San Jose State University
SJSU ScholarWorks

Master's Theses | Master's Theses and Graduate Research

2009

Work, organizations, and built environments : an ethnographic approach

Sarah J. Clementson
San Jose State University

Follow this and additional works at: https://scholarworks.sjsu.edu/etd_theses

Recommended Citation
Clementson, Sarah J., "Work, organizations, and built environments : an ethnographic approach" (2009). *Master's Theses*. 3735.
DOI: https://doi.org/10.31979/etd.jbtk-kn6m
https://scholarworks.sjsu.edu/etd_theses/3735

This Thesis is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Master's Theses by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

WORK, ORGANIZATIONS, AND BUILT ENVIRONMENTS: AN ETHNOGRAPHIC APPROACH

A Thesis

Presented to

The Faculty of the Department of Interdisciplinary Studies

San José State University

In Partial Fulfillment

of the Requirements of the Degree

Master of Arts

by

Sarah J. Clementson

August 2009

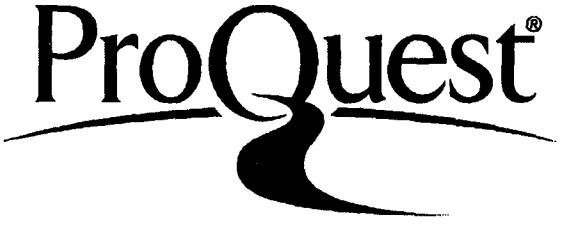
UMI Number: 1478613

All rights reserved

INFORMATION TO ALL USERS
The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript
and there are missing pages, these will be noted. Also, if material had to be removed,
a note will indicate the deletion.

UMI 1478613
Copyright 2010 by ProQuest LLC.
All rights reserved. This edition of the work is protected against
unauthorized copying under Title 17, United States Code.



ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

© 2009
Sarah J. Clementson
ALL RIGHTS RESERVED

SAN JOSÉ STATE UNIVERSITY

The Undersigned Thesis Committee Approves the Thesis Titled

WORK, ORGANIZATIONS, AND BUILT ENVIRONMENTS: AN ETHNOGRAPHIC APPROACH

by

Sarah J. Clementson

APPROVED FOR THE DEPARTMENT OF INTERDISCIPLINARY STUDIES

Dr. Charles Darrah,	Department of Anthropology	June 3, 2009 Date
Dr. Timothy Hegstrom,	Dean, College of Social Sciences, and Professor of Communication Studies	June 3, 2009 Date
Mr. William Dowell,	Herman Miller, Inc.	6 JUN 09 Date

APPROVED FOR THE UNIVERSITY

Associate Dean	Office of Graduate Studies and Research	7/20/09 Date

ABSTRACT

WORK, ORGANIZATIONS, AND BUILT ENVIRONMENTS:

AN ETHNOGRAPHIC APPROACH

by

Sarah J. Clementson

This thesis draws upon ethnographic data gathered at an American organization to explore the complex interplay between employees and their material work environments. At the heart of this interplay lies a paradox: employees seem at once casually dismissive of and keenly sensitive to their built work environments. This thesis argues that in order to understand this paradox, we must identify and understand not only the specific characteristics of the built work environment, but also the larger social forces that influence these employees, their work, and, ultimately, their engagement with their material work environments. Specifically, we must understand the organization and its members, members' interactions with each other, their activities, and their relationships with their built work environments. The results of this exploration suggest new ways of thinking about employees and their built work environments, helping designers of office environments to work more effectively with organizations and end-users in creating work environments that are not only supportive and aesthetically pleasing, but that also facilitate and inspire.

ACKNOWLEDGEMENTS

This thesis owes its existence to the many people whose guidance and support made it possible for me to write it. Dr. Chuck Darrah gave me the opportunity to work with him on the initial project for Herman Miller, and chaired my thesis committee, providing his insight and exhibiting great patience as he read and helped me edit my thesis. Dr. Tim Hegstrom and Bill Dowell graciously agreed to serve on my committee and read and commented on my thesis. In different ways, each of my professors in the anthropology department at San Jose State inspired me to think about how I look at and understand the world around me.

The members of the research department at Herman Miller facilitated our initial study, and the participants at Benton Corporation generously gave of their time and insights as they patiently answered numerous questions.

My parents gave their constant, unconditional love and support, somehow always knowing when *not* to ask about my thesis. And finally, my husband, Dave Clementson, has given me his unflagging support and encouragement throughout my educational journey. He has always believed in me, and the importance of my journey, even when my work affected our family life, and when I sometimes struggled to maintain belief in myself. He has been, and continues to be a true life-partner.

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW

Introduction

"The built work environment doesn't matter—except when it does."

The rather pithy statement above succinctly captures an idea I heard expressed frequently by people at Benton Corporation, a consumer goods company located in the Southeastern United States. Employees there would laugh, "Oh, I can work anywhere—just give me a computer, a phone, maybe a chair." In the next breath, however, these same employees would explain how specific aspects of their material work environments were affecting how they performed their jobs. Such conversations suggest an interplay between employees and built work environments in which the material environment is barely visible to them and yet hard for them to ignore. In this thesis, I explore this paradoxical interplay, and in so doing, answer the question of why employees at this organization seem at once casually dismissive of and keenly sensitive to their material work environments. I propose that specific characteristics of the built work environment at Benton, while certainly important, do not hold all the answers to this question. Rather, the answers lie in larger social forces that influence the ways in which employees perceive, understand, and engage with the organization, their work, and the material work environment at Benton.

