use of physical characteristics of the work setting as a symbol of status and role is aptly illustrated in Figure 5.1.

The concept of role (and status) goes far back in history (see Thomas and Biddle 1966) and, broadly stated, has been examined from at least two major perspectives—structuralist and interactionist—which have been argued as supplementing each other (Heiss 1981). The structuralist set of studies contends that features of roles, such as role conflict (Merton and Barber 1963), role overload (Goode 1960), and role strain (Merton and Barber 1963; Goode 1960) are inherent in the nature of social structure. From a different perspective, the interactionists have postulated the ways in which roles are learned and used in interaction (Mead 1934). However, none of these studies expounds on what constitutes roles. An exception to this is Nadel's (1957) treatise on role analysis, which provides the foundation for the present chapter. Because of its detailed analysis of the internal structure of roles and, particularly, their unfolding in settings, Nadel's explication seemed useful for the present study. Therefore, inasmuch as it helps to understand the case for Midwest Survey, the following paragraphs briefly delineate this research.

Status in a work setting is conceptualized as an elementary form of a standardized group of duties and privileges conferred by the organization on the individual or group in a certain defined work situation. Since Roman times, the term status has had the additional meaning of rank; hence, one infers that the differential rank or position of the individual or group in a hierarchical structure is indicative of status. Dependent on the designated responsibilities involved, a particular position in an organization entails certain rights and obligations. While the *knowledge* aspect of these rights and obligations has been conceptualized as *status,* the *performance* aspect has been referred to as



"Do you know who you're talking to, Buster? You're talking to the guy with the biggest desk, biggest chair, longest drapes, arid highest ceiling in the business!"

Figure 5.1. Physical setting as status symbol. (©The New Yorker Collection, 1981 Dana Fradon from cartoonbank.com. All rights reserved)

role (Nadel 1957). Thus, by inference, status and role are not only complementary in nature, but they are also two aspects of a single concept: roles represent the dynamic aspect of a status (Linton 1947), and status translated into action is role (Parsons 1951). While the behavior or conduct of individuals exhibits these aspects (role and status), role and status are also independent of behavior in that they function with a constantly reconstituted personnel. The concept of roles, therefore, refers not to specific individuals but to individuals' roles seen as clusters of qualities, those invariant qualities as are required in the implementation of tasks and goals in the larger social structure.

An understanding of the total entity of role behavior involves practical problems of perception and recognition, which are facilitated by the mutual entailment of the role attributes in which one attribute functions as a cue for the others (to be discussed). For example, the role "name," as used in forms of address, is a cue that conditions the expectations of the listener and consequently is linked to status. And signs such as dress and badges of rank are meant to facilitate the perception and recognition of differential roles and conclusively prove or disprove their character (also to be discussed is an elaboration of core and peripheral attributes of role and their entailment within each other).

A similar case can be presented for status (cf. Hughes 1971). A particular status comprises some specific determining characteristics such as the formal and technical qualifications required for a position; in addition, a complex of auxiliary characteristics are expected of, and associated with, a particular status. The technical characteristics of status are generally associated with an ongoing historic role and come prior to the individual worker taking on a particular work role. On the other hand, the auxiliary characteristics of status are formed over time as they become embodied in ordinary talk, the physical setting, and/or other symbols of organizational culture. In other words, auxiliary characteristics of status are encoded in the material and nonmaterial facets of the organizational culture and subsequently decoded by workers in the process acquiring meanings specific to the organizational culture of which they are part.

Inasmuch as roles are based in status, there tends to be a congruency between the two (Nadel 1957). And while individuals may not systematically put together their role expectations of others with particular statuses, it is suggested that there is a cognitive consciousness that central attributes of status and role tend to be congruent with each other, as are their peripheral attributes. However, the processes through which this congruency unfolds itself and becomes manifest in a physical work setting have not so far been systematically discussed in the literature, either from the social science or the architectural perspectives, and are elucidated in this chapter.

Role behavior (inclusive of both knowledge and its performance) is enacted phase by phase, occasion by occasion, in a "process" extending over time and in physical space. The physical setting of work implicates and facilitates the perception of both the status and role in behavior. For example, on the one hand, workspace is the most concrete auxiliary characteristic and patent symbol of status bestowed by the organization upon the worker; on the other hand, for the worker, in the course of work, the workspace becomes a salient means to, and support in, the performance of ones' role in the execution of required tasks and responsibilities. In addition, usually, the design and plan of workspaces evolve from a response to the status needs and role functions

for a particular position. In fact, it is only when a *workspace, physical location,* and/or relevant physical setting are able to confirm, nurture, and sustain fitting perceptions of both—the *knowledge* and its *performance* —overtime that a particular role and status come to be validated in a work setting. For example, when an executive has a corner office affording a wider view and twice the amount of natural light as other offices, the workspace becomes a symbol of the executive's status, and when personalized, it comes to be an extension of the role attributes and backdrop to the interactive role of the executive. In other words, workspace is more than simply the physical setting wherein role behavior materializes; rather, it is better conceptualized as an integral part of the conferred status and worked-out role. Several examples from the data are highlighted in this chapter to show how the physical setting becomes an indicator of congruence (or incongruence) between status and role. Also illustrated are the ways in which the organization tends toward congruence between status, role, and the physical aspects (workspace, physical location, and surround) of a work setting, each complementing the other two.

However, because of constraints of the overall building layout and the myriad factors that need to be considered in the equitable allocation of workspaces, sometimes organizations cannot successfully align status and role with the allocated workspace. Consequently, in such cases, when a workspace, physical location, or the physical surround fail to enhance both the status and role they are enveloping, there is the tendency of status and role to shift away from congruency. The physical setting subsequently comes to be perceived as congruent with either status or role, separating the two from their tendency to congruence and leading to tensions in the organization. The understanding of these interrelations between the socia organizational constructs in congruence or incongruence with the physical aspects of the workplace is the focus of the next several sections of this chapter.

An analysis of the interviews and observations demonstrates at least two ways in which spatial restructuring redefines status and role relationships in a work setting. First are examples that demonstrate ways in which workspace and/or physical location is congruent with status and role and acts as an indicator of such a congruency. In contrast, the second set illustrates cases in which the physical setting is not in consonance with status and role, and acts as a deterrent to status/role congruency.

PHYSICAL SETTING AS AN INDICATOR OF STATUS/ROLE CONGRUENCY

We often expect a confirming consistency between status and role attributes; for example, we expect that in a work setting, the differences in social status

of the workers will be expressed first through the role "name," and then through other role attributes such as clothing, posture, speech patterns, and so on. However, it is only when workspace and its attributes also come to be congruent with the status and role that workspace confirms and facilitates the course of social behavior. The most patent indicator of the consistency between status and role in a work setting is the workspace and/or its physical attributes, as highlighted in the following examples. The first example illustrates a situation in which the *physical location* of the workspace becomes congruent with both the status and role of the incumbents and subsequently comes to act as an indicator of this congruency.

The Demilitarized Zone (DMZ) of Survey Operations

On the second floor of Midwest Survey, adjacent to the main entrance and exit of Survey Operations, is an elongated space, bounded on one side by a section of Operations and on the other side by the Editorial Department. A window wall on the north side faces the outdoor garden (see Figure 3.3). As projects wax and wane in the Operations Department, workspaces in this area are regularly regrouped and otherwise rearranged. When several workers who had been moved to workspaces in this area for a relatively short period of time were subsequently laid off work, this space came to be ritually established as the "DMZ Area" (Interview 1).

The organization confers a relatively low status on these production workers who have been allocated a workspace in the DMZ area but have not been assigned a specific project for any number of different reasons. Over time, these workers with an assignment but no ongoing project affiliation, especially when allocated a workspace in the DMZ area, came to signify workers in a marginal role. Thus, although the organization initiated this ritual of space allocation as a sequence of practical acts, over time the DMZ area became a good indicator of the marginal status conferred on these workers and the marginal role behavior expected of them.

Offices of the Director and Operations Management

In contrast to the DMZ but illustrative of an alignment of status, role, and physical setting, and in fact, reflecting and enhancing the incumbents' rank are the offices of the Operations Management and the Director. We turn first to the offices of the Director.

Also on the second floor of Midwest Survey, at the head of the Administrative section corridor running east–west, are the Director's offices, comprising a suite of three separate offices (see Figure 3.3). The Director occupies a spacious corner office looking north and east, with the south wall opening

into a comfortable conference/library area, and the west wall opening into a large office of an Administrative Assistant.

The Director's office itself is very distinguished, with wood paneling, an ornate ceiling, and a north and east corner view looking into the beautiful University campus. Modern furnishings cater to the needs of a top executive—as evident in the comfortable grouping of sofa chairs—andthose of an intellectual, reflected in the floor-to-ceiling book cases with a wide range of books, reports, and documents. The Office of the Director is responsible for executing a varied number of functions because of the many hats worn by the Director (e.g., faculty in several departments of the University, Head of Survey Operations, Head of Administration, Head of the Research Centers, member of the Board of Trustees, and research scholar).

Directly adjacent, and facing north, is the Administrative Assistant's office—alarge, always busy office because of both the internal and external functions it executes. For example, this office needs to interface not only with all internal matters ranging from Administrative, Operations, and/or Research matters, but also with all relevant external situations and events such as those pertaining to Midwest University, the Board, and/or client related issues. The office itself, with all its furnishings, has an efficient layout. A glass partition wall separates this office from the Administrative section corridor, thereby affording a feeling of openness while maintaining acoustical privacy.

Opening directly from the south wall of the Director's office is a wood-paneled library and conference room used both for in-house and client-related meetings and discussions. Wood-paneled wall shelving, with neatly filed journals, and a large polished wood conference table with matching chairs fill the entire room.

This set of three offices leaves one with the general impression of coming into the most important set of offices at Midwest Survey. This location serves somewhat as a nucleus, easily accessible to other departments on the second floor, such as the Survey Operations, Editorial Department, and Computing Facilities on the east, and three Academic Research Centers and the Central Administration core on the west.

The widely accepted perception among workers is that departments in proximity to this nucleus of power and prestige (the Offices of the Director) are themselves important actors in the organizational arena and have a distinctive place in the functioning of the organization. In other words, the perception is that the closer to the nucleus of Midwest Survey workers are, the higher their status and the more salient their role in Midwest Survey. With this background, it is not difficult to understand the reluctance of staff when they are asked to relocate to other, nearby sites because of lack of space in the present building. For instance, a typical response was along these lines: "If I'm sent to L.P. [another building away from the main building], I'll be

forgotten. . . . Nobody wants that to happen" (Interview 36). As the physical distance between themselves and the source of power on the second floor increases, workers perceive themselves as being deprived of symbolic status and an active role in Midwest Survey.

Besides the Director's offices, a large part of the management of the Survey Operations is also housed on the second floor. Located in a highly coveted wing of the building, they occupy private workspaces laid out along the perimeter of the east wing, with a pool of support staff (in partitioned workspaces) in their center. These prestigious offices, overlooking the campus in the near distance and an outdoor landscaped court of the building closer up, reflect and enhance their occupants' high status and salient role (see Figure 3.3). The internal arrangement and amenities of these private workspaces in Survey Operations speak to their rank in the hierarchy. Through a selection and placement of furniture equipment, artifacts, and symbols such as closed or open doors, the incumbents are endowed with means to send signals directed either to the organization or colleagues/staff confirming differential status and roles. Many individuals in the management staff felt embarrassed about the exclusive space allocations made for them:

> You can see it's [this is] the biggest office in this section. . . . It [the overall plan] hasn't worked out as well as we thought. Communication has broken down. . . . It's been a real mistake to have all the SSD'S [Senior Management] in one cluster. . . . Now, I think there should have been some intermixing. . . . (Interview 30)

However, they could justify their exclusive use of this area because, for instance, as the senior staff member articulated it, "I am responsible for new client contacts. I love that . . . and we need to project a certain image" (Interview 30).

Because Survey Operations brings in 90 percent of Midwest Survey's revenue, compared to 10 percent brought in by the Research Centers, and especially because it provides "a level of detail above the Research Centers," Survey Operations' management perceive their status as "high" and their role as "salient." These perceptions are confirmed by and through their workspaces, which afford a latitude not only for the execution of instrumental functions, but also for the display of the symbolic status mandated at this level. From the perspective of the organization, the physical setting is a latent yet persistent aspect of work that needs to be allocated and/or restructured on an ad hoc basis. For the workers, it becomes and is used as a signal of the congruence between the differential status and role of individuals and the various departments vis-a-vis each other, and also as a vehicle for an ongoing nonverbal dialogue over issues of mutual concern between the organization and themselves.

The Phone Shop

In contrast to the previously described spaces on the second floor where the decision making takes place, the "real" work of surveys is carried out at the shop level. On the fourth floor of the building, remote in both physical and social distance from the nucleus on the second floor, is the Phone Shop. Approximately fifty phone interviewers were working on the National Longitudinal Study (NLS) Questionnaire[1] at the time I was collecting data for the present project.

This typical Phone Shop consists of a large rectangular space divided along the two long walls by 5-feet high partitions to accommodate twelve interviewers and a supervisor (see Figure 4.5). The fabric-covered partitions have two functions: They allow for flexibility and are acoustically sound—a much desired feature that affords the privacy needed for phone interviewing. Maintaining confidentiality during the interviews is also the reason for carpeting the space and for the interviewers' desks to be facing the wall. Each interviewer's cubicle comprises an average space of 5 feet by 6 feet, to be taken or exchanged at any time, depending on the needs of the several ongoing projects.

The work of interviewing involves several responsibilities. The primary task of phoning potential respondents is usually assigned to a "temp" (temporary worker). It consists of asking respondents' questions (from a list supplied by a supervisor) from a precoded questionnaire and in a given order. Because people are generally home to take calls in the evening, interviewers work the noon to 8 P.M. shift. The average number of interviews completed in a day varied depending on whom I interviewed.[2] For example, a Phone Shop Supervisor divulged: "Some interviewers accomplish as much as four to five interviews a day" (Interview 13). On the other hand, a temporary phone interviewer said, "One might do seven to eight interview calls a day, if one pushes it" (Interview 19). This interviewer's supervisor, I learned later, was motivating his workers by sanctioning "a five dollar bonus for every interview beyond the minimum assigned" (Interview 15). A typical interview using the NLS Questionnaire lasted an average of forty minutes to an hour. Beyond the task of interviewing, "temps" are also asked to set up appointments with potential respondents for interviews at a future time and date. And after all the interviews are completed, they validate a small percentage of them (sort of rechecking the work already done) for quality control.

Among others tasks, the business of interviewing respondents also entails the important in-house task of supervising the interviewers. Phone Shop Supervisors have a two pronged responsibility: the first calls for managing all respondent paperwork, and the other entails supervisory tasks related to the first. For example, a typical supervisor on the NLS was responsible for locating respondents, distributing and assigning the cases to the interviewers, and

finally, sorting and working through the paperwork entailed in special cases (eg handicapped respondents, respondents in jail, or those released from drug rehabilitation programs. In addition, the supervisor needed to: "keep track of my staff—three temps and two clerical staff. . . . Incidentally, these partitions you notice are higher than those in (room) 406, which are a constant problem. These are much better in deterring socializing among interviewers" (Interview 13).

Besides the problems with individual interviewer workspace arrangements and a crowded layout, there were other more nagging problems for the Phone Shop supervisors. These included, but were not limited to (1) the ad hoc and, consequently, non-functional arrangement of their open workspaces in the Phone Shop to accommodate the loads of paperwork generated by the tasks involved; (2) the inadequacy of their own open workspaces in allowing the latitude for executing tasks such as interviewer evaluations, for which it was desirable to have some degree of privacy; and (3) the lack of a large enough space to hold meetings to accommodate all the interviewers simultaneously. One supervisor aptly articulated some of these ideas:

> Here [in the Phone Shops], we do the real work of Midwest Survey. We collect the raw data; they [Operations Management] should have a whole floor for interviewing and related work so there is some stability provided. . . . instead of [us] being moved and then shops set up in the most crowded conditions like they generally are. (Interview 13)

The phone interviewers are crucial to the organization because they tread that narrow bridge between potential information, retrievable from respondents, and the raw data made available to the organization. While their role is an indispensable one in the process of collecting data for the organization, it has been downgraded to the lowest rung of the organizational hierarchy. First, the role has been narrowly limited because, in its present form it is restricted to administering a standardized questionnaire. Second, because of the standardization of the questionnaire, the organization can justify the use of temps for such work. The use of temps, in turn, downgrades the role of phone interviewers.

Furthermore, the lowly status of the occupants is emphasized by the physical distance of the Phone Shops from the core of decision making on the second floor. For example, a senior management executive is known to have referred to the Phone Shop staff on more than one occasion as "the bodies up on the fourth floor" (Interview 44). A marginal and remote physical location from the prime center of activity connotes the plebeian role of these workers; their low status is implicated in their less than adequate workspaces, which in some instances are so inundated with papers/files and so on that they simply spill over into the corridors. In referring to their *physical location* on the fourth floor,

the executive invokes both their marginal role and low status. Thus, it is clear that the status conferred by the organization and the role played by the Phone Shop personnel are in consonance. Furthermore, the workspaces in the Phone Shops and their location are in alignment with and symbolic of the consonance between the incumbents' status and role.

This instance illustrates, among other things, that the devaluation of the phone interviewers role, along with the low status accorded these jobs and physical characteristics such as their less than desirable location and nonfunctional workspaces in Midwest Survey, leave the incumbents feeling helpless. Furthermore, because interpersonal contact among phone interviewers is discouraged through the institution of physical barriers, they feel they have next to no resources to cull out even the small degree of dignity that comes with knowing they have their own desks; or the latitude to exchange ideas with a coworker across a partition. An organization has the capacity to choose or disregard enriching work lives by allocating workspaces that, besides being functional (i.e., adaptive and goal oriented) could also facilitate interpersonal and group goals.

Offices of the Senior Survey Management

The workspaces of the Senior Survey Management are in stark contrast to the workspaces in the Phone Shop. The diversity and variation in furniture, style, and physical layouts of the workspaces of the management attest to the latitude for diverse management styles afforded at this hierarchical level. Highlighted here are two Senior Survey Directors' workspaces.

As I enter to begin our prescheduled interview, a Senior Survey Director brings my attention to the workspace (see Figure 4.2B). "I have the next best office to the two Directors [Director of Midwest Survey and Director for Survey Operations]. . . . I have to, because I talk to clients, can't be interrupted, and often, clients visit me . . . so I need a presentable office" (Interview 30).

The private workspace is a large, well-lit, adequately furnished, and tastefully arranged office on the second floor of the building, where the Operations arm houses its managerial functions. The west window wall overlooks a semienclosed garden on the ground floor. The south wall, directly behind the occupants large, uncluttered desk and chair has floor-to-ceiling shelving and boasts a variety of items: books on survey research, reports, a vase with flowers, a bunch of framed family pictures, and a number of other knickknacks. The adjacent wall has two main elements: a computer and ancillary equipment, and the door to the office. Against the backdrop of the north wall is an informal seating area with a sofa and a chair. This vantage point affords a visitor a good view of the whole office—thebooks, the technology used in the business, and the outside landscape. The ostentatious office clearly signals

the congruence between the occupant's high status and salient role and is symbolic of the multitude of formal and informal functions that are the responsibility of the incumbent in such a workspace. The proximity of this workspace to other Survey Operations management staff on the same floor has facilitated the establishment of informal relations between them:

> We planned to have most of the Survey Group located on the second floor [meaning one general area], so that there could be close contact within any one group. I think it works well when compared with the previous plan [meaning the previous location] where Survey Operations was scattered all over the place. (Interview 30)

This is the physical environment of the upper management of Midwest Survey: functional, aesthetic, and flexible enough to accommodate the informal exchanges of the elite group of the Survey Operations. If one were to place this space on one end of a continuum, at the other end could be placed the following workspace, also of a Senior Survey Director.