Talking with Benton employees about their work and their built work environments was one component of a larger ethnographic project initiated and sponsored by Herman Miller, Inc., a company that designs, manufactures, and installs office furniture and office "systems," or environments. Herman Miller is keenly

interested in how people use and respond to the work environments that they design and produce. As such, members of Herman Miller's research department engaged Dr. Charles Darrah, professor of anthropology at San Jose State University, and me, as his graduate student assistant, to conduct ethnographic research at a corporate client site in order to understand how employees there were responding to the office environment that Herman Miller had recently designed and installed. In addition to talking with Benton employees, Dr. Darrah and I also spent time in different areas at the site, observing people as they worked, as they interacted with colleagues, and as they engaged with their material work environments.

On our first visit to Benton, we began with what we assumed would be a fairly straightforward task: to identify and accurately describe the different elements of the built environment. Armed with maps and floor plans, we explored the different areas, learning to find our way around, getting to know people, and developing detailed written descriptions of specific spaces and elements of Benton's built environment. Our very first conversations with Benton employees gave us pause, however. While all were quick to verify the existence and locations of the work areas, conference rooms, and walkways that appeared on our floor plans, as conversations progressed, it became clear that those same spaces and elements held different meanings, and were seen, perceived, and understood very differently by the people we were talking to. Our maps and floor plans suddenly appeared simplistic: incomplete black and white renderings of what was, ultimately, a complicated and intertwined social and material landscape at Benton.

This thesis draws upon the ethnographic data we gathered at Benton Corporation to explore this social and material landscape and understand how employees there engage with their material work environments. As part of this exploration, I identify and describe larger contexts, articulating employees' perceptions and understandings of the organization, their colleagues, and their work. In the next section of this chapter, then, I review areas of literature that address organizational cultures, organizational communication, work practice and activity, and anthropology of the built environment; four concepts that are pertinent to the discussion of organizations and their members, work, and people and their built environments.

In Chapter Two, I explain the research methodology that informed this thesis and describe the organizational setting of this research. In Chapter Three, I introduce the academic field of Environment-Behavior Studies (EBS). After exploring a sampling of literature from EBS, I describe the conceptual framework that underlies this thesis, inspired by the work of one of EBS's founders. Chapters Four, Five, and Six describe three different groups of employees at Benton and their work, their interactions with colleagues, and their perspectives of and engagement with the organization and their built work environments. I conclude in Chapter Seven, first, with a look back at the previous chapters, identifying lessons that can be learned by understanding the experiences of these groups of employees at Benton. Finally, I offer a series of questions and discussion points that might be posed to designers and organizational leaders interested in altering, or creating new built work environments that best suit the organization, and the end-users and their work.

Literature Review

Introduction

This thesis draws upon ethnographic data gathered at an American consumer goods company to explore the complex interplay between employees and their material work environments. At the heart of this interplay lies a paradox: employees at Benton Corporation seem at once indifferent and sensitive to their built work environments. This thesis argues that in order to understand this paradox, we must identify and understand not only the specific characteristics of the built work environment, but also the larger social forces that influence these employees, their work, and, ultimately, their engagement with their material work environments. Specifically, we must understand the organization and its members, members' interactions with each other, their activities, and their relationships with their built work environments.

We must also understand four specific academic areas pertinent to this thesis: (1) organizational cultures, (2) organizational communication, (3) work practice and activity, and (4) anthropology and built environments. Social scientists from a variety of academic disciplines study these topics, and so it is instructive to understand some of the different perspectives these scholars bring to their work and to the intellectual conversations that have taken place across different disciplines. In the following sections of this chapter, I explain why these subjects are pertinent to this thesis, explore samplings of literature that address these concepts, and discuss particular ideas that might be applied to this thesis.

Organizational Culture(s)

Cultural anthropologists have long been interested in the nature of human organizations. In places where the first anthropologists conducted their research, there were numerous examples of social organization (e.g., households and kinship), but relatively few formal organizations, at least in the form we recognize now. A current definition of organizations is that they "...all have explicit rules, a division of labor, and aims that involve acting on or changing everyday life" (Gellner and Hirsch 2001: 2). Definitions of organizations in the not-so-distant past typically described firm organizational boundaries delineating who or what belongs inside the organization, and who or what belongs outside of it. Today, we see that organizations' boundaries are becoming more porous, particularly as the global marketplace shrinks, notions of time and work change, and distinctions between work, leisure time, and home and family life become increasingly blurred.

In the United States, organization research has been a highly interdisciplinary area of study (Van Maanen, in Gellner and Hirsch 2001), and can be called "organization research," "organization studies," or "organization behavior" (OB). However, while scholars from communication studies, business and management studies, psychology, and sociology, among others, have dedicated themselves to the study of organizations, roots of organization studies can be traced back to cultural anthropology. The final stages of the Hawthorne Studies, for example, (which will be discussed in greater detail later in this chapter), were designed and conducted by an anthropologist; the first academic journal devoted to organization research, *Human Organization*, came out of

anthropology; and the first textbook in organizational behavior was written by cultural anthropologist W.F. Whyte (Bate 1997:1147-1148). It could be argued, in fact, that anthropologists are uniquely suited to the study of organizations: they bring the "master concept" of culture (Jordan 2003), the theoretical perspectives of holism, cross-cultural comparison, and relativism, and attention to the historical, contextual, and processual aspects to the study of organizations (Baba 1986; Bate 1997). In addition, and perhaps most important, they contribute research and fieldwork techniques such as ethnographic methods that effectively capture and shed light on human behavior (Baba 1986:2).