The private office located on the first floor of Midwest Survey is almost spartan in character (see Figure 4.2A). One enters looking directly into a window wall; the other three walls are relatively bare. In the center is a round conference table with comfortable chairs all around it. In one corner sits a small, inconspicuous file cabinet and a computer terminal on a table. In another corner is a shelf of books and reports. These are the extent of the furnishings of this office. First, the reasons for these frugal furnishings and the even more unconventional space layout for a manager's office are clearly stated: "Decisions are made in a democratic fashion in this group" (Interview 38)) and second,

> since paperwork is processed as it comes in, the vast amounts of furniture needed to store and stack it are unnecessary in this office. The workspace layout is functional. Since most of a manager's time is spent in meetings with one's group, superiors, or clients, a round table is the most congenial prop to have for these occasions; nothing else is there to distract from the business at hand. (Interview 38)

Clearly, the differential use of space in these private offices of the two Senior Survey Directors signals to workers and the organization the managers' personal styles and their unique perspectives on employee management. It is to the credit of the upper management of Midwest Survey that there exists the latitude for the expression of different philosophies to enhance group morale within a department. The choice and spatial layout of furniture eloquently divulge the gist of the social structure of the Operations Department: one group may be managed in a conventional manner—the regular authoritarian posture of manager and worker; the other portrays a more egalitarian attitude—"we" make decisions around this table. These two stand almost on op

posite ends of a continuum and make yet another statement, perhaps one directed toward the organization. If the first instance is interpreted as an affirmation of rank and aspirations for a rung up the pyramidal structure, the latter can be viewed as an affirmation of status tinged with a rebellion toward line management structure. It is worth noting that in both cases, physical layout and other attributes of the workspace have been used to express individual perspectives about work and to enhance the congruency between these leaders' roles and status.

PHYSICAL SETTING AN INDICATOR OF STATUS/ROLE INCONGRUENCE

Although organizations tend to have workspaces indicative of and consonant with status and role, often, as found in the case of Midwest Survey, the constraints of the physical layout make it cumbersome to fit the social organizational aspects with the physical location and/or workspaces. Consequently over time, workspace (and/or physical location) that is allocated becomes, incongruent with the status and role of the incumbents. Depending on the location of these workspaces, one of the social organizational constructs—either status or role—comesto be perceived as congruent with the workspace and in turn adjusts prevailing perceptions to reflect and reinforce the incongruence between the other two. Workspaces thus become indicators of the status/role incongruencies in the social organizational scheme in a work setting, mobilizing the system toward further change. Four examples illustrate the ways in which workspaces at Midwest Survey show incongruence between status and role in the work setting.

The Case of Accounting

The primary function of Accounting is to provide a service: the fiscal management of Midwest Survey. However, the general perception of the status of this service department has been augmented through the deft manipulation of workspaces and other physical attributes to that of having greater significance than other service departments. A brief description of these workspaces follows.

The two Chief Accountants' Private offices are medium sized, approximately 150 square feet in size, and functionally as well as aesthetically laid out (see Figure 4.1A). Two other offices are divided between open plan and partitioned workspaces housing several accounting staff. Accounting had recently grown in size, with eleven clerical staff, two Chief Accountants and the Controller, who keeps track of the overall financial health of Midwest Survey. From

the daily routine tasks of keeping the field and in-house staff payroll up to date and keeping account of the dollar volume of business conducted, to furnishing projections for the volume of business in relation to incoming future projects, Accounting "never stops" (Interview 11). The staff almost have to work around the clock and often act as a backup for each other to keep the financial arm of the organization running smoothly. They have one individual responsible for working solely on the interviewer payroll (both field and in-house interviewers), another for the staff payroll, and yet another for accounts receivable and accounts payable, and even then, "we are, very often, a backup for each other" (Interview 11). Their interface on a daily basis is primarily with the Office of Field Coordination and Management (OFC&M), and the field interviewers' and field managers' in-house staff coordinators. The field staff send in their hours worked weekly to the staff coordinators, who convert the data into dollar figures and translate the information to the Accounting department.

Accounting is akin to one of the "shops"—likethe Coding or Phone Shop in Survey Operations—where working late hours is the norm rather than the exception. And while any service department has such responsibilities, it has been kept "respectable" by the efforts of the Controller, who wanted it to be at a level higher than the other service departments. The means used to accomplish such a task should be noted:

> Some kind of dress code has been instituted in the department; at least we [the Controller and the Chief Accountants] have private offices; some of the people in [Survey] Operations who were given cubicles instead of private offices were very upset about their space. . . . She [the Controller] likes to keep her [private] office looking nice; it's her home away from home. I'm glad she didn't lose her office. If she gets upset, Accounting is upset. . . . We're sensitive to her needs, as she is to ours. (Interview 11)

The Controller echoes some of these same ideas, such as the need to maintain "respectability" lest they (Accounting) be discerned as being at the same level as other service departments: hence, the informally instituted rules about dress, work hours, and most notably workspace. The leader "keeps her office looking nice;" her private workspace—a large office partitioned from the corridor with a glass wall—is enhanced with beautiful reprints and other artifacts from her European and other travels. In fact, what hangs in her office is seen to be fit to be hung in the Director's Office: in a previous year, she brought back a reprint for the Director's Office, which hung there in a conspicuous spot. Such subtle manipulation of the physical attributes of workspace have led to the elevation of the status of Accounting to a level somewhat higher than that of other service departments. The Accounting Department, under her leadership, had managed to secure resources otherwise unavailable to service departments, such as three private office spaces in a desirable space zone

of the building. Thus, even though the status of Accounting is not high in the organizational hierarchy and its role remains that of a service function, its physical location—in close proximity to the Offices of the Director in the Administration wing (see Figure 3.3)—has raised its structural–functional position with respect to the larger organization.

Furthermore, I was made to understand that it was fortuitous that the leader did not have to give up her private workspace at a time when there was a dearth of workspace in the Survey Department, because "if the leader is not happy then Accounting is not satisfied either" (Interview 11). The consciousness accompanying such a sentiment leads one to believe that the source of this perceived cohesiveness in Accounting could more than likely be spawned from some collective pursuit of the group. For example, the definition and enhancement of the status of the group through the astute manipulation and management of attributes of the collective workspaces could conceivably be a continuing goal that brings the group together on an ongoing basis. In stark contrast to the Accounting Department, cohesiveness within other departments was a much desired but nonexistent aspect of social organizational life, especially since the move to the new building.

These examples illustrate that collectively contemplated and planned acts (in Accounting) such as the differential privatization of workspace, the aesthetic layout, the arrangement of work areas to augment work interactions, the astute display of work areas (as in the Controller's office, with a glass wall facing the corridor), and the prized location of the group space, have facilitated the perception of an enhanced status and made it consonant with its physical location. These perceptions have developed over time through the subtle engineering of the workspace areas by the incumbents of the Accounting Department and have been effective in altering the group's subjective orientation about its structural functional position at Midwest Survey. In other words, the "nicer" the workspace, the better the location of the workspace, the greater will be the degree of synonymity with "respectability" or status. It is important to note that the prized workspaces of Accounting have come to signal an elevated status and, consequently, the physical space and the status are perceived as congruent. However, the role of Accounting in Midwest Survey remains that of providing a service to the various departments. Over time, the perceived congruence between the physical space and status helps reinforce and highlight the tension and resulting incongruence between this perceived status—as elevated—and role—as service oriented.

The Computing Services Department

With the proliferation of personal computers and laser technology in printing, Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Tele-

phone Interviewing (CATI) systems, the Computer Department of Midwest Survey, has grown by leaps and bounds over the last few years. Its main function is that of a service arm to the Survey Operations, the Academic Research Centers, and the Administration Department. At the previous location of Midwest Survey, the Computer Department's location in the basement level reflected its service function. Its present location in the building baffles all other departments: "What is a service department doing at a location next to the Director's offices?" (Interview 11). (See Figure 3.3.) When asked, the workers in the Computer Department justify their location: They are an integral part of the five-year planning and policymaking committee working on funding avenues to be diverted into making Midwest Survey more technology intensive.

The Computer Department does not have the same status as a core department that brings in monies for the organization; it essentially services the other core departments. However, it has been allocated a coveted physical location and attractive workspaces therein. Its role has been simultaneously enhanced by securing for it the responsibility of making the organization more technology intensive and of advising the organization on short and long-term budget plans required for implementing the organization's goal. The coveted location has added to the credibility of this enhanced role. In other words, the attractive workspaces of the Computer Department have facilitated the perception of the department as having a significant role in Midwest Survey. Its enhanced role and coveted physical workspaces are now congruent even though its status remains constant as that of a service department.

In this example, an upgraded work location (and/or workspaces) facilitates the perception of an enhanced role for the Computer Department and thereby impels congruence between its physical location (and workspaces) and role. However, this redefinition leads the enhanced role to become incongruent with the low status (that of a service department) of the Computer Department. Thus, we find, physical location has become a deterrent in the normal tendency toward status and role congruence.

The Library

We shift our attention to the physical location of one of the most dignified spaces of Midwest Survey—the Library (see Figure 3.3). Any description of the Library mandates a brief reference to the central individual, by title, the "Librarian," whose role in the organization over the thirty years of her tenure has made her close to a revered sage.[3] Hence, the function of the Library has been amplified from one of being just a place to acquire more information to one wherein lies the opportunity to expand one's understanding about almost any aspect of the organization.

The Library had a location in the old building such that one could very often during the work day, while taking care of different aspects of work, occasionally stop here for a quick respite and take a breather from the immediate task at hand. The general impression was that it was an unostentatious-looking room overflowing with boxes of journals and reports that needed to be archived, a room that quietly facilitated the inadvertent confluence of people from different areas of Midwest Survey.

The present location is quite a contrast to the casual setting and atmosphere previously described. The second floor location itself is dignified: aside from the entrance to the Computer Center down the hallway, there is no other department in close proximity to distract one from the Library. The interior is rectangular in shape, with the long side of the rectangle running north–south, and the south facade overlooking a beautiful grassy lawn (the rear of the building). The inside is comfortable and spacious: the reading areas face the south lawn and the stacks are arranged along the blank east wall. A storage area contains boxes of reports and the like that need to be archived before they are dispatched either to storage or to temporary locations in the basement of the present building. One notes a distinct difference in the atmosphere of this new Library: it is relatively unoccupied on just about any given day and the level of activity seems to be at a constant low ebb. Several reasons for this have been cited: (1) The "sprawling plan" of the new building is responsible for the decreased number of patrons; (2) "It's just so out of the way, it's an effort to get here." One frequent visitor from the Research Centers put it succinctly:

> What was so nice about the location of the Library in the old building is that, say, you went to the Library to look up something, you almost always ran into someone there. . . . You begin to talk and the next thing you know is that you've worked out a joint project. . . . Now that's what I call a Library. . . . It can both have the books and provide the grounds for the intellectual ideas to flourish. . . . This doesn't happen at this place [the present Library]. (Interview 52)

Others in different departments had similar complaints. The Library was too far from their department: "You need to make a special trip to get there, and it's not that I don't like to do that, it's just that in a place like this, we don't have the time for these things; we're really a Job Shop" (Interview 30).

The Library is an example of a common space that is useful for everyone in the organization. Clerical staff and others have a need to look at the handbooks in the Library; newspapers are there for those who need a bit of respite from the work of the day; more serious references are available for the research oriented, and manuscripts of past analyses and reports abound for cross reference.[4] It is a fertile ground for camaraderie across the levels, but the persisting fact is that the Library's frequency of use has diminished since it moved

into its new setting. It also plays an essential and indispensable role for researchers in compiling their finished reports. The Library, when viewed as a neutral and intellectual base, is endowed with an elite status equal to no other department at Midwest Survey. However, its spatial location—perceived to be in a remote corner of the building—acts as a deterrent to the frequency of usage as well as to the facilitation of interaction across and within the levels of the organization.

At the time the Library moved to the present location, its role and status were unchanged (i.e., high status and significant role); however, this new physical location and design (remote location and the isolated placement of the entrance doorway) were not congruent with either its status or role at Midwest Survey. Over time (a year later, at the time the above interviews were conducted), while its role in sustaining the informal networks had diminished, it continued to fulfill its formal role as and when needed. Thus, physical location and role have become congruent over time, resulting in the Library's status and role to become disengaged and perceived as incongruent (high status and diminished role). The spatial location and physical design of the Library have facilitated the perception of its congruence with its diminished role and simultaneously highlighted the ensuing incongruence between its status and role.

Open Space versus Private Workspace

We turn our attention to a group of Administrative Offices on the second floor that have an important physical location in accord with their significant role within the organization. More specifically, the significance of their role derives from the salient role of the office they serve. Our interest in these offices lies in the way their spatial setting comes to be perceived as consonant with either the status or role, thereby altering the prevailing perception of status/role congruency to one of tension between the status and role.

The proximities of these sets of Administrative Offices to each other is illustrated in Figure 3.3. As mentioned earlier, to be allocated a space somewhere along this corridor is to be perceived as having a role that must be salient. The office spaces along this administrative corridor are considered to be prestigious offices—well decorated and naturally lighted from the north facing window wall.

Susan, a secretary, has an office in this corridor. In addition to being a secretary for three people in Contracts/Grants Administration, Susan also provides secretarial services to the Treasurer and Associate Director for Administration. While her office is surrounded by this prestigious set of offices, her assigned open workspace makes her role an ambiguous one.

Susan's "office" is a desk, a large, gray plastic laminate, veneered desk accommodating a personal computer, an electronic typewriter, a small desk

lamp, and a few other secretarial supplies. The desk faces the corridor, which not only provides the usual distractions of circulating traffic but fosters additional annoyances such as people congregating in the hall while they are waiting to visit any of the incumbents in adjacent offices (which, I am told, is quite often), inadequate florescent lighting, and stagnant air. Susan confided that the workspace was giving her facial muscle cramps; in fact, her doctor recommended she be allocated a different space for this reason.

> I've told two of my bosses I feel displaced. It's affecting my health. I brought in my doctor's letter. I got these kind of responses: "You could put the letter in your personnel file" or "There's a job in Operations. You could take that if you're interested"—meaning I could quit if I didn't like it. . . . They could handle people as individuals; instead the usual way is they emphasize they're in authority. (Interview 21)

Susan felt intimidated by this interaction with her superiors and felt this would not have occurred had she been in a "regular office." She had worked at other places before coming here—the U.S. Post Office, the U.S. Treasury Department, and the State Mental Health Childrens' Retardation Center—and none of them, according to Susan, maintained such dual standards—one for the people with "qualifications," and the other for the rest. According to Susan's perceptions, such dual standards were prevalent at Midwest Survey.

Even the interaction with her colleagues had been jeopardized. She recalls:

> When people I know walk by and say, "Why they have you out here?", I'm so humiliated. I was once told by the previous Director that I was a valued employee of Midwest Survey. See, I [sic] been here twenty years, in different departments.. . .I do realize we've got to have the qualifications but after that, they've got to be fair, and the truth is that they can't be counted on to be fair. . . . Most people feel the way I do, but the difference is, they accept it and I don't. (Interview 21)

These excerpts indicate that Susan felt herself to be in the role of an underdog; the whole identity of her role as a valued employee with a salient role was being perceived in a changed light by both her superiors and her peers, more so since the change in her workspace. From Susan's perspective, the workspace in the corridor had caused her role to be perceived as nonsignificant, further heightening the incongruence between her actual role (as secretary to three important positions—thus, a valued employee) and the status conferred on her (office space in a corridor). As such, her workspace became an indicator of this incongruence.

Along the same prestigious administrative corridor, almost next door, is Michelle, an Administrative Assistant[5] who has weathered the ups and downs of Midwest Survey for twenty-four years. While Michelle has some additional

responsibilities, there are great similarities between her role and that of Susan. The greatest difference between the two is the conferred status; Michelle enjoys a private office.

Michelle is proud of her private office space: she has personalized it with plants and has brought in other conveniences such as an electric heater. She sees herself as an important team member, as when she expresses acts of management in the plural form, for example, “We've done a lot of hiring" (Interview 17). It is as if the workspace (private office) allocated by the organization to Michelle has elevated her perceived status. For example, when asked about Susan's workspace, she is very matter of fact: "No doubt it is an unpleasant situation, but that was a decision taken by the Space Committee after a holistic analysis of the space available and the people needing space" (Interview 17).

Susan's concerns with workspace are very basic: she would be more than happy with a minimum level of privacy (e.g. a low, partitioned wall would be helpful), the latitude to arrange and personalize her space, and a location that would permit the two. Michelle's concerns, on the other hand, are more global. They center around the physical layout of the building. Michelle already has a private office space, but there are a great many inconveniences to put up with in this new building:

> Everything's much farther apart—physically and otherwise. You've got to walk a block to everything—to pick up supplies, to the Cafeteria, to the Library, just about any place. You never see people anymore; most people interact with their own group. And the social activities like the annual picnic we had last Friday are a one-time thing. You don't build any networks that way. (Interview 17)

She is wistful about the "sense of belonging to each other" that was the hallmark of Midwest Survey when it was six times smaller in person power than the four hundred–odd people it has today. "In the last couple of years we've done a lot of hiring. It's an interesting organization to work for." Growth has brought other disadvantages:

> The building is so fragmented. . . . environmental problems are many; it is hot and cold erratically, and then the windows don't open. You need an Allen wrench. Elevators don't work. There are other issues as well to which there is a lot of resentment, for example, the casual atmosphere—coming to work in shorts, breastfeeding babies at work, coming in anytime you please. . . . Yes, people talk about the stratification, some constructively and others not so constructively, but recently there have been attempts to rectify it. (Interview 17)

The juxtaposition of these two examples clearly demonstrates that the employee with a private office sees herself as a team member of the organization, and in contrast, the employee with a desk in an open space (with no

privacy and/or latitude to personalize) is disillusioned about the organization. The workspaces have become a lucid reason for, and indicator of, the incongruence between the status and the role in a work setting: the general perception is that Susan's role is diminished with the allocation of an open desk, and Michelle's status is elevated with a private workspace.

SOCIAL AND PHYSICAL SETTING AT MIDWEST SURVEY

Physical settings in organizations not only provide the background for facilities and a stage for the incumbents to enact their roles, but they also become visual symbols of the status of the occupants and, over time, come to be part of the overall culture of the organization. Two aspects of the organizational structure of Midwest Survey—status and role of incumbents—are highlighted in this section to show the ways in which they are intermeshed with the physical settings at Midwest Survey. This goal is best illustrated through two diagrams: first, a four-cell representation of the status/role construct at Midwest Survey (Figure 5.2), and second, a status role typology that explicates the relative positions of resources such as physical location and workspaces, as allocated by the organization, and as they come to be modified by workers' perceptions over time (Figure 5.3).

In Figure 5.2, the *x*-axis represents Status on a continuum ranging from *Low to High,* and the *y*-axis represents Role on a continuum ranging from *Low* (nonsalient) to *High* (salient). The specific locations of the departments or incumbents in this figure depict their relative status and role in the social organizational structure. The diagonally opposite cells A (high status/salient role) and C (low status/nonsalient role) are shown as having individuals or departments that manifest congruence between their status and role. Several such examples are indicated. The high status/salient role of the executive management is positioned in cell A. In these cases, workspaces and their respective physical locations have come to indicate and be congruent with the social–structural positions of the departments as depicted in Figure 5.2. Thus, these workspaces are perceived to be more or less in equilibrium and in consonance with the social structure. On the other hand, consider the case of the DMZ and the Phone Shop. The marginal physical location of the workspaces in these two areas act as an extension of their nonsalient role (i.e., they are indicative of the nature and type of work the individual is expected to do). In other words, the physical location takes on meaning by and through the ways in which the social organizational functions unfold. Beyond this, they act as indicators of the impoverished status conferred on the incumbents of these spaces by the organization. The low status and inconsequential roles of these incumbents decrease the desirability of these spaces and warrant the place-

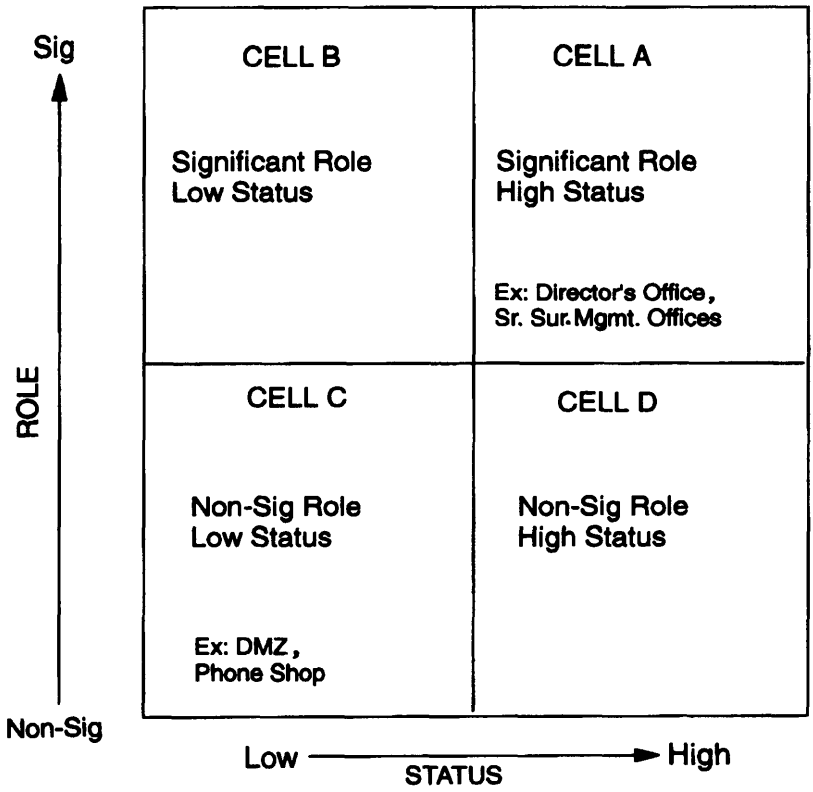


Figure 5.2. Four-cell representation of Status Role Construct.

ment of the DMZ and Phone Shop in cell C (representing low status and nonsalient role).