Even within the discipline of anthropology itself, however, there is considerable variety and overlap among the anthropological sub-fields, naming conventions and labels, and professional titles, associated with the study of organizations. For that matter, anthropologists have also not reached consensus on a single definition of the "master concept" of culture. This thesis will follow the definition offered by Margaret LeCompte and Jean Schensul: "Culture consists of the beliefs, behaviors, norms, attitudes, social arrangements, and forms of expression that form a describable pattern in the lives of members of a community or institution" (1999:21).

Examining organizations through the conceptual lens of culture calls attention to group patterns of behavior and belief, and the shared, social nature of cultural features or elements. In fact, it is through the identification and understanding of these patterns and elements that I examine organizational life at Benton Corporation, and seek to articulate the ways in which different groups of end-users there perceive, understand, and engage with their material work environments.

Scholars began applying the concept of culture to organizations as early as the 1950s to analyze the environments of factories and schools, mainly as a scientific variable, something that could be studied, quantified, measured, and eventually manipulated: something those organizations *had.* Anthropologists, sociologists, and management, labor, and organization theorists began exploring the concept in depth in the late 1960s and 1970s. In the mid- to late-1970s, scholars began to push back against dominant positivist perspectives within their disciplines, with the corresponding emphases on quantitative analysis, and began adopting interpretive methods to collect and analyze more qualitative data (Jablin and Putnam 2001).

It was in 1979 that the phrase "organizational culture" first appeared in American academic literature, in a study about organizational change. In his article, "On Studying Organizational Cultures," published in *Administrative Science Quarterly*, management scholar Andrew Pettigrew suggested that organizations were best studied through what he called a "longitudinal-processual" approach (Pettigrew 1979: 570). This approach differed radically from past approaches to the study of organizations, because it assumed that the organization was a continuing system, with a past, a present, and a future, rather than a discrete, static, entity to be studied only synchronically. He cited his long-term study of a British boarding school as an example of this approach. In this study, he conducted not only a before, during, and after analysis of the impacts of major structural leadership changes at the school, but also an extensive historical analysis that included the founding and evolution of the school.

Pettigrew claimed that it was only by studying an organization in such a diachronic fashion that one could trace the emergence and development of an organizational culture. He further claimed that organizational purpose, commitment, and order are not only generated by and passed down from the founder, but also arise out of the collective symbols, beliefs, ideology, language, ritual, and myths of the members of the organization: these six elements constituted Pettigrew's definition of organizational culture (Pettigrew 1979: 574).

These were important ideas, first, because until this time, most scholars viewed organizational climate or culture as something that was only passed down from founders and leaders of the organization, not as something that could arise out of the beliefs and practices of an entire organization. Second, Pettigrew recognized that the creation of symbols, beliefs, ideology, language, ritual and myth are ways that people within the organization construct and manage meaning. While certainly ground-breaking, Pettigrew's introduction and articulation of the concept of organizational culture invited finer definition and further exploration, specifically from communicative and anthropological approaches.

The shift to more interpretive approaches made the concept of organizational culture particularly attractive in the early 1980s, and it was at this time that organization theorists, and management and communication studies scholars began to publish work in this area. Because they had always worked with meanings and symbols (in the study of rhetorical theory and criticism, for example), communication scholars in particular were uniquely positioned to understand and apply the idea of culture to organizations and

communication (Jablin and Putnam 2001). Culture was now being used as a metaphor, rather than a variable—something an organization *is*, rather than something an organization *has*—and increasing attention was being given to the ways in which interactions might actually be the building blocks of culture.

The first communication studies scholars to use the term "organizational culture" were Michael Pacanowsky and Nick Trujillo, who based their 1982 article, "Communication and Organizational Cultures" on the assumption that people in organizations are not only performing work: they do other things, too, that are just as interesting and important as work-related activities. They argue that work and non-work related behavior and practices are communication-based, and communicatively constituted, and that all of this makes up organizational "life" or "culture." It is worth noting that the inclusion of non-work related behavior and practices serves to de-emphasize the management-oriented perspective, which focuses on organizational outcomes only, and that had previously dominated organizational communication scholarship (Pacanowsky and Trujillo 1982).

According to Pacanowsky and Trujillo, the main purpose behind studying organizations' cultures is to understand how organizational life is accomplished *communicatively*. They outline what they believe are the benefits of the organizational culture approach: the study of organizational culture can be either preparation for or used in conjunction with quantitative studies; it can provide members of organizations with a complete picture of the organization; it places emphasis back on communicative behaviors in organizational study (something that had been neglected with the previous

dominance of management perspectives); and it can serve as a critique of prior methods and approaches. Pacanowsky and Trujillo rely heavily on Clifford Geertz's (1973) definition of culture, his use of a web as a metaphor for culture, and his method for analyzing culture, or, interpretation, in setting up their own notions of culture. Like Pettigrew, they also identify several key indicators or "displayers" of organizational culture: relevant constructs, facts, practices, vocabulary, metaphors, stories, and rites and rituals.

Also in the early '80s, the notion of organizational culture was introduced into popular literature. Articles about corporate culture were published in magazines and newspapers, and popular "self-help" business books like Peters and Waterman's *In Search of Excellence*, and Deal and Kennedy's *Corporate Cultures* became best-sellers. The common wisdom at the time was that upper management could simply "change the culture" in order to change, or improve organizational outcomes. This notion became especially popular as companies in the United States grappled with increasing competition from other countries, such as Japan, and new management programs like "Total Quality Management" (TQM) were adopted.