Physical locations and/or workspaces of departments that are perceived as being in a state of incongruence with their status or role fall in cells B and D. They come to be perceived in these schematic locations (as indicated by boxes enclosing the name of the department) through some aspect of the physical setting that is not in congruence with either their status or role.

For example, in the case of Accounting, its relatively low status and nonsalient role in the overall organization warrants its position in cell C (Figure 5.3). However, its present desirable physical location subtly alters workers' perceptions of Accounting as having a high status in the organizational structure; hence, we position it schematically in cell D. This process has had some latent repercussions: the perceived high status—emanating from the

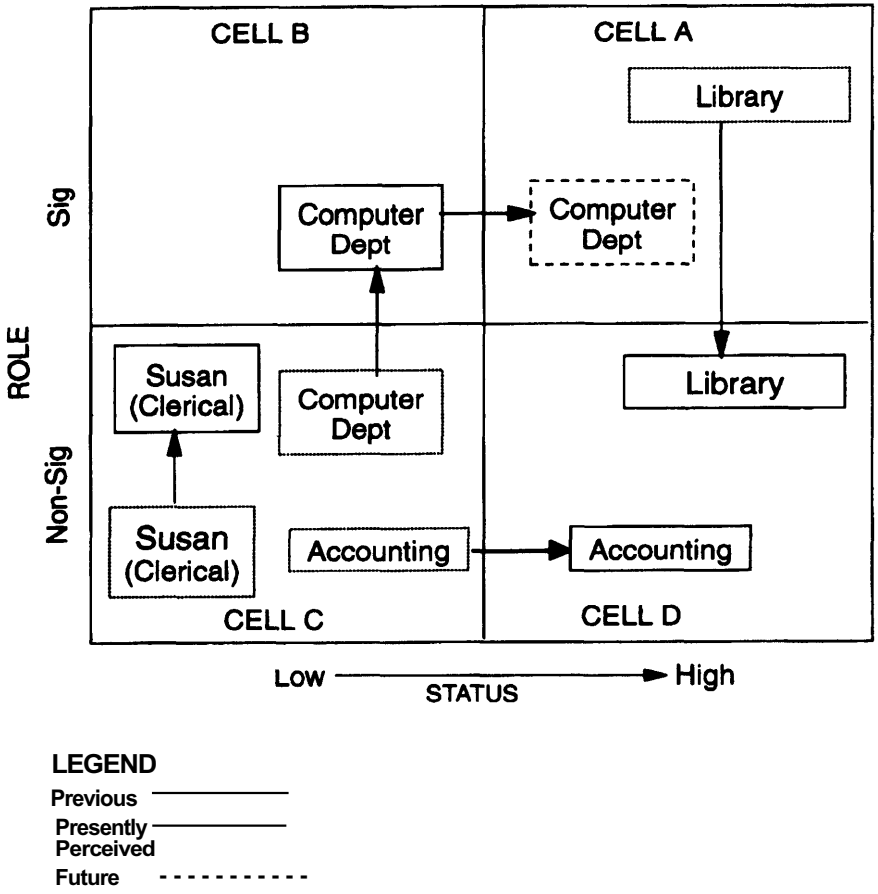


Figure 5.3. Representation of Status Role Typology at Midwest Survey.

sought after physical location—now is incongruent with its low role in the organizational hierarchy. In this case, while the physical location propagates an elevation in status, it simultaneously generates and makes explicit a rift between the knowledge (high status reflected in the coveted physical location) and the performance aspects of Accounting's service-oriented role. It is this dissonance between the perceived high status, on the one hand, and the nonsalient role on the other hand (when in cell D), that subsequently creates tensions between Accounting and other departments. Figure 5.3 illustrates the suggested ways of alleviating these tensions:

1. Allocation of additional tasks and responsibilities to augment the present role of Accounting, and facilitate its congruence with the perceived status and assigned workspace (would locate in cell A).
2. Allocation of a comparatively more modest physical location for Accounting-one in keeping with its service-oriented role and relative status in the overall hierarchy (would locate in cell C).

The second example illustrates the way in which the physical location of the Computer Department facilitates the recognition of its changing role from being nonsalient to salient. The department originally supported other arms of Midwest Survey (Survey Operations, Research, and Administration) by providing them with data processing and programming services. Consequently, its social organizational position (nonsalient role and low status) at that time schematically placed it in cell C (dotted box, Figure 5.3). In fact, prior to the move in 1986, its assigned physical location (the basement level in the previous location) was in keeping with its service role and status. However, in the new location, the Computer Department was able to secure a physical location in a prestigious area of the building. Along with this came an explicit acknowledgment of the elevation in its role: it was assigned the task of making Midwest Survey more technology intensive and was simultaneously made an integral component for long-range planning strategies. Consequently, we place the Computer Department in cell B. It should be noted that while the physical location and workspaces presently accorded the Computer Department are congruent with its new role, its role and status have become incongruent, as shown in its positioning in cell B. This incongruence may lead to tensions between itself and other departments. Interdepartmental tensions could be alleviated by boosting the status of this department, whereby the status, role, and physical location of the Computer department would be in consonance (as indicated by the schematic move from cell B to cell A, shown in Figure 5.3). Given the trend of the Computer Department's increasing role in Midwest Survey, such a situation—when the Computer Department may be an independent center, bringing in its own monies—may not be too far in the future.

Consider yet another example—the Library. The spatial location of the Library has facilitated the devaluation of its role from one of significance to nonsignificance; subsequently, it has come to be perceived as located in cell B, as shown in Figure 5.3. A more central and salient location for the Library would augment the salience of its role and its high status, and have it schematically located in cell A.

The example of the secretary with the open workspace is interesting because it shows clearly how perceptions of status and role come to be reassessed and redefined with configurations, and further reconfigurations, of physical space. A closer analysis of this case is in order.

With the title of Secretary to the Associate Director and two other Grants and Contracts Managers, it is understood that Susan is a "valued employee" of the organization. Encompassed within this role are tasks and responsibilities that in general require confidentiality with regard to documents and verbal interaction. Such a title and role invoke visions of a workspace that would provide the needed privacy and appropriately symbolize Susan's status level.

But Susan is allocated an open workspace, comprising a desk in a corridor in a heavily trafficked circulation route. The workspace therefore is devoid of any degree of privacy, has inadequate fluorescent lighting, and gives the general impression that it is a marginal make-do workspace for a transient worker rather than a permanent and valued employee of the organization. Clearly, the workspace is not congruent with the status or role of the occupant. Furthermore, allocation of a marginal workspace implies that Susan's role in the department may not be that important. In addition, the open workspace lacks other attributes of the role: for example, the notion of a secretary dealing with confidential materials; therefore, the concept of confidentiality in the role itself appears illegitimate. Thus, with the open workspace, Susan is perceived as having a diminishing role and is located schematically in cell C.

It is interesting to note that during the fieldwork, another worker with the title of Secretary to the Administrative Assistant of the Director was assigned an open workspace—a desk in the same corridor with Susan. This occurrence softened the tensions for Susan by mitigating the marginality of her role. It also clearly showed the way in which role, status, and workspace can be brought into congruence and thereby lessen the build up of tensions emanating from incongruence among the three elements. In this case, when two workers, instead of a single worker, get assigned open workspaces, some degree of salience of the given role is recaptured. For example, if the particular work assigned could not be executed in open workspaces, there would not be an additional such workspace added; but the fact that it had been added could connote that the performance of assigned tasks and responsibilities are feasible through such a workspace. Consequently, Susan's schematic position in Figure 5.3 moves from the previous position in cell C to a new position within the same cell C in which the role is presently perceived as having greater salience. The present position brings Susan's status, role, and workspace conceptually closer to each other and augments a reduction in the tension. Other possible ways of reducing tension in this case would include the following:

1. Providing some enclosure for the open workspace (design feature affording privacy, such as a low, partitioned wall).
2. Physically locating the single open workspace within a group's boundaries, even if it were a group other than the one to which one has prime affiliation (security from location).

3. Affording the latitude to personalize the workspace, even to a small degree (imparting a sense of control).

ROLE ATTRIBUTES AND CONSTRUCTED MEANING OF THE PHYSICAL SETTING: THEORETICAL AMPLIFICATIONS

Several examples cited here establish evidence for conceptualizing the close interrelationship between status and role, on the one hand and physical setting on the other, and the ways in which they come to organize social organizational behavior. The theoretical perspective that best lends itself to a vigorous analysis of the internal structure of role (and status) is that of Nadel (1957).

In elucidating the internal structure of roles, Nadel emphasizes that it is the summation of all the interconnected series of attributes that make up the character of any given role. However, not all attributes have the same relevance for a particular role. Nadel proposes a hierarchy. According to Nadel, a role comprises of "pivotal" and "peripheral" attributes, both of which are internal to the role and become visible only with the unfolding of role behavior. The "pivotal" attributes are those whose "absence or variation changes the whole identity of the role." On the other hand, "variation or absence of peripheral attributes does not affect perception of effectiveness of the role" (Nadel 1957, pp. 31, 32). It is now proposed that in addition to the pivotal and peripheral attributes, there is an attribute of role that is external to the role itself but which facilitates its unfolding. This is termed an "extension" attribute, of which a relevant example is the physical setting of behavior (Gorawara-Bhat 1996). In a work setting, for congruence to occur between status, role, and workspace, the pivotal, peripheral, and extension attributes would need to be included within a common imaginary boundary, each taking its cues and following the one before it. For example, when an executive has a private corner office affording views and light from two sides, his or her status and role are entailed with the workspace that is indicative of and congruent with them. On the other hand, when the workspace—the extension attribute—of a valued employee is not entirely supportive of, or in consonance with the performance of the specific role, it fails to legitimize and/or be an extension of the aforesaid role and status.

Beyond their characteristic attributes, status and role, as delineated in examples such as the DMZ and the Phone Shop, come to be perceived by the workers as reflected through the physical setting that mirrors their congruence. In other examples, such as the Accounting and Computer Departments, only one of these social–structural constructs-either status or role—is reflected in, and comes to be congruent with, the physical setting. The perceived disengagment of the status and role causes tension among staff in the organi-

zation and, subsequently, a latent tendency is set up in the direction of mobilizing the social and physical factors to a state of congruence and change.

These examples have illustrated how the physical location and/or workspaces become a crucial "extension" of the role attributes and serve to enhance (or diminish) role behavior. When entailed with the internal pivotal and peripheral attributes of role (and status), this "extension" affords a means to understand the processes and explanations of how physical locations can be bleak and yet, because they are in congruence with the respective status and role, perceived as equitable. While the internal attributes are part and parcel of role and status, the extension attribute is salient in that it entails, supports, and sustains the role and status attributes of incumbents. Status and role, then, can best explain behavior in work settings when they are inclusive of the important "extension" attribute (viz. the physical location, surround, and/or workspace).

The ways in which the physical setting becomes an extension attribute are based in our assumptions about human behavior that the meaning people assign to things ultimately organizes their behavior. This concept is drawn from the symbolic interactionist perspective (Mead 1934; Stryker and Statham 1985), which emphasizes self-processes and role taking in the analysis of interaction for the creating and re-creating of society and person. In other words, when incumbents perceive a specific department as exhibiting an enhanced role and as allocated a distinguished departmental location, the entity comes to be socially constructed as such over time, even though there could be any number of inconsequential reasons for the allocation of that particular location in the organizational scheme. "If men define situations as real, they are real in their consequences" (Thomas and Thomas 1928).

For personnel in organizations, things become objects once they are defined as relevant for the completion of work. These so-called "objects" acquire meaning[6] for the staff in the process of negotiation and construction of activity in and with the organization. Consider, for example, how a fairly centrally located set of offices came to be known as the DMZ among the staff after a number of personnel occupying them were laid off (i.e., the physical set up of these spaces came to acquire a meaning and be socially constructed and connotated as such, after which they acquired the name DMZ). In another example, "the bodies up on the fourth floor" connote the shop areas where routine sorts of tasks are handled in bulk fashion by easily replaceable staff. Social life in the organization is thus continually created (by the organization) and re-created (by the participants), with tasks to be completed and goals to be achieved within certain time frames. Through these mutual processes entailed between the worker and the organization, the environment of action and interaction, inclusive of the physical surround, becomes a symbolically defined environment. And often, as the evidence points out, the physical sur-

round becomes a means to alter the very social structure of which it is part. In the course of persistent incongruencies between the symbolically defined environment and the social structure of which they are a part, organizations might conceivably alter their course of action to adapt to their workers and/or the workers may alter their ways of comprehending the policies of the organization.

SUMMARY

1. Role and status are complementary. According to Nadel (1957), roles can be conceptualized as consisting of pivotal and peripheral attributes. Through examples from Midwest Survey, it has been demonstrated that this explication needs to be extended to include the physical surround, so as to understand the processes through which role behavior unfolds and comes to be validated within the organization. The ways in which the physical setting (inclusive of the location, surround, and workspace) comes to be a salient "extension" attribute of role behavior are documented in this chapter.

2. Role behavior always unfolds in some physical setting. Physical settings initially apportioned and allocated by organizations come to be endowed with meaning and symbolism by users and workers in the course of work. Meaning is given to, and derived within, the context of the social organizational structure (Mead 1934). These ideas are amplified and the previous examples illustrate that this negotiated construction of meaning is based in and derives from the tendency of status, role, and the physical setting to come into congruence and thereby sustain and perpetuate a constructed meaning. For instance, when role and status unfold within an external physical setting that supports their internal structure and attributes, then the physical setting becomes an extension in the facilitation and execution of the instrumental and expressive functions of work. However, a situation of incongruence between the physical and the social constructs gives rise to tensions between the departments and could set into motion forces that might change and alter organizational perceptions and attitudes.

3. An awareness of the interdependence of the social and physical factors relevant in work settings, and the processes by which they coalesce or disengage, would best serve the interest of organizations in alleviating tensions between departments and their staff.

NOTES

1. The data for the NLS study had been collected in the field for the prior eight years, and in this, the ninth year (1987), the decision was made to experiment with con-

ducting interviews by phone. A very sophisticated Computer Assisted Telephone Interviewing (CATI) system was being used to collect the data. Unfortunately, the study lasted only about four months (March through July); because the budget had been overrun, the shop had to be closed down. Although the expected completion rate was 95-97 percent, in actuality, it was only about 75 percent. The remaining respondents would have to be followed in the field.

2. Phone interviewers find that it does not serve any purpose to do more than what is expected, but at the same time, if the number of interviews conducted falls short of the number set by the supervisor, subsequent performance evaluations reflect a lower productivity for the interviewer.
3. In the kinds of responsibilities that the librarian holds, she has become a vital formal and informal component of the organizational structure of Midwest Survey. Because of the unbiased judgment she offers, she has become an integral part of all policymaking decisions regarding not only the Administrative Sector but also the Survey Operations and the whole organization. Besides representing the formal organization, she also plays a pivotal role in the informal organization of Midwest Survey, as evidenced in the semiannual, elaborate get-togethers she hosts for all of Midwest Survey. Her significant role, beyond that of librarian, contributes to the overall cohesiveness of the organization and far exceeds that suggested by her title.
4. The unique mix of functions at Midwest Survey (viz. Survey and Research) affords its Library the latitude to act simultaneously as a linkage to, and a resource for, Midwest University in at least three ways. First, its large archive of data sets enables interested researchers access to survey data (from completed Midwest Survey projects) for secondary analysis. Second, it houses a collection spanning more than forty years of methodological and technical literature on the methodology of surveys that is continually updated to reflect developments in the state of the art of survey research. And third, its substantive research collection reflects and is continually being shaped by the varied research interests of its Research arm—the faculty, and students of Midwest University. The reference services provided by the Library to the University and the general public allow access to all these resources.
5. Her job description is that of Secretary to the Associate Director, but some time ago, her title was changed to Administrative Assistant.
6. For example, Csikszentmihalyi and Rochberg-Halton (1981) have studied the ways in which objects come to have meaning and implications for definitions of the self. Other research (cf. Holahan 1978) has shown the differences in the range of meanings that men and women derived from objects.

6

Workspace, Social Interaction, and Satisfaction

Physical environments often serve as repositories of individual experiences and social relationships and are, therefore, more than a cause of behavior and more than a behavior mechanism. (Altman, 1993)

INTRODUCTION

Chapter 5 explored the ways in which the physical work setting has implications for organizational factors; specifically, the degree to which workspaces reflect and become generative of status and role congruence–incongruence. In contrast, the present chapter focuses on the role of the physical setting/workspace on issues of salience to individual workers—social interaction and satisfaction at the work setting.

If status is a key aspect of the formal organization, social interaction can be conceived as an important element in sustaining the informal structure (cf. Crozier 1971; Homans 1950; Roy 1979; Whyte 1948). At the same time, social interaction also serves important expressive functions for Midwest Survey, such as nurturing the integrative and cultural aspects of the organization (I and L functions on Parsons's AGIL scheme; see Chapter 4 for details). For example, the sustenance of congenial relations and a cohesive group had been the prevailing norm and a source of great satisfaction to the incumbents of the Operations arm until the 1986 move. Some vignettes from respondents' reminiscences illustrate the case:

> Until just a few years ago, it used to be like a family. Now it's ballooned out.. . . It's still her [boss's] home away from home. (Interview 11, employee with twenty-two years of service)

> This building is too fragmented. Everybody is much farther apart, physically and otherwise. There used to be a sense of belonging to each other, not as much any more. (Interview 17, employee with twenty-four years of service)

> I joined this place after high school. It's like my home. We used to be a cohesive group. If a proposal had to get out everybody worked and got it done. Now, it's different. . . . Each group has its own clique, and may not be bothered with others' needs. (Interview 10, employee with twelve years of service).
>
> I came here twenty-six years ago. It was casual, everyone pitched in and got the work done; I at once felt at home, and have felt that way since. (Interview 1)
>
> I see several problems with Midwest Survey, but I feel I'm a valued employee, and more than half my friends are from here. (Interview 27, employee with ten years of service)
>
> My boss has been a great friend; I have her to thank for the fact that I was given opportunities to use the skills I was good at. . . .I have lots of other friends here too. I like it that way. (Interview 30, employee with five years of service)

As is evident in these statements, besides providing for the professional growth and advancement of its incumbents, the Operations arm also affords the latitude and support for a range of opportunities for informal social interaction, thereby augmenting, in the process, the growth and sustenance of a cohesive community.

The processes that enhance social interaction and related satisfaction, and the ways that interaction is facilitated or inhibited over time (in turn having consequences for the cohesiveness) via the physical setting of the workplace, are the focus of this chapter. To analyze these processes, first, incumbents' feelings about the interaction opportunities afforded by and through their workspaces are explored. Next, a quantitative analysis using the classified and coded variables (see Chapter 2 for the classification and coding of the interviews) is carried out to explore the relationship between workspace and worker satisfaction. The final section discusses the ways in which perceptions about the different dimensions of workspace and satisfaction are moderated by the opportunities for informal social interaction afforded to the incumbents.

PHYSICAL SETTING AND SOCIAL INTERACTION

The role of the physical setting in the support (or nonsupport) of social interaction has been known in the literature for some time. For example, in a seminal study Festinger et al. (1950) demonstrated that one's friends are drawn from the population of people one has met, and the probability of meeting is directly related to the contiguity of residential entrance ways. Along these lines, Archea (1977) showed how spatial layout can regulate communication between individuals via the information it makes available to them about each

other. Beyond the spatial layout, the configuration and/or arrangement of the spatial layout is also significant for interaction. Bavelas (1960) and Leavitt (1951), in separate studies, showed that problem-solving groups are more effective in their speed, quality, and efficiency when six-person problem solving groups are arranged in a centralized-wheel layout as opposed to a circlular arrangement. And besides acting as a communicating medium, spatial layout and/or architectural arrangement can also signal the appropriate social roles and responsibilities. For example, jury members seated at the head of a rectangular table assume leadership roles and participate more than members seated on the sides (Strodtbeck and Hook 1961).