In general, the 1980s and the 1990s appear to have been the heyday of the concept of organizational culture in both popular and academic literature. Some argue today that organizational culture was just a passing fad, and that the concept as applied to organizations is no longer relevant or credible. Despite this claim, the concept still appears in current organizational scholarship. Writings about organizational culture seem to be dominated by sociologists, and management, labor, and organization theorists, and

while they rarely agree on the definition of "culture," "communication," or even "organization," most have acknowledged the central role communication plays in constituting organizations and organizational culture. Over time, then, the concept of organizational culture has transformed from something an organization *has*, to something the organization, and its members, *do*.

Within the discipline of anthropology, the early 1980s brought about a surge not only in the number of anthropologists working outside of academia and in the private sector (and without government or military sponsorship), but also in American corporations' involvement in international business activities. The rapid increase in American international business activities brought about new attention to, and concern about intercultural understanding and communication. Although originally published in the early 1960s and 1970s, anthropologist Edward Hall's work was now recognized as especially relevant at this time and took on new importance. Hall introduced the concept of "proxemics," or subtle, culturally-based rules about personal space, time, and communication, and wrote about cultural aspects of verbal and non-verbal communication (Hall 1959). Hall revealed the ways unwritten, culturally-based rules underlie personal interaction and communication. This new understanding was particularly helpful as American businesses were exposed to Japanese, Middle Eastern, Eastern European, and Southeast Asian business cultures, and differing beliefs about work and communication (Baba 1986:9).

As the concept of corporate culture exploded in popularity in the popular media through the efforts of best-selling business authors Deal and Kennedy (1982), and Peters

and Waterman (1982), and with the advent of Japanese Quality Management programs especially, "culture" became the concept *du jour*, along with new attention to work process and work practices. Managers and business scholars embraced the concept of corporate culture with enthusiasm, interpreting and applying it in widely varying ways (Jordan 2003). While anthropologists themselves had not agreed upon a single definition of culture, as the concept became increasingly muddied in the business world, managers and scholars alike looked to anthropologists for guidance in recognizing, defining, interpreting, and applying the concept of corporate culture (Baba 2006; Jordan 2003). As a result, demand for the expertise of anthropologists, and for business anthropologists in particular, increased dramatically in the private sector.

More recently, anthropologists have responded to the not-so-current obsession with the concepts of corporate and organizational culture with their own explorations and interpretations of culture *within* organizations. Anthropologists such as Batteau (2000) however, distinguished between the use and understandings of "culture" in business schools, management, and some organization studies (mostly as something unitary that is disseminated from "above" and that can be manipulated by management) and anthropological conceptions of culture. Batteau describes culture in organizations primarily as a sense-making device, and identifies cultures of "rationality, inclusion, command and authority, and adaptation and resistance," that exist in tension in every organization (Batteau 2000: 726).

Other scholars have responded with their own explorations of culture in organizations. Kunda (1992) conducted an ethnographic study of a large American high-

tech firm, where he found that corporate culture was used by management largely as an insidious, but effective way to control the hearts and minds of most employees, while marginalizing others. In his conclusion, Kunda suggests that there may be larger societal implications of this use of corporate culture, especially if the corporate culture in question is strong enough that it permeates life outside of the organization, and if the employees themselves have the organization as their only source of community. Hamada (1991; 1994; 1995; 1998; 2000) has published multiple studies on organizational culture, with most of her work focusing on the challenges, at both the macro and micro levels, facing transnational corporations. She describes the move of a manufacturing company from the United States to Japan, and the accompanying difficulties with technology transfer due to culturally-based communication difficulties (1991), and the considerable problems caused by differing interpretations of sexual harassment in a Japanese-owned organization in the United States (1995). In addition, Hamada cites the larger problems of cultural differences in organizational, political, and even economic structures (Jordan 2003).

Implications for Understanding Benton

Social scientists today see organizations not as distinct, firmly bounded entities which contain people, work and communication, but as porous, complex systems or networks that are communicatively constructed. Likewise, the concept of organizational culture is no longer exclusively viewed as a monolithic variable, to be measured and manipulated, but as a complex, densely-woven fabric, also communicatively constructed, that makes up the whole of the organization. Understanding organizations and

organizational cultures as complex and communicatively constructed allows for more nuanced, detailed, and at times more critical analyses of organizations and the interactions and activities that take place within those organizations. This perspective certainly informed our research at Benton Corporation, as we sought to include a diversity of voices and experiences from different levels of the organizational hierarchy, and to capture perceptions, interactions, and activities involving material aspects of organizational life, an aspect not often included in existing research.

Organizational Communication

Communication is a ubiquitous but critical activity in organizations. Indeed, as we conducted our research at Benton Corporation, conversations with employees frequently circled back to the subject of communication. People from all levels of the organizational hierarchy readily described instances of clear and effective, or poor and difficult communication. Applying the concept of organizational communication to our work at Benton highlights not only the intricacies of day-to-day interactions among different employees, but also existing and potential communication pathways and networks, power differentials, and the nature of Benton's organizational hierarchy and structure.

The area of study known as organizational communication is a subfield of communication studies, an academic discipline that explores human communication in different contexts. Typically, this subfield has been defined as the study of communication *in* organizations. The premise of this definition is that the organization itself is a distinct, firmly bounded entity, neatly containing people, work, technology, and

communication, among other things. Today, however, we see organizations whose boundaries are becoming more porous: the global community and marketplace are shrinking, notions of time and work are changing, and distinctions between work and home life are becoming increasingly blurred. The "new" organization can be seen as an increasingly "complex system of symbols, messages, efforts, and activities—a network of contributions from its members and from people and groups outside of its boundaries" (Cheney, Christensen, Zorn, and Ganesh 2004:8). A more interesting, and perhaps more accurate definition of this subfield, then, is that it is the study of organizations *as* communication (Deetz 2001).