The physical setting and spatial arrangement of workspaces also play an important role in regulating both formal and informal interaction in work settings. For example, proximity of workspaces has been linked to the occurrence and frequency of both formal communication (Conrath 1973), and informal, face-to-face communication (Homans 1954; Conrath 1973). By creating greater visual accessibility, open types of workspaces facilitate communication (Lorenzen and Jaeger 1968). Furthermore, the spatial office arrangement with "desk-between" visitor and occupant, signaling greater psychological distance, was found to be more prevalent in government and commercial organizations (Joiner 1976) than the "open-space" arrangements that were more common among academics (Campbell 1980). When "desk-between" arrangements existed in academic faculty offices, faculty members were perceived as being less accessible to students (Zweigenhaft 1976). In addition, the overall spatial layout of a work setting is a salient factor in the creation and sustenance of informal and formal interaction patterns. "Activity nodes"—areas where peoples' paths cross during routine activities (Bechtel 1976)—develop when they are convenient to individual workplaces (Markus 1970), centrally located (Steele 1973), and comfortable for conversation (Mehrabian 1976).

Several examples that follow highlight the ways in which the physical setting has shaped the formal and informal interaction patterns at Midwest Survey. The current layout of Midwest Survey, much to the chagrin of most workers, is more a reflection of its hierarchical order than incumbants' social interaction patterns. Because it is least conducive to facilitating or navigating the cultural and informal functions of Midwest Survey (I and L on Parsons's AGIL scheme), workers find it a contrast to the ease of exchanges afforded by their previous physical setting. For example, one respondent remembers:

> In the old building I knew every middle manager [at the same level as me]; I think that was a function of the building. Here, it's different. I don't know who to ask what. . . . Each section is almost a separate entity here, and there's a lot of open space in between that is almost useless. . . . It would be nice to have a middle manager meeting every two months, so we could exchange notes and get to know each other. (Interview 35)

In another instance, a respondent exhibits an awareness of the ways a better use of space could enhance the functions involved in collecting survey data. The suggestions are offered by a senior management staff member who started out at the bottom and thereby recognizes "what people are up against":

> Casual frequent interaction is not conducive in a building layout such as we are in. For example, the Budget Monitor for this project is on the Second Floor and I'm here [on the first floor]. I have to call her most of the time, and it's problematic. . . . I find it's good to be close to the group I work with. . . . You set up relationships with people in spatial proximity, and a disruption of these forces you to rethink and rearrange the physical space and then interferes with the support networks developed. That is not good. . . . I'm not saying space needs to become a crucial concern, but it does need to satisfy some key factors. . . . This building here segregates people. I'm not sure we really understood what this move would mean to us. . . . Exchanges could be facilitated by the physical space;for example, we could capitalize on the common spaces, the Library, the Cafeteria for communication between the different parts of Midwest Survey. . . . A little could go a long way, but someone has to care to do these things. . . . One of the big problems we have is the lack of regular channels for communication, and the ideal way to do this is structuring it within a physical setup. (Interview 34)

These two examples highlight the organizational problems created by a physically fragmented layout and hint at feasible solutions to minimize distance between the different sections and allow better use of the common spaces of the Operations arm. Further elucidating the problems of the current layout of Midwest Survey, a middle-management employee asserts: "There is poor circulation within and between projects . . . and, the present plan is completely illogical" (Interview 36). The respondent went on to offer some constructive suggestions toward a conceptual layout that would support interaction within the groups, facilitate the supervision of the subordinate groups, as well as "depict the status of the corporation" within the present constraints of space, suggesting that the Personnel section and all Administration services be housed on the first floor (which currently was occupied by the various Research Centers) and that the entire Operations staff, along with the allied "shops," be on the second floor. As shown in Figure 6.1, the layout suggested for the Survey Operations follows a series of concentric circles, housing the upper management in the core and the shops and clerical services in the outer, peripheral rings. It was proposed that the Computing Facilities and other related service arms such as Data Entry Shops would be allocated space in the basement, with the overflow diverted to the fourth floor. This ideal space layout, according to this respondent, would not only be efficient, it would also foster opportunities for interaction within and between the levels. The present plan, the

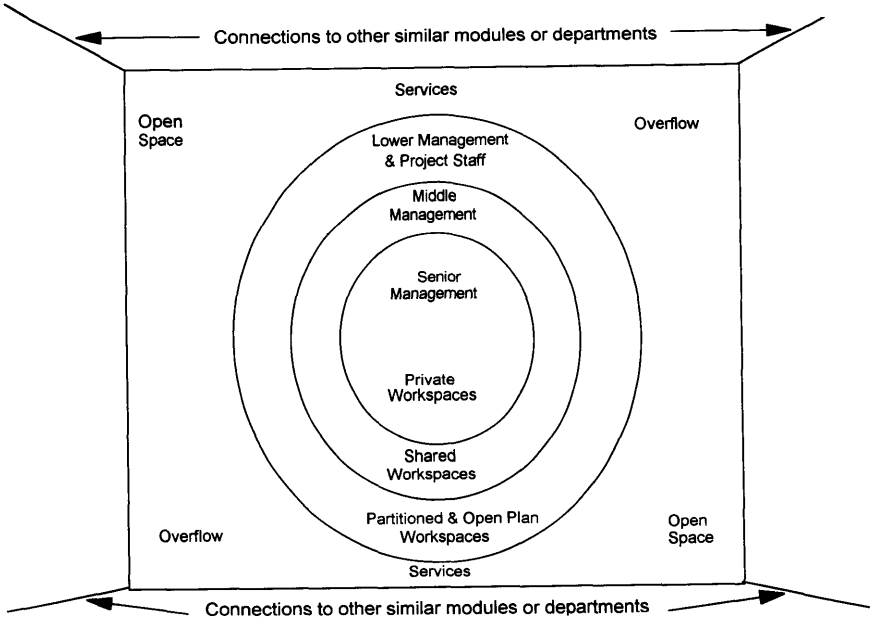


Figure 6.1. Proposed conceptual layout for the Operations arm by a respondent in Survey Operations.

respondent asserted, "was not really thought out. We've been very disappointed in the space. . . . There are hardly any places to be together casually" (Interview 36).

This suggested ideal layout for the Survey Operations—a system of concentric rings with the core consisting of supervisory staff and the outer rings housing the Survey Operations levels in descending hierarchy—is parallel to Lévi-Strauss' observations of the subordinate of the two Winnebago moieties. Lévi-Strauss (1963) argued that the two moieties' opposing spatial conceptions of the same village structure were based in their own social positions within the prevailing hierarchical system. Interestingly, the upper management of the Survey Operations perceive their present layout to be "concentric and hierarchical," with all the ruling functions in one location on the second floor (cf. Interviews 30, 34, and 37). However, from their position of superordination, they conceive of the present layout as an ideal one in which the relations between themselves and their subordinates are symmetrical. In contrast, from their position of subordination, the middle/lower management of the Survey Operations perceive the current layout of Midwest Survey as

hierarchical and asymmetrical. Interestingly, their (leader's) conception of an ideal layout—a concentric layout with the upper management at the core and the workers in the peripheral circles, with the distance of their departments from the core varying inversely with their social position in the hierarchy (Figure 6.1)—parallels their current layout in principle and reinforces their own social position. In other words, they perceive their relations with the upper management as essentially hierarchical and asymmetrical. In reflecting on respondents' differing superordinate and subordinate positions in the social structure, these two differently perceived spatial conceptions of the same organizational structure (Midwest Survey) lend support to Lévi-Strauss' model.

The Phone Shop is another example that underscores the role of the physical setting in failing to support incumbents' formal and informal exchanges. The perceptions of, and meaning derived from, the physical setting for the workers in this shop are quite dismal: the work setting, perceived as crowded and unstable, is one of the main causes for overt alienation of the workers toward the organization as a whole. In the words of two lower-level workers:

> When we had the Town Hall meetings, at least we felt we had a finger in the pot. . . . If I could change one thing about Midwest Survey, it is that they've got to make us see that we're an important part of a bigger whole. This would have an impact on all other facets of our work lives. . . . Need I say more. (Interview 4)

> We're so big now, we're so scattered in this building, our thought is not even counted. Every person is at his or her desk—which, incidentally, may be moved at any time; there seems to be no responsibility to the group, no pride in one's work. . . . I'll say, like anyone, I've adapted to, but I'm not crazy about my job. (Interview 5)

The dissatisfaction with the organization expressed by these workers is consistent with their perception of the organization's stance toward its low-level workers. The organization has chosen to downgrade their status by allocating them less than desirable workspaces. In return, the workers have responded in kind; their involvement with work is narrowly limited to the designated task and no more, and it is no surprise when we notice them defiling their work areas by littering them, because they feel no commitment to the organization and, consequently, no pride in their workspace. For instance, one staff member of the cleaning crew told me, "I can tell temporaries; they leaving [sic] all kinds of things—paper, food, unclean toilets. . . . Most of the [other] offices are okay. Just pick up garbage and go" (Interview 3).

In contrast to these examples, several features of the physical setting were cited as supporting social interaction and thereby fostering the cohesiveness of the group. For example, a project set up in an open plan area (see Chapter 4 for a discussion of open workspaces), highlighted the team spirit of the work-

ers on a project when all of its members were in relatively close physical proximity to each other.

> [We were in this] temporary space from February to September [1986], and [there was] no carpeting. We had these baffle boards between us. . . and none of us [managers] had private offices. We had our shops right there. What we didn't have was the privacy and the amenities, but we had the spirit: We would joke and we would talk, and we would pass messages back and forth through and between the walls; there was a camaraderie. . . . It [this physical set up] sort of gave importance to all the jobs, treating all the parts of the body as part of the whole. By being together we had the spirit. . . . I think it works far better if a project is set up like this. (Interview 54)

Another example that demonstrates the ways location and layout influence formal and informal exchange is Midwest Survey's Library in its previous building. According to both the Operations staff (cf. Interview 30) and the Academic Center staff (Interview 52), the location and interior layout of the Library in the previous location were such that "they offered opportunities for serendipity." Staff could meet each other [at the Library] in an unplanned way and "these impromptu meetings were ideal for congenial bonding, . . . for bouncing off ideas, and before you knew it, new ideas had emerged for some collaboration and you'd have worked out an idea for a paper" (Interview 52). The underlying implication was that these informal exchanges in the Library, facilitated via its physical location and layout at its previous location, had made it conducive to impromptu social interaction. Such informal interaction was cited by the respondents as the underlying reason for the growth of professional exchanges. In contrast, much sentiment was voiced against the remote location and the isolated design of the present Library, which "is isolated from everybody else" and according to the Librarian as well, was used to a lesser degree than the Library in the previous building.

The salience of the type of workspace in facilitating interaction emerges most clearly in the following instance. An interviewer who had previously worked at a different survey research organization was presently located in a semipartitioned space. She felt that she could use more privacy for the sort of work she was doing. However, the almost open workspace had some advantages, chief among which was "the interaction is good (in this situation) and I've been able to develop some good friendships" (Interview 19).

These examples demonstrate that the incumbents perceive the following:

1. Various attributes of the physical setting of Midwest Survey play a role in the social interaction opportunities afforded its incumbents.
2. The current spatial structuring of Midwest Survey is adequate but not facilitative in supporting interaction either at the formal levels for the

work functions or at the informal levels for the camaraderie and support needed to sustain motivation.

WORKSPACE AND SATISFACTION: A QUANTITATIVE ANALYSIS

From the previous ethnographic description, it is clear that incumbents perceive social interaction as an important element in their work satisfaction and that interaction is facilitated by the physical setting, particularly the immediate physical environment—theworkspace. To highlight the pattern that emerged from the ethnographic data, the relevant environmental, psychological, and attitudinal variables were coded and scaled. In the following pages, these are related to the four main types of workspace prevalent at Midwest Survey—private, shared, partitioned, and open plan (see Chapter 2 for a detailed description of the environmental, psychological, and attitudinal variables, and Chapter 4 for an elucidation of the types of workspaces).

Workspace Type and Sociophysical Attributes

The salience of the sociophysical attributes of the workspaces for workers at Midwest Survey organized by workspace types is shown in Table 6.1. The table lists the average scores for six of the sociophysical attributes of the workspaces, selected from the ones coded as described in Chapter 2. The number of respondents in each workspace type is listed in parentheses in the row following the workspace type at the top of Table 6.1. For the six attributes listed, the

Table 6.1. Salience of Sociophysical Attribute by Type of Workspace
(Most salient = 4, *Least salient* = 1)

Sociophysical attribute	Workspaces occupied by respondents[a]			
	Private (37)	Shared (10)	Partitioned (12)	Open (7)
1. Aesthetic appeal	3.3	2.6	2.4	1.8
2. Privacy and quiet	3.2	2.7	1.9	2.0
3. Centrality	3.3	3.0	2.2	3.2
4. Perceived control	2.8	2.2	1.7	2.0
5. Personalization[b]	2.8	2.1	1.5	1.7
6. Social interaction opportunities	2.4	1.8	2.1	2.3
Total	17.8	14.4	11.8	13.0
Approximate average score	3	2.4	2	2.2

Note. Maximum score = 23; total average score = 14.25.
[a]Numbers in parentheses indicates number of respondents.
[b]Maximum score = 3

maximum possible score is 23. The actual total scores are tabulated, along with the calculated average score for the four workspace types.

Table 6.1 indicates that the sociophysical attributes of workspaces are valued at all workspace types in the organization (total average score of 14.25 out of a possible 23). However, the degree of salience of the different attributes for workers varies depending on the type of workspace in question. For instance, private workspaces, with a total score of 17.8, are the highest rated workspace type at Midwest Survey. Furthermore, it is noteworthy that on all six attributes listed in Table 6.1, private workspaces receive the highest ratings when compared to shared, partitioned, and open plan workspaces. For example, they afford opportunities for personalization, both in detail and more often than any other workspace type (a score of 2.8 out of a possible 3). However, even private workspaces were only rated *fair* (a score of 2.8 out of 4) in their latitude for allowing control of the ambient conditions, a common complaint across all the workspace types. More than one employee had a sweater and/or an electric room heater on in the summer, when the outside temperature was around 90 degrees. The organizationwide complaint was that the latitude to open or shut the windows at Midwest Survey was nonexistent for the incumbents in any of the workspace types.

The extent to which the overall layout and the four types of individual workspace facilitate work and social interaction is perceived as merely "adequate" (score of 1.8-2.4 out of a possible score of 4). In other words, the majority of incumbents perceive the current physical setting of Midwest Survey as barely adequate and not facilitating their opportunities for social interaction.

Table 6.1 shows an interesting finding: the average rating of open workspaces is higher than that of the partitioned workspace (2.2 vs. 2). And while the occupants of open workspaces lack the privacy (a score of 2 out of a possible 4) and access to control of ambient conditions (also 2 out of a possible score of 4), and do not exhibit much personalization of their work area (1.7 out of 3), they are more satisfied with the opportunities afforded for interaction than their counterparts in the shared and partitioned workspaces (2.3 for open types as compared with 2.1 for partitioned and 1.8 for shared types). In addition, the incumbents of open types of workspaces perceived their workspaces to be relatively close to the central core of the organization as compared to their counterparts in partitioned workspaces (3.2 vs. 2.2). A possible explanation for this is in the fact that they saw themselves as key components of an important department—working toward the primary goal of Midwest Survey, collecting data—rather than as solitary individuals at isolated workspaces, working on a minor aspect of the production of a survey.

Table 6.1 should be read with some caution. As described in Chapter 2, a snowball sampling technique was used to identify respondents for the present ethnographic study. As such, workspace types emerged from the analysis of

the data, and thus they were not controlled for sample size from the beginning of the study. As indicated in Table 6.1, sample sizes vary across workspace types. Furthermore, the sample sizes do not represent a constant fraction of the incumbents occupying the various workspace types at Midwest Survey. Therefore, these results should be read only inasmuch as they are indicators of trends. A more rigorously controlled sampling is necessary for a quantitative understanding of the sociophysical attributes identified herein.

Recapitulating, Table 6.1 leads us to conclude that private workspaces were the most desirable with respect to the sociophysical attributes. There were trade-offs among the three remaining types of workspaces, wherein, for example, open plan workspaces were found beneficial in facilitating cohesiveness and partitioned workspaces were rated salient in mitigating distractions and promoting efficiency. Surprising was the finding that open plan workspaces did not follow the expected trend and come in rated as last; instead, they are rated slightly higher than partitioned workspaces. This discovery motivated a search for the conditions under which workspaces are rated high or low on their sociophysical attributes. The following sections explicate the conditional variables.

Workspace Type and Rank in Midwest Survey

For the present study, *rank* is conceptualized as the differential position of the worker in the hierarchical structure of the Survey Operations department (inclusive of the Administrative arm). Those coded *High* in rank belonged to the upper management (e.g., Senior Survey Directors, Directors, and Vice Presidents). The *Medium* rank comprised the middle-management group of Survey Operations (eg, Survey Directors). Rank in the *Low* category comprised lower-management levels (e.g., Assistant Survey Directors, Shop Supervisors), and the *Very low* rank included the clerical staff, temporary workers, and project hires. In the Academic organization, the rankings were less differentiated: Faculty from Midwest University and other universities, and research associates were rated *high;* student interns and research assistants were rated *Low.* And while rank has been considered synonymous with status since Roman times, it should be noted that rank and status are perceived by both arms as having dissimilar levels in the Survey Operations and the Academic organization. For example, a faculty researcher ranked *High* in the Academic organization has a higher status than a Senior Survey Director ranked *High* in the Survey Operations, and a student ranked *Low* in the Academic arm has a higher status than a Shop Supervisor ranked *Low* in the Survey Operations.

The relationship between the rank of workers and the types of workspace they occupy is highlighted in Table 6.2, which lists the correlation between the percentages of each type of workspace and the rank category in Midwest Survey. The total number of respondents occupying each workspace type is listed

Table 6.2. Correlation between Workspace Type and Rank in Midwest Survey

Rank in Midwest Survey	Type of workspace[a]				Total number of workspaces
	Private	Shared	Partitioned	Open	
High	57%	-	-	-	
	(21)				(21)
Medium	40%	40%	8%	-	
	(15)	(4)	(1)		(20)
Low	3%	40%	75%	71%	
	(1)	(4)	(9)	(5)	(19)
Very low	-	20%	17%	29%	
		(2)	(2)	(2)	(6)
Total	(37)	(10)	(12)	(7)	(66)

[a]Numbers in parentheses indicate number of respondents.

in parentheses at the bottom of each of the first four columns. The total number of workspaces occupied by each of the four rank levels is also listed in the last column to the right.

Table 6.2 indicates that physical workspace patently reflects the organizational structure and corresponding hierarchy therein. All *High* ranked individuals at Midwest Survey occupy private workspaces. However, private workspaces are not exclusively for the *High* ranked—the correlation is not perfect; while 57 percent were ranked in the *High* category, 40 percent were ranked *Medium,* and 3 percent were of ranked Low (supervisors in the shops). Functional requirements for the job, in addition to rank, define the allocation of private workspaces. As elaborated in Chapter 5, there is a significant gradation within private workspaces. Not all of them are the same; they range from the ostentatious to the austere. Private and shared workspace types are most commonly used by management and other supervisory personnel; open workspace types signal low budget, production-type tasks assigned to the lowest rung of the hierarchy; partitioned workspaces, on the other hand, lie in between the two—low-level supervisors and Phone Shop or Data Entry clerical staff occupy them. Most often, partitioned workspaces are allocated to workers whose rank is *Low* (of those in partitioned workspaces, 75 percent were ranked *Low).* From a practical standpoint, this is not surprising or new: the functions at the higher ranks *(High* and upper *Medium)* require, and are allocated, private or shared workspaces; partitioned and open workspaces suffice for the functions at the lower ranks *(Low* and very *Low).*

The type of workspace also tells a story about the workers' functional role in the organization and their ensuing hierarchical level, as seen in the example of the Phone Shop. These workers perceive that they have one of the

most important jobs at Midwest Survey, namely, extracting data from the field, without which the rest of the organization could not function. However, in accordance with the general perception of the workers in the Survey Operations, the Phone Shop personnel "couldn't be doing anything of great importance for Midwest Survey" (Interview 58), evidenced in the fact that they were assigned partitioned workspaces (rated lowest on the sociophysical attributes compared to all the workspace types prevalent at Midwest Survey; see Table 6.1). In assigning the Phone Shops an unattractive location and workspaces that are nonconducive to social interaction, the organization was implicating them to the lowest status at Midwest Survey. This discrepancy between workers' perception of the salience of their role and the organizational reality (which is that their interviewing tasks can be performed by temporary workers) is a conceivable ground for the low morale among the Phone Shop workers. (Also see Chapter 5 for a discussion of congruence among these workers' low status, insignificant role, less than desirable location, and the workspaces housed within this location).

Workspace Type and Motivation for Work

The salience of the workspace type for the incumbents' motivation to work is highlighted in Table 6.3, which shows the percentage correlation between three types of motivations held by the incumbents—extrinsic, intrinsic and mixed (partly intrinsic and partly extrinsic)—and the type of workspace they occupy. The numbers in parentheses in each of the cells indicate the number of respondents in the respective cells. The total number of workspaces for each of the three motivational categories is presented in the last column.

As shown in Table 6.3, workers in private workspaces, when compared to incumbents occupying other types of workspaces, were found to be significantly different on yet another dimension: their motivations. Private workspaces were found to have the largest percentage of intrinsically motivated or work-oriented employees (62 percent). The physical attributes of private workspaces support a variety of personal controls, including privacy, social interaction, and the latitude for a multiplicity of functions ranging from formal to informal and instrumental to expressive. It is no surprise then, that Table 6.3 shows that personnel in these workspace types are intrinsically motivated to take pride in their workspaces and, consequently, find these workspaces the most desirable of all the types at Midwest Survey.

In contrast, partitioned and open workspace types were more typically found to house the extrinsically motivated worker—with a pay- or reward-centered orientation. However, this is not meant to imply literally that workers in partitioned and open type workspaces are extrinsically motivated; similar disclaimers apply to the finding that private workspaces house intrinsically moti-

Table 6.3. Correlation between Workspace Type and Motivation for Work

Motivation for work	Type of workspace[a]				Total number of workspaces
	Private	Shared	Partitioned	Open	
Extrinsic	8%	40%	58%	72%	
	(3)	(4)	(7)	(5)	(19)
Intrinsic	62%	20%	-	14%	
	(23)	(2)		(1)	(26)
Mixed	30%	40%	42%	14%	
	(11)	(4)	(5)	(1)	(21)
Total	(37)	(10)	(12)	(7)	(66)

[a]Numbers in parentheses indicate number of respondents.

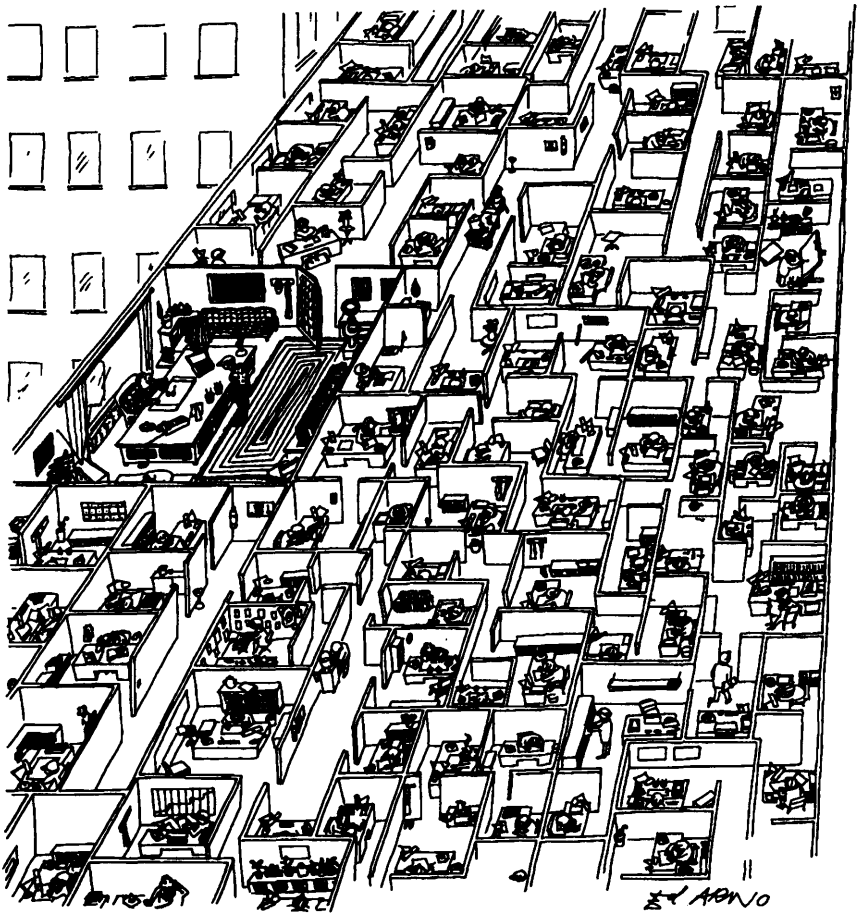
vated workers. Rather, the implication is that when *enacting* their assigned roles at their given workspaces, workers may be extrinsically (or intrinsically) motivated. It should be noted (following from Chapter 5) that any role subsumes many subroles within it. For example, in asking respondents questions related to their motivation for work at a given time in a given space, it is possible to capture only a slice of the megarole of the particular respondent. As such, what may be relevant in enacting one role may be inconsequential in the unfolding of another role nested within the megarole of an individual worker. In addition, role, status, and workspace, individually and conjointly, are dynamic in character and can change. And while the present study was conducted over time, it concentrated on only the work role of the respondent. Therefore, these findings regarding motivation refer to incumbents' work attitudes and motivations only with respect to their enacting a work role bounded by and within their assigned workspace at Midwest Survey.

Work Satisfaction, Workspace Type, and Rank in Midwest Survey

Work satisfaction, for the purposes of this study, is defined as that positive emotional state resulting from the perception about the degree to which the various dimensions of work, singly or in combination, allow the fulfillment of one's important job values (Locke 1976). A host of positive outcomes has been linked to the satisfaction derived from work. Satisfied workers have fewer physical and mental health problems (Sales 1969; Sales and House 1971), lower rates of absenteeism, and are more productive (Baird 1976; Fisher 1980; Locke 1976). While such studies provide useful perspectives for understanding the relationship between worker satisfaction and performance, they are somewhat limited for the task of depicting organizational life at Midwest Survey in all its complexities and richness. The predominant emphasis in most of these stud-

ies has been on the development of better techniques for achieving organizational efficiency. The focus in the present chapter, however, lies more in the dimensions that lead to work satisfaction rather than the outcomes.

A taxonomy of job characteristics that facilitate work satisfaction include work, pay, promotions, recognition, benefits, working conditions, supervision, coworkers, company, and management (Dessler 1979). The use of physical space as an incentive to motivate workers, or as a monetary reward, is best illustrated through a cartoon reproduced from *The New Yorker* (Figure 6.2).



"I'm afraid a raise is out of the question, Benton, but in view of your sixteen years of service we are advancing you two spaces."

Figure 6.2. Physical setting represented as monetary reward. (Drawing by Ed Arno; ©1977 The New Yorker Magazine, Inc. Reproduced by permission.)

All these aspects of the job undoubtedly compete in relevance for a given worker; however, in conducting fieldwork at Midwest Survey, it soon became apparent that because workers' concerns and satisfactions regarding their work were so intermeshed with the physical setting in which they worked, a fuller picture of Midwest Survey would entail an understanding of both the physical setting and organizational characteristics related to work satisfaction.

In gathering workers' perspectives on satisfaction with their work situation (see Chapter 2), data were collected for general satisfaction with workspace, physical layout, and the work itself. While these data may be highly interrelated, for the purposes of the present section, coded data for satisfaction with work are used. The relationship between these data on satisfaction with work, workspace type, and one specific organizational characteristic (rank) is now explored

Figure 6.3 presents a composite plot of two graphs. The first presents work satisfaction by type of workspace occupied; with the four types of workspaces represented on the bottom x-axis and the four levels of satisfaction with work on the *y*-axis (*High* = 4, *Medium* = 3, *Low* = 2, *Very low* = 1). The second graph plots work satisfaction by rank occupied in Midwest Survey; the four rank levels at Midwest Survey are depicted on the top horizontal axis (H

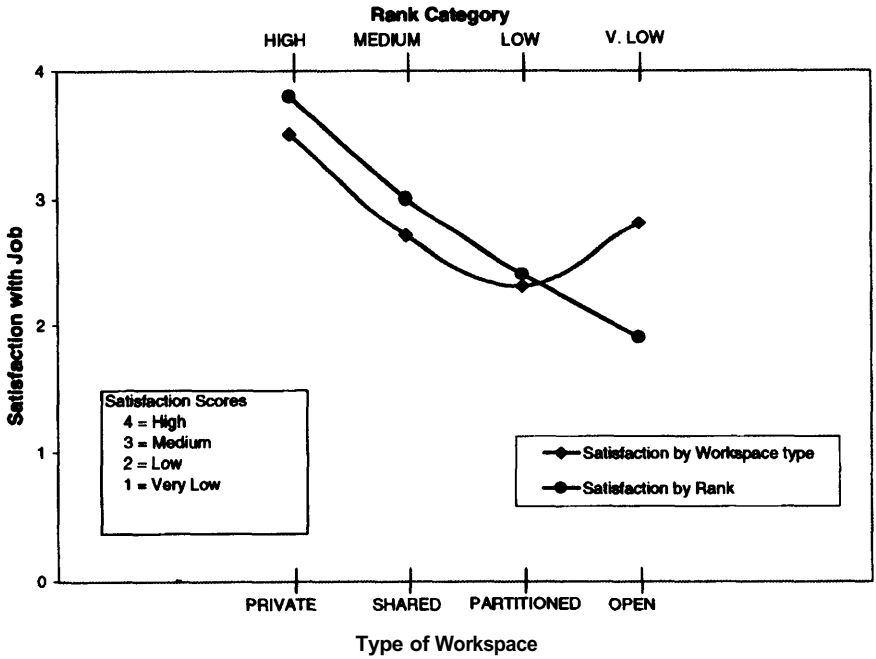


Figure 6.3. Satisfaction with work by type of workspace.

= *High*, M = *Medium*, L = *Low*, and VL = *Very low*), and the four levels of work satisfaction occupy the *y*-axis.

In Figure 6.3, the mean satisfaction with work by rank scores were in line with expectations: Persons with higher rank enjoyed significantly greater satisfaction from their work. As shown, satisfaction with work monotonically decreases with decreasing rank hierarchy. While job attributes associated with rank influence satisfaction, they alone may not be sufficient to account for all the variation. Data presented earlier in this chapter indicate that the intrinsic and extrinsic attributes of a given workspace type significantly impact workers' perceptions and attitudes, independent of occupational rank (see Table 6.1).

In contrast, the relationship between satisfaction with work and workspace type is not as straightforward. The average satisfaction scores when grouped by workspace types (without regard to the rank of the occupant) range from 2.3 to 3.8 (maximum score = 4). This finding is to the credit of the management of Midwest Survey, who, despite the differentiation and specialization of tasks, have been able to keep the staff satisfied with most dimensions of work. Open workspace types show higher satisfaction with work than either partitioned or shared types (a possible explanation for this is discussed in the next section).

It is important at this point to diverge and highlight some of the underlying bases for these analyses. From the beginning of the study, the focus has been on the understanding of contextually oriented behaviors. In other words, workspace type cannot be linked to satisfaction with work in a vacuum; therefore, it is important to understand that relationship as situated within the organizational context, both formal and informal. Along these lines, it is less useful to examine which specific attributes of workspace are linked to satisfaction and more relevant to focus on the confluence of various impinging contexts to understand the totality of the work setting. For example, studies demonstrating that attributes of work environments such as spatial location (Campbell and Campbell 1988), visual stimuli (Heerwagen and Orians 1986), and privacy (Becker, Gield, Gaylin, and Sayer 1983) are valued and make a difference for work satisfaction broadly assume that a particular setting will be valued the same way in all organizational contexts. The ethnographic data gathered for Midwest Survey indicate that such simplicity is not possible. The structure and function of Midwest Survey and the work lives of individual workers, including their exchanges with various facets of the organization, unfold in and through the medium of the physical space. Furthermore, depending on their differential structure and function, the different arms of Midwest Survey implicate dissimilar attributes and aspects of the physical setting. For example, while the Academic arm of Midwest Survey seems to prefer "open" private workspaces to encourage the impromptu exchange of ideas, a

part of the Operations arm values "closed" private workspaces, to maintain confidentiality with clients and execute managerial responsibilities. It is proposed that the physical attributes of the work setting evolve in a dynamic relationship and in tandem with the status they connote and the role they invoke (as elaborated in Chapter 5), as well as with the interaction opportunities they afford. With time, as they come to be socially constructed, they become part of the very fabric of the organizational context that they initially reflected. Consequently, the interest is less in simply identifying specific antecedent physical attributes as leading to consequent variable of satisfaction; rather, the goal is to highlight the variables that are meaningful to the workers, and the processes involved in their confluence from the phenomenological standpoint.

The following section briefly examines one way of conceptualizing social interaction and explicates ways in which workers weave it with their physical surround in negotiating a satisfying work life for themselves.

WORKSPACE, INTERACTION, AND SATISFACTION

Following Freese (1987), social interaction may be conceptualized as resource exchange. Furthermore, the central theme of this chapter is that workspace plays an important role in facilitating such exchanges. In other words, systemic social interaction goes beyond the social-psychological paradigm of "the signaling and interpreting between actors (that) constitutes an interpersonal interaction process" (Turner 1988). Instead, it is conceptualized as a form of resource exchange and as inherently ecological in nature. It is the resource transfers, and not persons who mutually signal and interpret, that constitute social system interaction because they are the reason a social system is organized. A resource can be physical and/or social and is whatever counts as sustaining the entities involved in its transfer. For instance, a small gesture of approval is a resource. In addition, a resource does not have to be a highly valued commodity. Recognition, cooperation, help, freedom from noise, and so on, can all become potential resources, ready to be transferred between the source and target at the appropriate time and place. Resources as such are often transferred during interpersonal interaction, but they can also be transferred with no contact between the interactants except the transfer itself. For example, the sociophysical attributes of workspaces are perhaps the most important resources used by workers to build and sustain the social organizational culture of the work setting. Several examples elucidate this point.

Consider the case of a large office space accommodating several strategically positioned open workspaces for the project personnel of a Coding Shop at Midwest Survey. In very simplistic terms, each worker seeks out the supervisor, gets allocated an assignment, proceeds to the workspace, and brings to

bear the necessary resources to execute the assigned task. Generally, resources needed for tasks at Midwest Survey cover a whole range from cooperation (with project staff), guidance, and support (generally from a supervisor), to library help. Open workspaces have one advantage that the other types lack: visual access. This single factor allows for a potential range of resource exchanges even without leaving one's workspace, and without a great deal of disruption in one's own work when one does leave the workspace. For example, when workspaces are in visual range of each other, it is easier to have a quick, impromptu exchange in words or gestures, while at the same time continuing to get further along with the job at hand. And so, while privacy may not be high on their list of assets, incumbents of open workspaces come to recognize and use the ways in which these workspaces facilitate the breeding of little doses of interaction and nurturance regularly, and form the basis for the informal framework of an ongoing workplace culture.

The visual impact of photographs has been argued to have been the single most important factor in developing the image of World War II (Marwil 1991). In a similar vein, while resource exchanges—formal and informal—are part of the dynamics of the survey world; when actualized in full view of the several open workspaces, there comes to be a general understanding that all those in view become part of the transactions and come to identify as a group together in the common cause of coding. Over time, these small resource exchanges—the interaction episodes, and the nods and gestures—get ingrained and frozen as part of the physical setup in which they take place. Thus, as part and parcel of the setting, they come to serve as artifacts of an informal network, each resource exchange sustaining within itself the rudiments of an informal culture of the Coding Shop comprising open workspaces.

The open and free-flowing quality of open workspaces have another advantage: they give the illusion that other locations in the organization are relatively closer than they may actually be (see Table 6.1). And when other locations are close, implications are that resource transfers are relatively unencumbered. Thus, when we conceive of social interaction not so much as the signaling and interpreting between individuals but more as the quality of, and accessibility to, the exchange of resources—inclusive of, but not limited to peer support, supervisory guidance, and help—we can understand the ways in which the ecology of the open workspaces, as opposed to the partitioned workspaces, facilitate, sustain, and perpetuate such a set of exchanges.

The influence of workspace on social interaction and building informal culture is not limited to the open plan type of workspaces only. As described earlier in this chapter, incumbents have persistently expressed the idea that they miss the social life that used to be an integral part of Midwest Survey in earlier times. In other words, the nature and type of social interaction prevalent at the previous location of the organization, when it was neither as spe-

cialized and compartmentalized nor had the variety of the types of workspaces (as it did at the time of the present fieldwork), was presently nonexistent.

More importantly, when many respondents recall the affable nature of interaction among themselves with enthusiasm, they are also simultaneously recalling the sociophysical attributes of the earlier locations of Midwest Survey:

> The space was always cramped, that's the way I remember it, but we were all in it together. Everyone did everything. (Interview 1)

> [At the previous location] . . . we came to know each other on a personal level. Most of the friends I had were from my work. . . . Now we hardly see each other, and there's no vehicle to keep up the communication lines. (Interview 17)

These typical vignettes from the interviews lead me to believe that in an earlier location of Midwest Survey, the workspaces themselves may not have been laid out in the most functional overall space arrangement. Even the cramped spaces may have had to be shuffled around; and despite complaints such as, "I just wish my desk would not be moved again," there was a persistent enthusiasm about being part of a cohesive community at the previous location. One can deduce from this that it is not the functional arrangement of the physical space by itself that leads to optimum interaction opportunities for the workers. Rather, it is the latitude for creating with and through the given physical setting a work setting that is imbued with symbolic meaning relevant to the workers and emanating from the local culture, as cited in incumbents' reminiscences about their feeling of being together in a common venture at the previous work setting. The importance of providing the latitude for such a creation and sustenance of social space in childrens' street games has been aptly made by Opie and Opie (1984): "In our continual search for efficient units of educational administration we have overlooked that the most precious gift we can give the young is social space: the necessary space. . . in which to become human beings."

Workspaces are generally designed with the functional role of the occupants in mind (e.g., if an individual needs to interface more with external than internal matters of the organization, the workspace needs to be private and demarcated in some way from the everyday internal goings on of routine work life). But we have seen that the functional criteria for workspaces alone do not enhance workers' satisfaction. Satisfaction is enhanced when workspaces go beyond serving instrumental needs to afford opportunities for cultivating and sustaining the expressive needs of workers. And when workspaces facilitate resource transfers among and between workers, they create occasions for cultivating bonds that can over time augment and embellish the organizational culture.

In this stance, I do not mean to imply that the functional aspects of the workspace itself (like adequate storage and filing, furnishings, etc.) are unimportant, nor that the functions of the particular workspace vis-a-vis the overall layout need to be ignored, but rather that, beyond these physical aspects, workspaces need to be designed with a cognizance that a certain type and level of resource exchange between and among workers, when facilitated, could enhance the quality of work life. Conversely, when workspaces are designed and arranged in a layout that disregards potential resource transfers, they can inhibit formal and/or informal interaction opportunities and thereby impede the growth and flourishing of organizational culture.

Through its ecological nature, social interaction is interwoven with the physical surround in which it takes place, as seen earlier in respondents' recall and comparison of previous and present locations. In other words, the physical setting becomes a *condition* for the positive evaluation of one's social surround, especially in performance factors. Other studies of performance facilitators for managerial groups in office environments classify "social interaction" (comprising vertical support, horizontal support, quality of relationship, and accessibility) as a strong facilitator, while the "physical and ambient conditions" are seen equally as a facilitator or inhibitor, depending on the conditions (Crouch and Nimran 1989). While I believe that social structure is a more important aspect of organizational life (and the reason for this study) than the physical conditions, as do Crouch and Nimran, I have argued that the sociophysical attributes of the workspace become an integral aspect of the social interaction and, with time, the workspace comes to be "socially constructed;" the interweave of both make it difficult to separate "social interaction" and "physical and ambient conditions" (of which workspace is one aspect) and talk meaningfully about one without invoking aspects of the other. Therefore, to better state the Crouch and Nimran findings (1989) about social interaction as a facilitator: A supportive workspace and ancillary areas can enhance the system of resource exchanges for the management staff (in the above study) whereby "social interaction" is perceived as "a prominent facilitator of performance." This nagging problem of trying to separate the variables and measure them "scientifically" is not new. For an accurate rendering of the variables in real-life settings such as work environments, the clearly preferred method is a contextually oriented field study rather than a simulated study or an experiment.