Organizational communication scholarship can be categorized into three broad areas: the study of organizational environments (both internal and external), organizational structure, and organizational process (Jablin and Putnam 2001). Within these broad categories lies a wide variety of more specific topics, such as organizational change, organizational culture and socialization, globalization, leadership, communication networks, technology and technology-mediated communication, power and politics, and participation and organizational democracy, among many others (Cheney, Christensen, et al. 2004; Jablin and Putnam 2001). There are, of course, aspects of all of these topics (as well as others not listed above) that could be reviewed and discussed in relation to Benton Corporation. However, a review of literature for each topic is far beyond the scope of this thesis. Instead, I will focus on a topic area that seems most pertinent to the research site and the focus of this thesis: organizational change and change-related communication.

Indeed, a recurring theme and central topic of interest in our research was the substantial large-scale change that was taking place at Benton, both environmental and organizational. The relationship of these two very different types of changes to each other, the role of organizational culture at Benton in the promotion and management of these changes, and the impact of such changes on employees, their work, and their engagement with their material work environments will be discussed in greater detail in subsequent chapters. In this section, I will review how different scholars have studied organizational change, including the role of organizational culture in organizational change.

Organizational Communication and Organizational Change

Organizational change has become an increasingly popular topic within business and social sciences, as well as in the popular press. A typical explanation for this surge in interest is that that today's organizational environments are changing so rapidly and unpredictably that organizations must, to borrow an over-used expression, "change or die." Globalization, deregulation, expansion of markets, speed of technological innovation, and an increase in more educated and demanding consumers, are all converging on organizations and their executives, forcing them not only to become more flexible and adaptable, but to actually anticipate and predict change (Zorn, Page, & Cheney, 2000). The proliferation of management consultants and management fads claiming to teach business executives how to do this, and even to "embrace" and "organize for change," clearly indicates that many are profiting from the organizational change bandwagon.

Within the academic world, relatively few scholars specifically define organizational change. Van de Ven and Poole (1995) discuss the concept of "organizational process" in their seminal review of organizational change literature. They explain that they "refer to *process* as the progression (i.e., the order and sequence) of events in an organizational entity's existence over time. *Change,* one type of event, is an empirical observation of difference in form, quality, or state over time in an organizational entity. The *entity* may be an individual's job, a work group, an organizational strategy, a program, a product, or the overall organization," (Van de Ven and Poole, 1995: 512). Organizational change, then, takes different forms: an acquisition or merger, a crisis, such as the death of a founder, or a site move. Organizational restructuring, downsizings, or interior remodels – all changes that took place at Benton Corporation – are clear examples of organizational change.

Despite new interest in the subject, scholars have for some time sought to explain and predict organizational change. Much of the earliest work in this area focused on organizational development (OD), innovation, and innovation diffusion. However, as Zorn, Christensen, and Cheney (1999) noted these topics have been largely "supplanted by a focus on 'change,' not because such traditional studies fail to provide insight, but because of the broad rhetoric of change sweeping organizations today" (Taylor, Flanagin, Cheney and Seibold, 2001: 123). It could be argued that one of the true founding fathers of organizational change scholarship was Kurt Lewin. Lewin (1951), in his book, *Field Theory in Social Science,* developed a theory that described organizational change as a

three-stage process: unfreeze, change, and refreeze. This process underlies the construction of many current theories about change, and is still frequently cited.

Bateson (1972), and Watzlawick, Weakland, and Fisch (1974) were the first scholars to distinguish between gradual or incremental change, and drastic, radical change. Bateson made a significant distinction between these two types of changes, calling them first- and second-order changes. Greiner (1972) was possibly the first organizational scholar to draw upon the evolutionary theory of punctuated equilibrium (although he did not use that terminology) as he described the rhythms of change as being "periods of convergence marked off from periods of divergence by external jolts" (Weick and Quinn, 1999:363).

Greiner's 1972 work laid the groundwork for today's social scientists as they continue to borrow from the physical and biological sciences in developing their own theories about, and typologies of organizational change. Gersick (1991), for instance, noted that most scholarship to date was based on "traditional assumptions about how change works" (Gersick, 1991:10). She then compared different models of change that had emerged from different disciplines, and specifically focused on the evolutionary theory of punctuated equilibrium. Although others before her applied the theory of punctuated equilibrium to organizational change, Gersick's work was groundbreaking because she broke the theory down into distinct and manageable parts, and clearly articulated how and why those parts aligned with human organizations, and organizational communication and change.

In 1995, Van de Ven and Poole, also drawing on the physical and biological sciences, laid out four different theories of organizational change: life cycle, teleological, dialectical, and evolutionary. For each theory, they identified an event sequence and a generative mechanism, or motor. The life cycle theory, for example, has an event sequence of start-up, grow, harvest, terminate, and start-up. The motor is an initiating program or regulation. The evolutionary theory has an event sequence of variation, selection, retention, and variation, and the motor is competitive selection and resource scarcity.

Until very recently, most studies viewed organizational change through a "top-down," or managerial perspective. Jones, Watson, Gardner and Gallois note that "...research to date emphasized the importance of change communication by middle managers and supervising staff who have the power to influence employees' behavior" (2004: 736). It was assumed that change would be envisioned, initiated and implemented by management; the effects of the implementation on employees might be noted and analyzed, but usually only with an eye toward worker efficiency and productivity. Additionally, there was a focus on change as bounded, discrete events that are initiated, take place, and then end, and on how lower level employees reacted to and dealt with the fallout of those events.