In-depth interviews with incumbents, observations of their work lives at Midwest Survey over time, and the extrapolation of the idea of interaction as resource exchange, along with the role of the physical context in facilitating these resource exchanges, show us that "workspace" is better understood from a more egalitarian and less authoritarian perspective. The idea suggested here is parallel to one used in prevailing management strategies in which the evolv-

ing manager seeks to support his or her employees in getting the job done well rather than autocratically guarding his or her power over them (Kleiman 1992). In this framework, even though workspace varies with rank, it has the potential of going beyond its sociophysical attributes and those that the organization allocates to become a means for workers to support and enhance their resource exchanges, with subsequent positive consequences for the organizational culture. This vision instills a consciousness on the part of management that workspaces can, through the facilitation or inhibition of resource exchanges, become indispensable tools in the social construction of organizational culture.

SUMMARY

The results illustrate that the more private, the more the latitude for personalization, the closer to the core of the organization, and most importantly, the more the interaction opportunities provided by a workspace, the greater the satisfaction for the incumbents. A surprise finding showed that workers in partitioned workspaces are more dissatisfied than workers in open workspaces. This side-discovery led me to look for the *conditions* under which workspaces afford satisfaction or dissatisfaction. The category of "ambient conditions" comprising the workspace is not mutually exclusive of the category of "social interaction." The differential elements of workspace are interwoven with the social psychological aspects of interaction—when it is viewed as a resource exchange (Freese 1987)—to provide a framework and, in some instances, a symbol for the creation and sustenance of an informal communication system and culture in the organization.

7

Toward a Social Psychology of Space Use in Work Settings

The organism and the environment form an indissoluble entity, that is to say. . . there are adaptational variations simultaneously involving a structuring of the organism and an action of the environment, the two being inseparable from one another. (Piaget 1952)

INTRODUCTION

The social organizational literature has suggested numerous ways for sustaining a work environment to enhance the quality of life and the creativity of its workers (cf. March and Olsen 1976; Katz and Kahn 1978; Scott 1981), generally focusing on relationships between individuals and groups while cursorily acknowledging the indirect influence of the physical setting on these relationships. A divergence from this genre of research was to be found in the field of applied organizational psychology, wherein the role of the physical setting was highlighted through demonstrating the ways that physical attributes of settings augmented worker efficiency and productivity (cf. Taylor 1923; Roethlisberger and Dickson 1939; Herzberg, 1967). In contrast, architecture has viewed the physical setting of organizations primarily from a practical design standpoint, articulating aspects of form, substance, and symbol with but a slight hint of awareness of the social bases of design. In other words, the social sciences have focused on the structural and functional criteria of work settings, and the architectural perspective has defined these structural and functional relationships indirectly through the extraneous reference point of the physical setting. And since both these perspectives have been developed in isolation from each other, they each offer a different view of the organizational work setting. From the phenomenological perspective of the worker, however, the organizational setting and the physical setting are one, and not two separate entities, as far as they have implications for the quality of work life and satisfaction. As Relph (1976), has aptly elucidated: "People are their

place and the place is its people, and however readily these may be separated in conceptual terms, in experience they are not easily differentiated." Therefore, it is important for a study of a work setting to examine the social organizational and the physical setting conjointly.

The present ethnographic study of Midwest Survey has explored the social and organizational facets of the work environment as reflected in its physical setting. In contrast to other studies of survey organizations that have been conducted mainly from a policy and management perspective (Kaplan 1961; Lazarsfeld 1962; Rossi 1964; Ikenberry and Friedman 1972; Sieber 1972; Glock 1979; Sheridan 1979), the viewpoint of the present study is based in workers' subjective perceptions and satisfactions with their work and workspaces. Specifically, it allows for an exploration of the issues that are salient to the workers from their perspective over time and within the physical context of their work areas. In addition, the study goes beyond merely documenting users' satisfaction with their workspaces. Ethnographic data are used to draw out themes that emerge as being salient to the workers; subsequently, the processes through which workspace and its sociophysical attributes become related to these variables are conceptualized. Two main variables that help delineate the social structure of Midwest Survey are (1) formal and informal interactions and the ensuing cohesiveness, and (2) status and role issues. Therefore, the present study focused on these variables as they are addressed by the organization and negotiated by the worker within the context of their physical setting.

Two assumptions guided the analysis. First, an understanding of the role of the physical setting in organizations is best achieved through an inquiry into the social processes that initially produced the structuring or restructuring of the physical setting. Classical examples of such an approach are Weber's (1958) comparisons of the physical facets of Occidental and Oriental cities in terms of social processes, such as the differences in the nature of interactive groups, and understanding the ancient and medieval cities of the West through the relative importance of military clans in the former and occupational associations in the latter. Second, following symbolic interaction theory (Mead 1934; Stryker 1983; Stryker and Statham 1985) and its framework of the mutually constraining processes between person and social structure, the meaning that workers assign to their physical surround, with time, comes to support and structure the routinization of their own behavior in the organization and further alters the social structure within which they act.

SUMMARY OF PRESENT FINDINGS

The most salient findings of the present ethnographic study of Midwest Survey are enumerated as follows:

1. Midwest Survey is a sheltered organization, a nonprofit social science research center, structurally and physically adjacent to its parent institution—Midwest University. This institutional cap over Midwest Survey is perceived as the cause of ongoing tensions between the two organizations. However, when the institutional cap is nonexistent (as in the case of Midwest Survey's East Branch and Eastern University), tensions between the two organizations dissipate.

2. Midwest Survey's internal organization is comprised mainly of two organizations under one roof: (1) the Academic arm, consisting of various research centers and (2) the Survey Operations arm, responsible for the production of surveys; and an Administrative arm servicing both.

3. Midwest Survey's corporate location houses four types of workspaces: private, shared, partitioned, and open. The allocation of these different types of workspaces is based mainly on the function and role of the incumbent; however, rank plays a significant part in how the spaces are allocated. The type of workspace—private at the high end, followed by shared, partitioned and open types—and spatial location in the overall layout are a patent indicators of hierarchy at Midwest Survey.

4. Private workspaces are better suited to support the formal—instrumental and symbolic—functions of Midwest Survey. Shared and open types provide most latitude for the informal interaction needs of the workers. Partitioned workspaces are salient in mitigating distractions that are prevalent in open types.

5. The social organizational functions of Midwest Survey are generally reflected in, and enhanced through, the sociophysical attributes of the four types of workspaces.

6. The implications of the sociophysical attributes of workspaces for the satisfaction of incumbents are as follows: The greater the degree of privacy, the greater the latitude for personalization, and the closer to the core of Midwest Survey, the greater is the satisfaction of the incumbents.

7. Private workspaces are perceived as most satisfactory, followed by shared and open types. Partitioned types are rated least satisfactory by the workers who use them, despite the fact that open workspaces are the types assigned to the lowest level in the hierarchy.

8. Two organizational factors act as moderators to work satisfaction: (a) the need for consistency in status, role, and physical setting, and (b) the latitude for informal interaction as afforded by the physical setting and the ensuing cohesiveness.

9. Generally, the workspace and/or physical location of the workspace are congruent with the status and role of its incumbents and act as an indicator of such a congruency. When the physical setting fails to simultaneously enhance incumbents' status *and* role, it acts as a deterrent to status–role con-

gruency. Over time, the physical setting impels its own congruence with either status or role, consequently altering the prevailing perceptions of status or role in the direction of the newly established congruence with itself. Under these conditions, workspace and/or physical location become an indicator of status and role incongruency, mobilizing the system toward further change and a new equilibrium.

10. Nadel's (1957) conceptualization of role behavior was amplified to include the physical setting of the workplace as an "extension attribute" of role. Over time, as this "extension attribute" becomes supportive of the instrumental and symbolic functions of Midwest Survey, it comes to be socially constructed, as it is endowed with meaning and symbolism, and becomes part and parcel of the social structure of Midwest Survey.

11. Congruent arrangements of status, role, and physical setting support the formal—symbolic and instrumental functions of Midwest Survey—and are salient factors for quality of work life and satisfaction.

12. The process of the social construction of the work setting entails another salient factor—opportunity for informal social interaction. Inasmuch as social interaction opportunities are supported by the physical setting, they are perceived as supporting the informal—expressive functions of Midwest Survey and are salient for satisfaction. Interaction, comprising a system of resource exchanges, is supported and enhanced in differential degrees by diverse workspace types, the sociophysical attributes of which get interwoven with and become an integral aspect of interaction to varying extents. With time, these workspaces and ancillary areas come to be socially constructed as part of the local culture, perpetuating differential degrees of cohesiveness.

13. While the internal organizational context sets the tone for the quality of work life at Midwest Survey, the physical context reflects this posture, is modified through the local cultural order, and has implications for navigating change in the organizational context. These changes in turn are reflected back through the physical setting and the cycle continues over the life of the organization.

THE SOCIAL PSYCHOLOGY OF SPACE USE IN WORK SETTINGS

The central argument of this book has been that an understanding of a work setting needs to conjointly weave in several strands relating to the work setting, including the physical, social, organizational, and symbolic dimensions, and from a phenomenological standpoint. In other words, work life in an organization is best understood through examining work phenomena in context. The following section briefly elaborates on the background, concepts, and evolution of the contextual approach in psychology. The data from Mid-

west Survey are then used to weave together the different contexts of the work setting in a conceptual model for the understanding of a work setting, which is presented in the subsequent section.

A Contextual Approach for Understanding Work Settings

Much as has been the case in the social sciences, most earlier research in the environment and behavior field has tended to separate the physical from the social dimensions of the environment. For example, early research in environmental psychology adopted an interactional perspective that focused on straightforward unidirectional effects of environments on behavior to the exclusion of other social contexts such as demographic factors, cultural differences, and/or personality dispositions (Altman and Rogoff 1987)1 (see Chapter 1). In other words,

> Research is viewed as an objective process by which knowledge is discovered and used to achieve technological solutions to environmental problems. Research activities are assumed to be value neutral and separate from the social dynamics observed and recorded within particular settings. (Stokols, 1990)

The organismic approach in environmental psychology—essentially a systems approach (cf. von Bertalanffy 1950)—wasa step forward in including social aspects in the understanding of behavior in environments. However, even though person–environment components exhibit complex reciprocal relationships in this approach, they are still conceived of as wholes or systems composed of separate elements or parts. For example, Stokols and Novaco (1981) adopt an organicist notion of homeostasis in the form of person–environment fit in a study of transportation and well-being. The psychological components of transportation and well-being are assumed to have reciprocal and multidirectional causal relationships with one another and are linked together in terms of person–environment "congruence." To the extent to which personal and interpersonal goals are congruent with qualities of the physical environment, the individual is considered to be psychologically adjusted. It is the overall pattern of relationships that is crucial in this model and not the characteristics of the elements considered in isolation or in specific relationship with other elements.

In contrast to the organismic approach that examines the relationship between elements, in that one independent element may cause changes in, or influence another element, the transactional or contextual approach begins with the "phenomenon." The phenomenon or event is conceived of as a confluence of person and context, coexisting and jointly defining one another and contributing to the meaning and nature of a holistic event. For example,

in the ecological research of Barker (1968) and his associates, psychological processes were examined in a variety of environmental settings in accordance with the thesis that behavior is inextricably linked with the physical and social environment in a continuous flow, and to understand this stream of behavior, it is necessary to describe the natural units of psychological functioning in physical settings as they unfold and change directions. The transactional or contextual approach underscored the understanding of places and events from a holistic perspective that recognized the inseparability of their different aspects that change in emergent and contextually linked ways.

A fuller recognition of the virtues of contextual and transactional conceptualizations in psychology, and specifically in environmental psychology, came during the 1970s (cf. Barker 1968; Moos 1976) and the 1980s (Stokols 1987,1990; Stokols and Shumaker 1981; McGuire 1983; Smith 1983; Gergen 1984; Stokols and Jacobi 1984; Wicker 1985; Winkel 1985; Altman and Rogoff 1987). Some impediments to incorporating contextual theorizing into operational constructs, and subsequently translating the findings into the design of physical settings, include but are not limited to the differing scope of analysis of research studies, and a nonfungibility between the terminology used in architecture and the social sciences.

The present study of work settings in a survey research center incorporates several of the broad methodological principles (Altman and Rogoff 1987) and conceptual strategies (Stokols 1987) in the design of the study and in the development of a working model of the social psychology of space use in work settings. For example, from the start, the present study examined social-psychological processes as embedded in physical and social–organizational contexts. The stance has been to discern the nature of the whole work setting, with the focus on phenomenon, and without emphasis on antecedent and consequent relationships among variables. This led to selecting a methodology that would allow for an examination of an event from several perspectives. Because a phenomenon is partly defined by the qualities of the observer and by the several perspectives of the incumbents, the observer, as well as the respondents, were inseparable from the phenomenon being observed. A fuller understanding of organizational life therefore led to selecting the ethnographic method of collecting the data—studying the workers in their natural setting at their workspaces and from a phenomenological standpoint; that is, the focus was on subjective and experiential aspects of work life, highlighting the meanings derived from, and constructed through the physical setting for the user(s). In addition, the model incorporates temporal process as an integral part of the study, showing people's ongoing actions in relation to one another and the sociophysical environment, along with the process and dynamics of change of the work setting over time.

Working Model of a Theory of Space Use in Work Settings

The significant findings of this study will now be used in the development of a working model of the social psychology of space use in work settings. The model is depicted in Figure 7.1 and highlights the relative positioning of the three main components of a work setting: the physical setting within which the organization is embedded (A); the social–organizational context (B); and workers' perceived quality of work life and their subjective degree of satisfaction (C). The ways in which these three components come to be implicated by and interwoven with each other are delineated here through a preliminary framework for a theory of space use within organizations.

The model highlights the processes by which events and behavior (phenomena) are shaped within and through the social organizational context and the sociophysical context of the work setting, and over time have implications for the local culture of the workplace. First, consider the development of the physical context (Segment A, Figure 7.1). Organizations chalk out their programmatic needs, such as identifylng their substantive and/or symbolic functions at the organizational and group levels. These requirements are then trans-

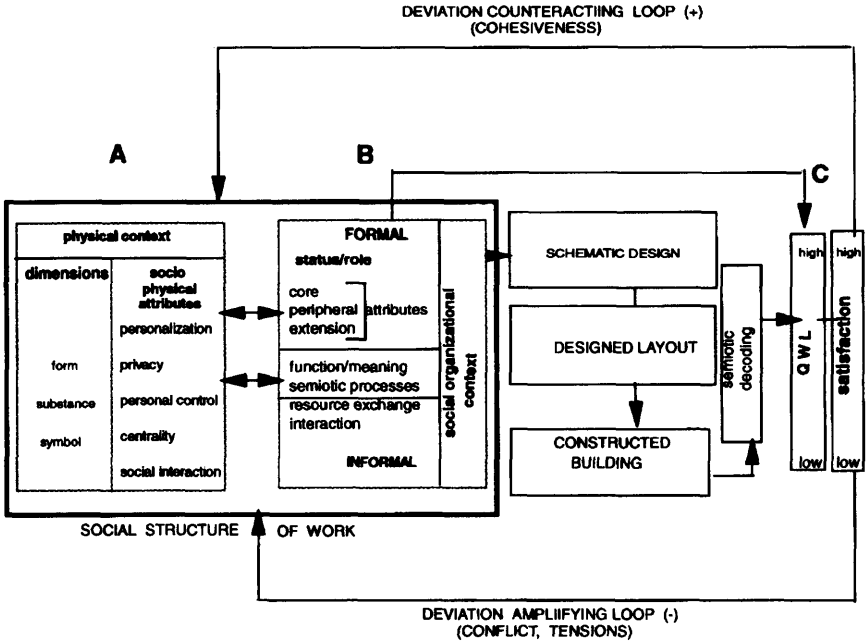


Figure 7.1. Framework for a theory of space use in work settings.

lated by architects into a programmatic layout. The programmatic layout is envisioned through a three-dimensional aesthetic framework and is embodied as a unique set of design features, further concretized into a schematic design and, finally, after several iterations, developed into a design layout (plan) for the organization. The designed layout is subsequently translated into the physical form of a building, and this practical outcome marks the conclusion of the architect's involvement with the organization. The social construction of this designed physical setting, however, begins only after the physical form is occupied and continues as the substantive and symbolic aspects of the physical setting become interwoven with the social aspects.

From a certain combination of form, substance, and symbol emanate a unique set of sociophysical attributes of a work setting (Segment A, Figure 7.1). For example, a specific layout invoking a given mix of substantive and symbolic dimensions for a hierarchical organizational structure would afford different degrees of privacy and personal space than would the dimensions for an egalitarian organizational structure. This is the phase during which the given physical layout comes to be encoded with symbolic meaning by the users of the setting. Subsequently, the totality of the designed environment comprises its physical attributes, its acquired sociophysical attributes, and the socially constructed meanings imbued on these by workers. It is plausible, therefore, that under some conditions the same physical environment is perceived as enhancing incumbents' quality of work life, and under other conditions the same design diminishes the quality of work life and becomes a cause for dissatisfaction.

The conditions for these divergent evaluations emanate from the social organizational context (Segment B, Figure 7.1)) which acts as a moderating variable for the physical setting. Two primary organizational aspects—status/role and interaction opportunities—emanating from the formal and informal organization, respectively, and invoked by sociophysical attributes of the work setting, come to be interwoven into the physical surround via symbolic and substantive dimensions. Most often, status/role is consonant with the physical setting of work. However, sometimes, constraints of floor layouts (especially in cases of reuse of buildings) deter the congruence of status, role, and the physical setting. Such situations can lead to conflict between and within departments. For an understanding of the conditions that may lead to incumbents' satisfaction, it is not enough that physical design respond only to the programmatic needs of organizations. Beyond functional needs, design needs to be attentive to the status and role relationships and their differential embodiment (via their sociophysical attributes) into the physical surround.

The latitude for interaction opportunity (Segment B, Figure 7.1) emanating from the informal organization and perceived as being a salient dimension by the incumbents may be supported in differential degrees by the at-

tributes of the sociophysical setting. When sustenance for interaction is afforded through sociophysical attributes of the work setting and/or ancillary areas, over time, workers engineer subtle negotiations for and through the physical work setting, give it meaning and, in the process, transform the physical that was initially allocated to become a vital part of the evolving organizational culture. For example, open workspace types are rated higher than partitioned types because it is conceivable that the facilitation and sustenance of social interaction exchanges are perceived to be superior in the open types as compared to the partitioned types of workspaces. Thus, when the sociophysical attributes of design become a means to facilitate, sustain, and perpetuate Valued resource exchanges for the workers (such as interaction opportunities), they go beyond *form* and *symbol* to engage the *substantive,* providing the latitude for endowing the physical work setting with meaning and, in the process, enhancing workers' satisfaction. It follows that the delineation of a work setting through either only its physical or its organizational structure is incomplete from the phenomenological perspective of the worker; therefore, they need to be jointly conceptualized. This confluence of the physical and the organizational contexts is represented in Figure 7.1 as the social structure of work.

Thus, both these formal and informal dimensions of the organization get woven into the work setting through the substantive and symbolic attributes of the physical context. In bringing into the fold these organizational issues, the goal of the designer needs be broad: beyond offering solutions for the functional needs of the organization, design also has to afford ways that the constructed meanings of its users facilitate their negotiations in the course of their daily routines; that is, design needs to be responsive to the meanings that workers assign to the physical attributes of the work setting, so that they are in alignment with these meanings as, and when, they are decoded. The major part of this phase occurs subsequent to when the designed layout is ready for the workers to occupy, and prior to Segment C, as depicted in Figure 7.1. This is the phase where decoding by users takes place and leads to evaluative perceptions by users of the degree of the quality of their work life, which further has implications for their satisfaction with work.

To the degree to which these aspects of the organization (status/role and social interaction) get interwoven with and complement the physical attributes, there are consequences for workers' quality of work life and their satisfactions with their work setting. Both quality of work life and satisfaction are depicted (Segment C, Figure 7.1) on a continuum ranging from *High* to *Low.* From the workers' perspective, the two organizational aspects—status/role and interaction—may be seen as valued resources that afford access to information and, consequently come to influence directly workers' satisfactions. In addition, the potential exculpation of these valued organizational resources through the

medium of the physical setting also comes to be a contributing factor for cresting and maintaining satisfaction. The physical spaces of the organization can either facilitate or constrain the acquisition and/or exchange of these valued resources. Therefore, in accounting for and predicting satisfaction, it is not enough to say that workers look for material gains. We need to understand the processes through which the valued organizational resources are disseminated through the medium of the physical setting and further modified by the workers over time to enhance satisfaction.

When the physical setting supports valued resource exchanges, and when it comes to be congruent with status and role, it comes to engage workers' affective and cognitive perceptions and contributes to a high level of satisfaction. Over time and through the processes of everyday work, the physical backdrop becomes part and parcel of the routine and comes to be imbued with meaning derived from, and given within, the context of the social organizational structure. The physical setting comes to be socially constructed as relatively more accessible, democratic, and renders to incumbents the feeling of being in a common venture. When perpetuated over time, these feelings bind incumbents in a cohesive group, and a deviation counteracting loop is set up (Upper Loop, Figure 7.1); that is, the greater the latitude the organization affords the worker to negotiate and work out the congruence between the organizational and physical components of the work setting, the greater the likelihood of an increase in the cohesiveness of the worker culture.

Conversely, the physical setting can fail to support needed resource exchanges and can fail to achieve a state of congruency with status and role. In such a case, the restructuring and reconfiguring of either the social organizational or the physical envelope can alter the social ecology of the work setting. Incumbents come to be less than satisfied with work and aspects of the work setting so implicated. A persistence of such a situation can result in a deviation amplifying cycle (Lower Loop, Figure 7.1). In other words, the greater the nonalignment of the substantive and symbolic dimensions of the organizational structure with the physical setting, the greater the chances for the development of tensions and further consequences for the disintegration of the workforce.

Thus, physical settings can both facilitate the generation of cohesiveness and exacerbate organizational conflicts in work settings. Inasmuch as they are a medium for substantive and/or symbolic communication, they engender cohesiveness. In symbolizing the other social forces that organize work life (e.g., status/role incongruencies), physical settings contain the ingredients of conflict. When understood from this perspective, a social psychology of space usage adds to our understanding of organizational life and helps to define and redefine the physical work setting to reflect the prevailing organizational culture.

EPILOGUE

The model presented here for the social psychology of space use in work settings, along with the empirical findings delineated throughout this book, lead us to conclude that workers' quality of work life and satisfaction are augmented when the physical setting of work is consonant with the organizational goals and the social psychological needs of the organizational actors; that is, an organization that is concerned about the well-being and satisfaction of its workers would make interventions to enhance communication and interaction among its employees. Moreover, an intervention, for example, a physical change in any part of the organization, would have consequences for the whole organization. These conclusions have significant implications for designers and managers of work settings. The message for designers is threefold:

1. The facilitation of resource exchanges between workers and among groups augments the formal and informal functions of the organization. An awareness of these social processes and subsequent incorporation or modification of various design elements to facilitate these social organizational functions can enhance the quality of work life and satisfaction of workers.

2. Workspace follows from, and comes to be an extension and indicator of, the incumbents' status and role in organizations. Therefore, restructuring and redefining the spatial setting is shallow when instituted exclusively for architectural embellishment, for the enhancement of status or role, and/or for achievement of work efficiency. It is only when the architectural and the social organizational components of work settings are conjointly taken into consideration in designing or restructuring that we move toward a better fit between workers' negotiated satisfactions and allocated physical settings.

3. Buildings usually outlive the organizations they initially house. They subsequently come up for reuse as constituting an exterior with a hollowed out interior containing vast amounts of flexible space, a container building, so to speak. Consider, for example, Sullivan's Auditorium Building in Chicago. Built in 1889, the original structure was built to house a hotel and a symphony hall. Over the years, the interior of the building was redesigned several times for changing functional needs (as the building changed hands) that ranged from an army base during World War II to its present function as an auditorium theater and an urban university. Another common example of the reuse of structures comes from multistory warehouse structures that generally lie on the outskirts of the central business districts of large cities. While they occupy lucrative property, the original functions of these structures have been transferred further away from the central location. Most often these well-built structures are hollowed out and their interior functions are developed into revenue-generating uses ranging from upscale residential lofts to indoor shopping malls. Recently, the interior of an old but well-constructed church, cen-

trally located in the city of Chicago, was gutted and developed into residential townhouses!

In considering the design/redesign of such anonymous spaces and the physical and social organizational consequences for working groups, architects have unique responsibilities. There needs to be an understanding of, and sensitivity to, the evidence that workspaces are more than the physical setting in need of aesthetic perks to symbolize the organizational culture. Workspace acts as an extension attribute of the work role and facilitates resource exchanges within and between departments; thus, it becomes an integral part of the social organizational culture. Therefore, it is necessary to bring both architectural and social science concepts to the drawing board and conceive of the design of work settings in ongoing terms as having the latitude to accommodate the changing structural and functional needs of the organization, as well as the evolving meanings workers assign to aspects of the physical setting over time.

There are implications for organizational management as well. An awareness of the interdependence of the social and physical factors relevant in work settings is crucial for the execution of work so that it is meaningful for the worker. Beyond this, a sensitivity to the processes by which these social and physical factors coalesce or disengage would best serve the interest of organizations in alleviating interdepartmental tensions.

The nature of the present ethnography has been exploratory. It has jointly examined the salient variables of status/role at the organizational level, social interaction at the group level, and both as enveloped within the physical context of work. Future studies need to examine jointly identity at the individual level, and within the social, organizational, and physical context of other nonprofit and for-profit organizations, to enable the generalizability of the results and help in developing and refining the social psychology of space usage.

NOTE

1. Examples of this genre of research are found in early studies of crowding that examined the direct impact of population density on psychological functioning (cf. Epstein and Baum 1978). Later studies, however, took into account the joint and interactive effects of physical density, person qualities, and interpersonal qualities (cf. Aiello, Baum, and Gormley, 1981; Baum et al. 1982; Worchel and Yohai 1979).

Appendix I

INTERVIEW CONTACT SHEET

Interview number _____

Number of interviews conducted _____

	Date	Time
1.	_____	_____
2.	_____	_____
3.	_____	_____

Subject's name _____

Organizational affiliation

A. Midwest Survey present staff
   1. Research Center _____
   2. Survey Operations _____
   3. Administration _____
   4. Field Staff _____

B. Other
   1. Branch Office Staff _____
   2. Former Midwest Survey Staff _____
   3. Midwest Survey Board Member _____

Type of workspace

Private _____
Shared _____
Partitioned _____
Open _____

Appendix II

QUESTIONNAIRE

I'd like to ask you a few questions[1] about your role in Midwest Survey, your work and workspaces, and your comments and thoughts about any organizational aspects that you feel might be pertinent. My main purpose here is to try to understand the issues at, and about, Midwest Survey that are important to you, and in what ways. Therefore, please feel free to interrupt me at any time for ideas and comments you may have about any of these subjects. I want to assure you that any information you share with me will be used confidentially and solely for the purpose of this study about Midwest Survey.

1. When, and at what level, did you start working at Midwest Survey?

2. Tell me about your work history at Midwest Survey.

3. Could you describe the kind of work and responsibilities you have in your present position at Midwest Survey?

4. Does your job require you to work mostly by yourself, or with others?

[1]During the pretest of the initial questionnaire (similar to the present one but having fewer questions), some respondents suggested a few additional questions as pertinent for inclusion in the final questionnaire. This questionnaire includes all these suggestions.

5. Do you like the actual work you do?

6. Does your present job give you opportunities to try out ideas of your own?

7. What is your guiding philosophy of work?

8. What are the sources of stress, if any, in your current position? Do you have any suggestions for alleviating these stresses?

9. Overall, would you say your work gives you a feeling of satisfaction or not? Could you give any instances?

10. Over the years, what have you found to be the advantages and/or disadvantages of being affiliated with Midwest Survey?

11. Which departments and people do you interact with most of the time (a) regarding your work and (b) informally?

12. Thinking about the physical aspects of your work, are you satisfied with your workspace, furnishings, and proximities to others in your group and department?

13. How would you compare your present workspace to the workspace you had in the previous building?

14. Are you allowed to make decisions about the arrangement or modifications of your workspace?

15. What is your opinion about the overall layout of the present building? What do you see as its advantages and/or disadvantages?

16. Do you have any ideas/suggestions for an ideal space layout for Midwest Survey?

17. In your opinion, is there adequate interaction between the Survey Operations and the other departments and divisions of Midwest Survey?

18. Midwest Survey has some policies for the whole organization, and then some rules that pertain only to Survey Operations and Administration. In general, do you think these rules/regulations are acceptable and appropriate for the different divisions, such as the Academic Centers and Survey Operations?

19. In your opinion, should Survey Management also have academic responsibilities such as teaching on campus and/or publishing articles? Would this present any advantages or disadvantages for Survey Operations?

20. Do you think the turnover in your group is average, above average, or a real problem?

21. What do you think about the quality of work produced by Midwest Survey?

22. The Survey Operations of Midwest Survey is dominated by women. What do you find to be the advantages and/or disadvantages of this situation?

23. Do you prefer the Survey Operations to be organized by projects or by centralizing the tasks?

24. Do you feel the process of review and promotions at Survey Operations is a fair one?

25. In your opinion, is racism an issue at Midwest Survey?

26. In the last few years, Midwest Survey has become more specialized than in the past. With respect to communication, what has this meant for you and your group?

27. In your group, do you have any kind of meetings among the group members for work or for informal purposes?

28. In what position at Midwest Survey do you see yourself five years from now?

29. Where do you see Midwest Survey five years from now?

30. Do you have any suggestions about which other people I should talk to at Midwest Survey?

I'd like to thank you for helping me understand your perspective on issues about Midwest Survey that are important to you. May I call upon you if I need to talk to you again or need additional help in any area?

Appendix III

CODE SHEET

Variable ***Description***

1. Interview number as conducted in chronological order.
2. Number of interviews conducted with noted individual.
3. Number of observations focusing on noted individual, made in decision-making meetings, training sessions, and in-house seminars.

Demographic Variables

4. *Age*
   1 = 20–29 years
   2 = 30–39 years
   3 = 40–49 years
   4 = 50–59 years
   5 = 60+ years

5. *Race*
   0 = Black
   1 = White
   2 = Other

6. *Sex*
   0 = Male
   1 = Female

7. *Organizational affiliation*
   1 = Academic Centers
   2 = Survey Operations
   Management
   Phone, Coding Shops
   Data Preparation
   Computing/Library/Editorial

Variable ***Description***

3 = Administration
Accounting
Personnel
Grants
Facilities
Supplies/Mail
4 = Field Staff

8. *Rank level*
1 = Very low
2 = Low
3 = Medium
4 = High

In Academic Centers
1 = Research assistants, Part-time students
2 = Clerical staff (e.g., secretaries)
3 = Fellows, Ph.D. candidates, administrative assistants
4 = Director, faculty, in-residence or visiting

In Survey Operations
1 = Temporary workers, Part-time students
2 = Lower management, clerical workers
3 = Middle management, personnel
4 = Directors, senior management

In Administration
1 = Temporary workers, Part-time students
2 = Clerical staff
3 = Middle management, administrative assistants
4 = Directors, Controller

Field Staff
1 = Interviewers
2 = Lower management
3 = Middle management
4 = Senior management

9. *Years of Service*
1 = 5 or fewer years
2 = 6–15 years
3 = 16–25 years
4 = 26+ years

Variable ***Description***

10. *Type of Workspace*
1 = Desk in open space
2 = Partitioned workspace
3 = Shared with 1–4 individuals
4 = Private

Sociophysical Attributes of Workspaces

11. *Aesthetic appeal of workspace (adequacy of square footage, furniture, lighting, windows)*
1 = Dissatisfied
2 = Moderately dissatisfied
3 = Moderately satisfied
4 = Satisfied

12. *Privacy and quiet afforded by workspace*
1 = Least or none
2 = Fair
3 = Moderate
4 = Adequate

13. *Distance of workspace from core (Director's office)*
1 = Far (fourth floor or basement)
2 = Moderately Far (first floor)
3 = Close (second floor, but not directly adjacent)
4 = Very close (second floor, in the same corridor)

14. *Perceived control of ambient environment*
1 = None
2 = Fair
3 = Moderate
4 = Adequate

Psychological Attitudes and Perceptions

15. *Pride in, and personalization of workspace*
1 = None
2 = Somewhat
3 = Significant

16. *Motivation for work*
1 = Extrinsic (money as prime motivation)
2 = Intrinsic (work for own sake, self-expression)
3 = Partly extrinsic, partly intrinsic

Variable	*Description*
17.	*Understanding of organizational structure/goals* 1 = None 2 = Somewhat 3 = Significant
18.	*General satisfaction with workspace* 1 = Dissatisfied 2 = Moderately dissatisfied 3 = Moderately satisfied 4 = Satisfied
19.	*Satisfaction with overall physical layout (relative location of departments, and circulation spaces) and social-interaction opportunities afforded* 1 = Dissatisfied 2 = Moderately dissatisfied 3 = Moderately satisfied 4 = Satisfied
20.	*Satisfaction with work* 1 = Dissatisfied 2 = Moderately dissatisfied 3 = Moderately satisfied 4 = Satisfied

References

Adams, R. 1977. *An Organization and Its Uncertain Environment: A Case Study of the National Opinion Research Center.* Master's thesis, Department of Sociology, University of Chicago, Chicago.

Aiello, J. R., A. Baum, and F. Gormley. 1981. "Social Determinants of Residential Crowding Stress." *Personality and Social Psychology Bulletin,* 7, 643–649.

Aldrich, H. E. 1979. *Organizations and Environments.* Englewood Cliffs, NJ: Prentice Hall.

Allen, J. L. 1 November 1998. "Pools of Vivid Office Colors Begin Spreading into the Mainstream." *Chicago Tribune,* Section 5, pp. 1–2.

Altman, I. 1975. *The Environment and Social Behavior.* Monterey, CA: Brooks/Cole.

Altman, I. 1976. "Privacy: A Conceptual Analysis." *Environment and Behavior,* 8, 7–29.

Altman, I. 1993. "Dialectics, Physical Environments, and Personal Relationships." In *Communication Monographs,* 60(No. 1):26–34.

Altman, I., and B. Rogoff. 1987. "World Views in Psychology: Trait, Interactional, Organismic, and Transactional Perspectives." Pp. 7–40 in *Handbook of Environmental Psychology,* Vol. 1 , edited by D. Stokols and I. Altman. New York: Wiley.

Archea, J. 1977. "The Place of Architectural Factors in Behavioral Theories of Privacy." *Journal of Social Issues* 33(No. 3):116–137.

Baird, L. S. 1976. "Relationship of Performance to Satisfaction in Stimulating and Non-Stimulating Jobs." *Journal of Applied Psychology* 61 (6):721-727.

Bales, R. F. 1951. "Theoretical framework." Pp. 30-84 in *Interaction Process Analysis: A Method for the study of Small Groups.* Cambridge, MA: Addison-Wesley.

Barker, R. 1963. The Stream of Behavior. New York: Appleton-Century-Crofts.

Barker, R. 1968. *Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior.* Stanford, CA: Stanford University Press.

Barley, S. R. 1983. "The Codes of the Dead: The Semiotics of Funeral Work." *Urban Life* 12 (No. 1):3–31.

Barthes, R. 1967. *Elements of Semiology.* Translated from the French by A. Lavers and C. Smith. London, UK: Cape Editions.

Baum, A., L. E. Calesnick, G. E. David, and R. J. Gatchel. 1982. "Individual Differences in Coping with Crowding: Stimulus Screening and Social Overload." *Journal of Personality and Social Psychology* 43:821-830.

Bavelas, A. 1960. "Communication Patterns in Task-Oriented Groups." Pp. 669–682 in *Group Dynamics,* edited by D. Cartwright & A. Zander. Evanston, IL: Row, Peterson.

Bechtel, R. B. 1976. *Enclosing Behavior.* Stroudsburg, PA: Dowden, Hutchinson, & Ross.

Becker, F. D. 1981. *Workspace: Creating Environments in Organizations.* New York: Praeger.

Becker, F. D., B. Gield, K. Gaylin, and S. Sayer. 1983. "Office design in a community college: Effect on work and communication patterns." *Environment and Behavior* 15(No.6) :699-726.

Blau, J. R. 1984. *Architects and Firms: A Sociological Perspective on Architectural Practice.* Cambridge, MA. MIT Press.

Blau, P. M. 1955. *The Dynamics of Bureaucracy.* Chicago: University of Chicago Press.

Campbell, D. E. 1980. "Professors and Their Offices: A Survey of Person–Behavior–Environment Relationships." Pp. 227–237 in *Optimizing Environments: Research, Practice and Policy,* edited by R. R. Stough & A. Wandersman. Washington, DC: Environmental Design Research Association.

Campbell, D. E., and T. A. Campbell. 1988. "A New Look at Informal Communication: The Role of the Physical Environment." *Environment and Behavior* 20(No. 2):211–226.

Carrol, G. R., and M. T. Hannan. 1995. "Focus on Industry: The Organizational Lens." Pp. 3–16 in *Organizations in Industry: Strategy, Structure, and Selection,* edited by G. R. Carrol and M. T. Hannan. New York: Oxford University Press.

Coleman, J. S. 1982. "Graduate Lecture Notes on *Conflict in Organizations."* Department of Sociology, University of Chicago, Chicago.

Conrath, C. W. 1973. "Communication Patterns, Organization Structure, and Man: Some Relationships." *Human Factors* 15(No. 5):459–470.

Converse, J. 1987. *Survey Research in the United States: Roots and Emergence 1860–1960.* Berkeley: University of California Press.

Creighton, T. H. 1949. *Building for Modern Man.* Princeton, NJ: Princeton University Press.

Crouch, A. & Nimran, U. (1989). Perceived facilitators and inhibitors of work performance in an office environment. *Environment and Behavior* 21(2):206-226.

Crozier, M. 1971. *The World of the Office Worker.* Chicago: University of Chicago Press.

Csikszentmihalyi, M., and E. Rochberg-Halton. 1981. *The Meaning of Things: Domestic Symbols and the Self.* Cambridge, UK: Cambridge University Press.

Cuff, D. 1991. *Architecture: The Story of Practice.* Cambridge, MA: MIT Press.

Cunningham, M. R. 1979. "Weather, mood, and helping behavior." *Journal of Personality and Social Psychology* 371947–1956.

Dessler G. 1979. "Morale and Performance." Pp. 202–231 in *Human Behavior: Improving Performance at Work.* Reston, VA: Reston.

Durkheim, E. 1947. *The Elementary Forms of Religious Life: A Study in Religious Sociology,* translated from the French by J. W. Swain. Glencoe, IL: Free Press.

Eco, U. 1979. *A theory of Semiotics.* Bloomington: Indiana University Press.

Epstein Y. M., and A. Baum. 1978. "Crowding Methods of Study." Pp. 141–164 in *Human Response to Crowding,* edited by A. Baum & Y.M. Epstein. Hillsdale, NJ: Erlbaum.

Festinger, L., S. Schacter, and K. Back. 1950. *Social Pressures in Informal Groups: A Study of Human Factors in Housing.* New York: Harper & Row.

Fine, G. A. 1987. "Appendix 2: Participant Observation with Children." Pp. 222–244 in *With the Boys.* Chicago: The University of Chicago Press.

Fisher, C. D. 1980. "On the Dubious Wisdom of Expecting Job Satisfaction to Correlate with Performance." *Academy of Management Review* 5(No. 4):607–612.

Freese, L. (1987). *Social Interaction: What Is It?* Paper presented at the 82nd Annual Meeting of the American Sociological Association, Chicago, IL.

Gans, H. J. 1983. "Toward a Human Architecture: A Sociologist's View of the Profession." Pp. 303–319 in *Professionals and Urban Form* edited by J. R. Blau, M. La Gory, and J. S. Pipkin. Albany: State University of New York Press.

Geertz, C. 1973. "Thick Description: Toward an Interpretive Theory of Culture." Pp. 3–30 in *The Interpretation of Cultures.* New York: Basic Books.

Gergen, K. J. 1982. Toward Transformation in Social Knowledge. New York: Springer-Verlag.

Gergen, K. J. 1984. "An Introduction to Historical Social Psychology." Pp. 3–36 in *Historical Social Psychology* edited by K. J. Gergen and M. M. Gergen. Hillsdale, NJ: Erlbaum.

Gideon, S. 1963. *Space, Time and Architecture.* Cambridge, MA: Harvard University Press.

Glass, D. C., and J. E. Singer. 1972. *Urban Stress.* New York: Academic Press.