Today, there is more emphasis on the change process, particularly on the implementation of change, the continuous, sometimes emergent, nature of change, and on multiple interpretations of change and its effects, including more attention to change discourse and communication practices throughout the entire process. However, much of

the more recent scholarship is still conducted by organization, business, and management scholars and consultants. Surprisingly, although communication problems are viewed as the most serious among change implementers (Lewis 1999), and it is recognized by most that communication is central to successful organizational change, comparatively few communication-based studies and scholarship address this topic.

According to Morgan and Sturdy (2000), most scholars tend to approach the study of organizational change from one of three perspectives: *managerialist*, *processual*, or *discourse* perspectives (Doolin, 2003). Scholars taking the managerialist approach are usually writing for executives and upper management, advising them how to engineer change effectively, and offering prescriptive techniques. Their focus is often on leadership and culture management, and they tend to assume a linear path from executives' and upper management's visions and decisions, to change outcomes. Unfortunately, these scholars also tend to ignore any complexity or ambiguity that may exist within the organization, organizational culture(s), or in the organizational change process, and do not consider multiple perspectives or interpretations.

Instead of assuming a straightforward linearity, the processual scholar will concentrate on the sometimes complicated dynamics of change: "studying *changing* instead of change," (Doolin 2003: 754). Context, both environmental and organizational, and political negotiation by organizational members is often highlighted by scholars taking a processual approach. However, despite this comparatively richer perspective, processual scholars do not question executives' and upper management's role or use of power in the organizational change process.

Researchers taking a discourse approach want to understand the ways that discourse underlies constructions and mechanisms of power and control within the organization. Discourses, in this sense, are "the way individuals explain themselves, their actions, and their organizations both to themselves and others" (Doolin 2003:754). Discourses are not just language and text-based: they can also be expressed and continually reinforced in social and material practices. Morgan and Sturdy (Doolin, 2003) identified three branches of the discourse approach: the functional, which focuses on the instrumental use of language by organizational members; the interpretive, which views language symbolically and focuses on organizational storytelling and narratives; and the critical, which is concerned mainly with power relations. In the following sections, I discuss examples of literature from each of the three perspectives just described.

The Managerialist Approach

In searching the organizational change literature, the vast majority of articles appeared to be written from the managerialist perspective, whether they were produced by scholars of communication studies, or by business, organization, or management scholars. Although those taking this perspective use a fundamentally management-centered approach, there does seem to be a range from the more extreme management perspectives, with little or no communicative content, to less extreme management biases, and more communication-based approaches and content.

The following works are communication-based, but are nonetheless prescriptive, and management- or leadership-focused. Bridges (2004), Timmerman (2003), Dutton,

Ashford, O'Neill, and Lawrence (2001), Denis, Lamothe, and Langley (2001), and Coombs and Holladay (2002), all explore organizational change through a communication-based lens. However, they are writing with the clear intent of instructing executives and management as to how to better manage the change process, and tend to ignore lower level employees' interpretations of change.

For example, Dutton, et al., explore issue "selling," or how lower levels of management attempt to draw top executives' time and attention to issues that are important to them. The authors claim that managers have implicit theories for how they go about selling their issues, which include three types of issue-selling moves and three kinds of contextual knowledge that prove critical to the success of managers' attempts to shape organizational change. Dutton, et al., interviewed directors and managers at a hospital and gathered 82 different accounts of successful, and unsuccessful attempts at selling issues to top management (vice presidents and above). The authors found that successful issues selling involved three distinct types of issues selling moves, and three types of contextual knowledge. The three issues selling moves were called packaging, involvement, and timing, and the three types of contextual knowledge were described as relational, normative, and strategic. The authors suggest that by identifying and understanding these issues selling moves and types of knowledge, top executives can cultivate an environment that stimulates management, and allows them the freedom to initiate what they call "bottom-up" organizational change.

The Processual Approach

The processual approach focuses on the dynamic and contextual nature of the entire organizational change process: attending to *changing* instead of simply change. Ancona, Goodman, and Lawrence (2001), and Nguyen (2001), explore the notion of time and organizational change. Ancona, et al., advocate the use of a temporal lens, explaining how and why it sheds new light on organizational change. The authors claim that using this lens forces scholars to use a different language, ask different questions, and use different methodological and conceptual frameworks as they study organizational change. Nguyen suggests that change implementers should acquire and display "temporal capability skills," so that they can more effectively "sequence, time, pace, and combine" different change interventions (2001: 601).

Feldman and Pentland (2003) link organizational routines to organizational change, claiming that combining ostensive (or structural), and performative aspects of routines—that is, the fact that routines are "brought to life" through specific actions, by specific people, at specific times and places—allows a consideration of routines as sources of change, as well as stability. Lewis, Hamel, and Richardson, in two different articles (2001 and 2003), examine how change is communicated to stakeholders during planned change at a nonprofit organization, developing models that predict how, and how much, change implementers communicate with stakeholders. Not surprisingly, they found that the amount of time and attention stakeholders receive is a function of how valuable they are to the organization.

Perhaps the most apt example of a processual approach is a series of articles published in Management Communication Quarterly in 2003, that traces the progress (or lack thereof) of an organizational restructuring. May, Turner, Hearn and Ninan, and Nichol and Nichol, each contribute an article to this four-part series, actually a case study of a telecom company in the Southeast, based on nine months of ethnographic research consisting of analysis of organizational documents, observations, and interviews with current and former employees. The series, written in narrative fashion, features a main character named Rachel, who is director of the leadership, training and development department at the company, and who has been charged with leading a major organizational push toward a "team-based" culture.