Glock, C. Y. 1979. "Organizational Innovation for Social Science Research and Training." Pp. 233–36 in *Qualitative and Quantitative Social Research: Papers in Honor of Paul F. Lazarsfeld* edited by R. K. Merton, J. S. Coleman and P. H. Rossi. New York: Free Press.

Goffman, E. 1959. *The Presentation of Self in Everyday Life.* Garden City, NY: Doubleday/ Anchor Books.

Gold, R. L. 1958. "Roles in Sociological Field Observations." *Social Forces* 36:217–223.

Goode, W. J. 1960. "A Theory of Role Strain." *American Sociological Review* 25:483–496.

Gorawara, R. 1974. *A Correctional Community.* Master's thesis, Department of Architecture, Illinois Institute of Technology, Chicago.

Gorawara-Bhat, R. 1987. Organizational Mood as a Source of Bias in Evaluation of Physical Space: A Case Study of the Dean's Offices, University of Chicago. Master's thesis, Department of Behavioral Sciences, University of Chicago, Chicago, IL.

Gorawara-Bhat, R. 1996. "The Physical Context of Social Order." Pp. 182–205 in *3rd Design and Design Support Systems in Architecture and Urban Planning Conference, Part I: Architecture Proceedings.* Eindhoven: Eindhoven University of Technology.

Hannan, M. T., and G. R. Carroll. 1995. "An introduction to organizational ecology." Pp. 17–31 in *Organizations in Industry: Strategy, Structure, and Selection* edited by G.R. Carrol and M. T. Hannan. New York: Oxford University Press.

Heerwagen, J. H., and G. H. Orians. 1986. "Adaptations to Windowlessness: A Study of the Use of Visual Decor in Windowed and Windowless Offices." *Environment and Behavior* 18(No. 5):623–639.

Heiss, J. 1981. "Social Roles." Pp. 94–129 in *Social Psychology: Sociological Perspectives* edited by M. Rosenberg and R. H. Turner. New York: Basic Books.

Herzberg, F. 1967. "The Motivation to Work." Pp. 282–287 in *Studies in Personnel and Industrial Psychology* edited by E. A. Fleishman. Homewood, IL: Dorsey Press.

Hilberseimer, L. 1964. "Where are we heading?" P. 202–221 in *Contemporary Architecture: Its Roots and Trends.* Chicago: Paul Theobald.

Historic American Engineering Record (HAER) 1980. *Documentation of the Systems of the Auditorium Building, Chicago.* Washington, DC: Library of Congress.

Holahan, C. J. 1978. "Sex differences in schematizing the behavioral environment." Pp. 131-139 in *Environment and Behavior: A Dynamic Perspective.* New York: Plenum Press.

Homans, G. C. 1950. *The Human Group.* New York: Harcourt, Brace & World.

Homans, G. C. 1954. "The Cash Posters: A Study of a Group of Working Girls." *American Sociological Review* 19:724-733.

Homans, G. C. 1986. "Mayo I: Psychology." Pp. 135-152 in *Coming to My Senses: The Autobiography of a Sociologist.* New Brunswick, NJ: Transaction Books.

Hughes, E. C. 1971. "Dilemmas and contradictions of status." Pp. 141-150 in *The Sociological Eye: Selected Papers on Institutions and Race.* Chicago & New York: Aldine Atherton.

Hutchinson, J. 3 December 1989. "Working Distance: At Times Office Dignity Can Give Way to Family Feeling." *Chicago Tribune,* Section 6, p. 5.

Ikenberry, S. O., and R. C. Friedman. 1972. *Beyond Academic Departments: The Story of Institutes and Centers.* San Francisco: Jossey-Bass.

Ittelson, W. H. 1973. "Environment Perception and Contemporary Conceptual Theory." Pp. 1-19 in *Environment and Cognition* edited by W. H. Ittelson. New York: Seminar.

Jencks, C. 1973. Modern Movements in Architecture. Garden City, NY: Anchor/ Doubleday.

Jencks, C. A. 1977. "The death of modern architecture." Pp. 9-37 in *The Language of Post-Modern Architecture.* New York: Rizzoli International.

Jencks, C. 1987a. "Post Modernism and Discontinuity." Pp. 5-8 in *Architectural Design Profile 65: Post-Modernism and Discontinuity* edited by Jeremy Dixon, James Stirling, Leon Krier, Terry Farrill, James Gowan, and Charles Jencks. London: Architectural Design, Imprint of Academy Group, Ltd.

Jencks, C. 1987b. "Post-Modernism and Eclectic Continuity." P. 25 in *Post-Modernism and Discontinuity.* London: Architectural Design, Imprint of Academy Group, Ltd.

Johnson, J. M. 1975. *Doing Field Research.* New York Free Press.

Joiner, D. 1976. 'Social Ritual and Architectural Space." Pp. 224-241 in *Environmental Psychology: People and Their Physical Settings* edited by H. Proshansky, W. Ittelson, and L. Rivlin. New York: Holt, Rinehart & Winston.

Kaplan, N. 1961. "Research administration and the administrator: U.S.S.R. and the U.S." *Administrative Science Quarterly* 6:51-72.

Katz, D., and R. L. Kahn. 1978. *The Social Psychology of Organizations.* New York Wiley.

Kaufman, H. 1985. *Time, Chance, and Organizations: Natural Selection in a Perilous Environment.* Chatham, NJ: Chatham House.

Kerch, S. 22 February 1998. "By Any Measure, Office Is Where You Live During Work. *Chicago Tribune,* Section 16, p. 1.

Kerr, C. 1964. "The Frantic Race to Remain Contemporary." *Daedalus* 93(No. 4):1051-1070.

Kleiman, C. 22 March 1992. "90's Will See Opportunity for New Breed of Manager." *Chicago Tribune,* Section 8, p. 1.

Larson, M. S. 1983. "Emblem and Exception: The Historical Definition of the Architect's Professional Role." Pp. 49–86 in *Professionals and Urban Form* edited by J. R. Blau, M. La Gory, and J. S. Pipkin. Albany: State University of New York Press.

Latham, I. 1987. "Leon Krier: A Profile by Ian Latham." Pp. 32-43 in *Post-Modernism and Discontinuity* edited by Jeremy Dixon, James Stirling, Leon Krier, Terry Farrill, James Gowan, and Charles Jencks. London: Architectural Design, An Imprint of Academy Group, Ltd.

Laumann, E. O., and J. S. House. 1979. "Living Room Styles and Social Attributes: The Patterning of Material Artifacts in a Modern Urban Community." *Sociology and Social Research* 54(No. 3):321–342.

Lazarsfeld, P. F. 1962. "The Sociology of Empirical Social Research." *American Sociological Review* 27757–767.

Leavitt, H. J. 1951. "Some Effects of Certain Communication Patterns on Group Performance." *Journal of Abnormal and Social Psychology* 46:38–50.

Lévi-Strauss, C. 1963. "Do Dual Organizations Exist?" Pp. 132–163 in *Structural Anthropology* translated from the French by C. Jacobson and B. G. Schoepf. New York: Basic Books.

Lewin, K. 1964. *Field Theory in Social Science.* New York: Harper & Row.

Liles-Morris, S. 19 September 1989. "Callers Want Work to Fit 'Needs, Values'." *USA Today,* Section 2A, p. 1.

Linton, R. 1947. "Concepts of Role and Status." Pp. 367–370 in *Readings in Social Psychology* edited by T. M. Newcomb and E. L. Hartley. New York: Holt.

Locke, E. A. 1976. "The Nature and Causes of Job Satisfaction." Pp. 1297–1394 in *Handbook of Industrial and Organizational Psychology* edited by M.D. Dunnette . Chicago: Rand McNally.

Lorenzen, H. J., and D. Jaeger. 1968. "The Office Landscape: A 'Systems' Concept." *Contract* 9(No. 1):164–173.

Louis Harris & Associates. 1978. *The Steelcase National Study of Office Environments: Do They Work?* Grand Rapids, MI: Steelcase.

Louis Harris & Associates. 1980. *The Steelcase National Study of Office Environments: II. Comfort and Productivity in the Office of the 80's.* Grand Rapids, MI: Steelcase.

Louis Harris & Associates. 1988. *The Office Environment Index: 2988 Detailed Findings.* Grand Rapids, MI: Steelcase.

March, J. G., and J. P. Olsen. 1976. *Ambiguity and Choice in Organizations.* Oslo, Norway: Universitetsforlaget.

Marcson, S. 1972. "Research Settings." Pp. 161–191 in *The Social Contexts of Research* edited by S. Z. Nagi and R. G. Corwin. New York: Wiley–Interscience.

Markus, T. A. 1970. "Building Appraisal: St. Michaels Academy, Kilwinning." *Architects' Journal* 7:9-50.

Marwil, J. 1 December 1991. "History in the Taking." *Chicago Tribune Magazine,* pp. 16–24.

McGuire, W. J. 1983. "A Contextual Theory of Knowledge: Its Implications for Innovation and Reform in Psychological Research. Pp. 1–47 in *Advances in Experimental Social Psychology,* Vol. 16, edited by L. Berkowitz. New York: Academic Press.

Mead, G. H. 1934. *Mind, Self and Society.* Chicago: University Of Chicago Press.

Mehrabian, A. 1976. *Public Places and Private Spaces: The Psychology of Work, Play, and Living Environments.* New York: Basic Books.

Merton, R. K., and E. Barber. 1963. "Sociological Ambivalence." Pp. 91–120 in *Sociological Theory, Values, and Sociological Change: Essays in Honor of Pitrim A. Sorokin* edited by E.A. Tiryakian. New York: Free Press.

Moos, R. H. 1976. *The Human Context: Environmental Determinants of Behavior.* New York: Wiley.

Moos, R. H., and S. Lemke. 1984. "Supportive Residential Settings for Older People." Pp. 159–190 in *Elderly People and the Environment: Vol 7. Human Behavior and Environment: Advances in Theory and Research* edited by I. Altman, M. P. Lawton, and J. F. Wohlwill. New York: Plenum Press.

Mumford, L. 1964. "The Highway and the City." P. 156 in *The Case Against Modern Architecture.* London: Secker & Warburg.

Muschamp, H. 28 August 1989. "How Buildings Remember." *The New Republic,* pp. 27–33.

Nadel, S. F. 1957. *The Theory of Social Structure.* Glencoe, IL: Free Press.

Needham, R. 1963. "Introduction: On Some Punitive Forms of Classification: Contribution to the Study of Collective Representations." Pp. vii–xviii in *Primitive Classification* by E. Durkheim and M. Mauss, translated from the French and edited by E. Needham. Chicago: University of Chicago Press.

Norberg-Schulz, C. 1965. *Intentions in Architecture.* Cambridge, MA: MIT Press.

Opie, I., and P. Opie. 1984. *Children's Games in Street and Playground: Chasing, Catching, Seeking, Hunting, Racing, Dueling, Exerting, Daring, Guessing, Acting, Pretending.* New York & Oxford, UK: Oxford University Press.

Parsons, T. 1951. *The Social System.* New York: Free Press.

Parsons, T. 1961. "An Outline of the Social System." Pp. 30–79 in *Theories of Society: Foundations of Modern Sociological Theory,* Vol. 1, edited by T. Parsons, E. Shils, K. D. Naegele, and J. R. Pitts. New York: The Free Press of Glencoe.

Patton, P. 27 August 1992. "There's No Place Like . . . the Office?" *The New York Times,* The Living Arts, p. B1.

Pelligrino, P. 1994. "Space, Form and Substance." Pp. 493–513 in *Advances in Visual Semiotics: The Semiotic Web* edited by T. A. Sebeok, and J. Umiker-Sebeok. Berlin: Mouton de Gruyter.

Piaget, J. 1952. *The Origins of lntelligence in Children.* New York: Norton.

Prewitt, K. 1983. "Management of Survey Organizations." Pp. 123–144 in *Handbook of Survey Research* edited by P. H. Rossi, J. D. Wright, and A. B. Anderson. New York Academic Press.

Relph, E. C. 1976. *Place and Placelessness.* London: Pion.

Roethlisberger, F. J., and W. J. Dickson. 1939. *Management and the Worker.* Cambridge, MA: Harvard University Press.

Rossi, P. H. 1964 Fall. "Researchers, Scholars and Policy Makers: The Politics of Large Scale Research." *Daedalus* 93(No. 4):1142–1161.

Rosner, K. 1988. "The Role of Semiotics in the Change of Aesthetics Paradigm in the 20th Century." Pp. 1045–1052 in *Semiotic Theory and Practice: Proceedings of the 3rd International Congress of the IASS Palermo, 1984,* Vol. 2, edited by M. Herzfeld and L. Melazzo. Berlin: Mouton de Gruyter.

Rotton, J., J. Frey, T. Barry, M. Mulligan, M., and M. Fitzpatrick. 1978. "Air Pollution and Interpersonal Attraction." *Journal of Applied Social Psychology* 8:57–71.

Roy, D. F. 1979. "Banana Time: Job Satisfaction and Informal Interaction." Pp. 192–205 in Life in Organizations: Workplaces as People Experience Them edited by R. M. Kanter and B. A. Stein. New York: Basic Books.

Russell, T. R. 1979. *Foundational Knowledge in Sociological Methods: The Rhetoric and Reports of Survey Research, Symbolic Interactionism and Ethnomethodology.* Ph.D. dissertation, Department of Sociology, Southern Illinois University, Carbondale.

Sales, S. M. 1969. "Organizational Role as a Risk Factor in Coronary Disease. *Administrative Science Quarterly* 14:325–336.

Sales, S. M., and J. House, 1971. "Job Dissatisfaction as a Possible Risk Factor in Coronary Heart Disease." *Journal of Chronic Diseases* 23:861–873.

Scott, W. R. 1981. *Organizations: Rational, Natural and Open Systems.* Englewood Cliffs, NJ: Prentice Hall.

Sheridan, P. B. 1979. *The Research Bureau in a University Context: A Case History of a Marginal Institution.* Ed.D. dissertation, Teacher's College, Columbia University, New York, NY.

Sieber, S. 1972. *Reforming the University: The Role of the Social Research Center.* New York: Praeger.

Simmel, G. 1908. "Space and the Spatial Ordering of Society." Pp. 614–708 in *Soziologie,* translated from the German by S. Fasolt, 1989. Leipzig: Duncker & Humblot.

Simmel, G. 1971. "The Stranger, 1908." Pp. 143–149 in *Georg Simmel: On Individuality and Social Forms* edited by D. N. Levine. Chicago: University of Chicago Press.

Smith, M. B. 1983. "The Shaping of American Social Psychology: A Personal Perspective from the Periphery." *Personality and Social Psychology* Bulletin 9:165–180.

Sommer, R. 1969. *Personal Space: The Behavioral Basis of Design.* Englewood Cliffs, NJ: Prentice Hall.

Sommer, R. 1972. *Design Awareness.* San Francisco: Rinehart Press.

Sommer, R. 1987. "Dreams, Reality, and the Future of Environmental Psychology." Pp. 1489–1511 in *Handbook of Environmental Psychology,* Vol. 2, edited by D. Stokols & I. Altman. New York: Wiley.

Steele, F. I. 1973. *Physical Settings and Organization Development.* Reading, MA: Addison-Wesley.

Stokols, D. 1987. "Conceptual Strategies of Environmental Psychology." Pp. 41–70 in *Handbook of Environmental Psychology,* Vol. 1, edited by D. Stokols & I. Altman. New York: Wiley.

Stokols, D. 1990. "Instrumental and Spiritual Views of People-Environment Relations. *American Psychologist* 45(No. 5):641–646.

Stokols, D., and M. Jacobi. 1984. "Traditional, Present Oriented, and Futuristic Modes of Group–Environment Relations." Pp. 303–324 in *Historical Social Psychology* edited by K. J. Gergen and M. M. Gergen. Hillsdale, NJ: Erlbaum.

Stokols, D., and R. W. Novaco. 1981. "Transportation and Well-Being: An Ecological Perspective." Pp. 85–130 in *Transportation Environment: Advances in Therapy and Research,* edited by I. Altman, J. F. Wohlwill, and P. B. Everett . New York: Plenum.

Stokols, D., and S. A. Shumaker. 1981. "People in Places: A Transactional View of

Settings." Pp. 441–488 in *Cognition, Social Behavior and the Environment,* edited by J. Harvey. Hillsdale, NJ: Erlbaum.

Strodtbeck, F. L., and L. H. Hook. 1961. 'The Social Dimensions of a Twelve Man Jury Table." *Sociometry* 24:397–415.

Stryker, S. 1983. 'Social Psychology from the Standpoint of a Structural Symbolic Interactionism: Toward an Interdisciplinary Social Psychology." Pp. 181–218 in *Advances in Experimental Social Psychology,* Vol. 16, edited by L. Berkowitz (Ed.), . New York: Academic Press.

Stryker, S., and A. Statham. 1985. "Symbolic Interaction and Role Theory." Pp. 311-378 in *The Handbook of Social Psychology: Theory and Method,* Vol. 1, edited by G. Lindzey and E. Aronson. New York: Random House.

Sundstrom, E. 1986. *Work Places: The Psychology of the Physical Environment in Offices and Factories.* Cambridge, UK: Cambridge University Press.

Sundstrom, E. 1987. "Work Environments: Offices and Factories." Pp. 733–782 in *Handbook of Environmental Psychology,* Vol 1, edited by D. Stokols and I. Altman. New York: Wiley.

Taylor, F. W. 1923. *The Principles of Scientific Management.* New York: Harper.

Thomas, E. J., and B. J. Biddle. 1966. "The Nature and History of Role Theory." Pp. 3–19 in *Role Theory: Concepts and Research,* edited by B. J. Biddle and E. J. Thomas. New York: Wiley.

Thomas, W. I., and D. S. Thomas. 1928. *The Child in America.* New York: Knopf.

Thompson, J. D. 1967. *Organizations in Action.* New York: McGraw-Hill.

Turner, J. H. 1988. *A Theory of Social Interaction.* Stanford, CA: Stanford University Press.

Van Maanen, J. 1988. *Tales of the Field: On Writing Ethnography.* Chicago: University of Chicago Press.

Venturi, R. 1977. *Complexity and Contradiction in Architecture.* New York: Museum of Modern Art.

von Bertalanffy, L. 1950. "The Theory of Open Systems in Physics and Biology." *Science* 111:23–28.

Wallis, W. A. 1964. "Centripetal and Centrifugal Forces in University Organization." *Daedalus* 93(No. 4):1071–1082.

Weber, M. 1946. *Essays in Sociology,* translated and edited by H. H. Gerth and C. W. Mills. New York: Oxford University Press.

Weber, M. 1958. *The City.* New York: Free Press.

Weber, M. 1978a. "The Types of Legitimate Domination." Pp. 212–301 in *Economy and Aociety: An Outline of lnterpretive Sociology,* Vol. 1, edited by G. Roth and C. Wittich. Berkeley: University of California Press.

Weber, M. 1978b. "Bureaucracy." Pp. 965–1005 in *Economy and Society: An Outline of Interpretive Sociology,* Vol. 2, edited by. Berkeley: University of California Press.

Weick, K. E. 1976. "Educational Organizations as Loosely Coupled Systems." *Administrative Science Quarterly* 21:1-5.

Weick, K. E. 1985. "Systematic Observational Methods." Pp. 567–634 in *Handbook of Social Psychology: Theory and Method,* Vol. 1, edited by G. Lindzey, and E. Aronson. New York: Random House.

White, H. C. 1992. "Introduction to Identity and Control." Pp. 3-21 in *Identity and Control: A Structural Theory of Social Action.* Princeton, NJ: Princeton University Press.

Whyte, W. F. 1943. *Street Corner Society.* Chicago: University of Chicago Press.

Whyte, W. F. 1948. *Human Relations in the Restaurant Industry.* New York: McGraw-Hill.

Wicker, A. W. 1985. "Getting Out of Our Conceptual Ruts: Strategies for Expanding Conceptual Frameworks." *American Psychologist* 40:1094-1103.

Winkel, G. 1985. "Ecological Validity Issues in Field Research Settings." Pp. 1-41 in *Advances in Environmental Psychology: Vol. 5. Methods of environmental investigation,* edited by A. Baum and J. E. Singer. Hillsdale, NJ: Erlbaum.

Worchel, S., and S. Yohai. 1979. "The Role of Attribution in the Experience of Crowding." *Journal of Experimental Social Psychology* 15:91-104.

Zwiegenhaft, R. L. 1976. "Personal Space in Faculty Office: Desk Placement and the Student–Faculty Interaction." *Journal of Applied Psychology* 61:529-532.

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