This series of articles is an excellent example of the processual approach: the authors write about a company's (mostly unsuccessful) attempt to reorganize as if it were happening in "real time," portraying the key players in realistic, but fully human terms so that the reader can understand each person's motivations and position. Perhaps most important, they provide in-depth, rich analysis that probes multiple angles of the attempt at organizational change: the consequences of multiple interpretations of language and central concepts, the complexities of systems of meanings, and interpersonal, group, and organizational dynamics. All of these components align with the processual approach's attention to the contextual, dynamic nature of *changing,* and the ways that members of organizations politically negotiate their way through change.

The Discourse Approach

Scholars analyzing organizational change through the discourse perspective are concerned with the way members explain themselves, their actions, and their organizations both to themselves and others. Discourse does not have to be language or text-based, which is why it is sometimes implicit: it can underlie the construction of mechanisms of control and order, and power and knowledge relations. The discourse approach can be divided into three distinct branches: functional, interpretive, and critical. The functional perspective is a branch of the discourse approach that focuses on the instrumental use of language by management, or employees of an organization.

Chreim (2002), for example, argues that organizational change involves shifts in organizational member identification, from identification with the aspects of the "old" organization pre-change, to management-induced dis-identification with the "old" organization, and re-identification with aspects of the "new" organization, post-change. The central focus of the article is on the use of language to influence the dis-identification and re-identification processes. Chreim claims that the language used during these processes establishes confluence, or maintains some sort of consistency throughout the process of organizational change and making it easier for employees to accept. To illustrate this instrumental use of language, Chreim uses two internal publications that were distributed within the Bank of Montreal and the Royal Bank of Canada as the two banks underwent major organizational restructuring.

The second branch within the discourse approach is the interpretive perspective. Scholars using this perspective also attend to language, but are concerned more with

organizational stories and narratives, and the ways those stories and narratives reflect members' co-constructed realities. Milligan (2003), Doolin (2003), and Heracleous and Barrett (2001), all provide an in-depth look at language as it is used in stories or narratives, and attempt to understand members' different interpretations of, and perspectives on their social and work worlds.

Milligan (2003) provides a good example of this approach in her article about organizational site moves. She claims that when employees are particularly attached to an organizational site, they may consider a site move a form of organizational death. Further, she argues that organizational change of any kind can involve feelings of loss, and that studies of organizations in general should include space. Milligan supports her arguments with ethnographic research conducted at a coffee house that moved to another location, and suggests that ignoring or minimizing employees' feelings of loss can result in a less-than successful site move and even be detrimental to the long-term viability of the organization itself.

A third branch of the discourse approach is the critical perspective. Unlike the functional and interpretive perspectives, scholars who analyze organizational change through this perspective are concerned not only with language, but also issues of power.. Many attempt to reveal and deconstruct usually implicit organizational discourse that may establish, and reinforce the idea that employees are relatively powerless subjects. Conrad (2003), Kuhn and Ashcraft (2003), and Pierce and Dougherty (2002) all examine forms of organizational discourse in an attempt to reveal sometimes hidden assumptions, and constructs of power.

Pierce and Dougherty (2002), for instance, explore issues of power and domination through a corporate acquisition, a type of organizational change. Specifically, they analyze the acquisition of Ozark Airlines by TWA, an acquisition that actually occurred thirteen years prior to the start of their research. The authors used archival research (analysis of court documents and newsletters), in-depth interviews with pilots from both TWA and Ozark, and a conceptual framework drawing on the concepts of resources, hegemony, and resistance. Through these research methods and their conceptual framework, they revealed how power and domination were constructed, enacted, and maintained through communication practices.

The authors of the final article in this section attempt to represent all three branches of the discourse approach. Zorn, Page and Cheney (2000) use a case study of the business services department of a large local-government organization in New Zealand to explore how management's use of current popular press management discourse, including terms like teamwork, customer service, quality/excellence, and now, even change, affects a major organizational restructuring. The authors borrow from Trujillo (1992) and analyze the data from their case study through three perspectives: the functional, the romantic, and the critical. For each perspective, they identify and examine motives, standards of evaluation, metaphors, key practices, and outcomes from the case study.

Ultimately the restructuring was not entirely successful. Zorn, Page, and Cheney analyze the same event through three very different perspectives to make the point that current popular press management discourse with its value-laden terms is ambiguous

enough that management and employees can define, interpret, and act on it in very different, sometimes conflicting ways. Additionally, the authors claim that the term change itself is becoming a part of that discourse. The notion that organizations must learn to "organize for continuous change," is pervasive, and the pressure on upper management to do so can create an atmosphere called "discursive closure" in which "change" becomes the justification for any and all practices, and any disagreements about such practices are summarily dismissed as being "against growth, against change" (2000:517).

Implications for Understanding Benton

As conceptual interpretations of organizational communication have shifted from that of communication *in* organizations, to organizations *as* communication, scholars have begun approaching topics from new perspectives. For example, more of the research coming out of this area now focuses on different, sometimes surprising forms of organizational communication, communication systems, networks, and pathways, and different voices, from both within, and outside of organizations. Organizational change is one topic in particular where these new perspectives shed light not only on organizational communication efforts associated with change, but also on impacts of such efforts and of the change itself on the interactions and activities of members from different levels of the organization.

These new interpretations and perspectives become especially instructive as I explore the effects of change on different groups of employees at Benton Corporation in upcoming chapters of this thesis. Throughout our work at Benton, where different types

and stages of organizational change were occurring, we looked for the ways organizational change was framed and communicated to different members of the organization in different ways. Was change being conceptualized by upper management directively, as discrete events, or as participatory, longer-term processes? Were members of upper management sending messages, either explicit or implied, suggesting that there were desired behavioral outcomes tied to changes that were being made both to the organizational structure, and to the material work environment? What were the effects of these messages? These types of questions, among others, informed our research, and will be addressed in following chapters of this thesis.

Work Practices and Activity

Work practices are often taken for granted and almost certainly underestimated, by organization researchers, designers, upper management, facilities managers, and sometimes even by the very people who are themselves engaged in that work. However, work is intertwined with many other aspects of organizational life, such as organizational culture, communication, access to and use of technology, information and knowledge sharing, organizational structure, power hierarchies, and the material work environment itself. Knowledge of the details of employees' work practices and activities is necessary in order to understand the complexity of organizations.

One of the first studies of organizations and work occurred in 1932, when Australian psychiatrist Elton Mayo hired W. Lloyd Warner, an anthropologist, to design and conduct the final stages of the now well-known Hawthorne Studies. The idea behind the Hawthorne Studies, a joint research project between the Harvard Committee on

Industrial Physiology and the Western Electric Company's Hawthorne Works, was to study the connection between working conditions and worker productivity (Roethlisberger and Dickson 1939). Warner observed employees working in the Bank Wiring Room at Hawthorne Works in Chicago, recording their interactions with each other while they performed their work.

In many ways, the Hawthorne Studies proved to be seminal in the development of the academic discipline of business anthropology, (then known as industrial anthropology), and the study of work. First, it marked the first time that qualitative research was conducted focusing on informal social relations within a work organization, and, while not focusing precisely on work practices and the built work environment, was quite possibly the first study to consider the impact of working conditions on worker productivity (Jordan 2003). Second, the findings were seen as important and surprising in that they showed that industrial productivity was so heavily influenced by the workers themselves, particularly as they interacted with each other, and worked together within informally organized social groups (Baba 2006). Third, the research and findings that came out of the Hawthorne Studies led to the founding of the Human Relations School (Baba 1986; Baba 2006; Jordan 2003). This school of thought held that understanding the informal (and often invisible), human relations or structures within organizations was critically important in understanding the organization itself (Jordan 2003).

The Human Relations approach to the study of organizations and work activity would remain firmly entrenched for the next 20 years, and was a response to Scientific Management, the perspective that had dominated prior to that time. Scientific

management, or "Taylorism," (so named for Frederick Taylor who developed this concept), advocated that work processes and activities be "scientifically" designed and managed, and saw the individual worker as rational and purely economically-driven: or, as the so-called "economic man." The Human Relations perspective, in contrast, for the first time took into account the role of humans and informal human organization on effectiveness and productivity within work organizations (Baba 2006). Theoretically, Human Relations was based on a form of functionalism called functional equilibrium theory. This theoretical perspective holds that, not only do all social phenomena within organizations serve a specific purpose in the smooth operation of the organization, they also should operate in harmony, to maintain a sort of equilibrium. If there is social unrest or conflict, the organization falls into "disequilibrium," which negatively impacts productivity (Baba 1986; Jordan 2003).

During the 1940s and 1950s, while Human Relations and functional equilibrium were certainly the dominant theoretical approaches to the study of organizations and work, there were three notable contributions to this field. The first was interaction analysis, a way to capture, measure, and analyze interactions between humans, and between humans and their environment, developed by anthropologists Chapple and Arensberg (Baba 1986:5). After recording certain types of business interactions, such as those of sales persons, or between employees and supervisors, using interaction analysis, researchers could break those interactions down into components, and find and analyze speech patterns. A second contribution during this period, one still in use today, was industrial ethnography, the products of which were usually case studies, which captured

and offered insight into cultures existing within a single industrial organization, or within entire industries (Baba 1986:6). The third contribution was the birth of the first anthropological consulting firm, Social Research Incorporated, started by W. Lloyd Warner and B.B. Gardner. The two anthropologists started their business with the goal of working with business organizations to "solve human problems, especially those problems related to external corporate relations, social change, and internal organization" (Baba 1986:6).

While certainly an improvement over scientific management, which considered individual workers to be cogs in a machine and work processes best scientifically micro-managed, the human relations approach nonetheless considered employee behavior that deviated in any way from management plans or expectations to be pathological, and something to be corrected, because this kind of behavior and activity upset the necessary equilibrium of the organization. With this focus on ideal and smoothly integrated social workings within organizations, the human relations approach did not account for notions of power or power differentials, or conflict, dissent, or resistance among employees. Nor did human relations acknowledge the existence and effects of any phenomena external to the organization (Baba 2006; Jordan 2003). Indeed, as labor unions became more active and more important in American industry, proponents of the human relations school were accused of being management-centric and of ignoring the working-class and labor unions entirely, and this approach to the study of organizations eventually fell out of favor (Baba 1986; 2006). However, the idea that organizations have both formal and informal structures, and that studying unwritten rules for patterns of behavior can provide a richer

understanding of the organization as a whole, remain important ideas in organization research today.

There are several different ways that scholars gain access to, and conduct research on work practices and activity within organizations. Some work within academia, perhaps funded in part by grant money and partnering with individual organizations on joint research projects. Others may work on a contractual basis for organizations as consultants or advisors, while still others are employed directly by organizations as in-house anthropologists or ethnographers. The work these anthropologists perform may be externally-focused, such as working on product design, or conducting consumer and marketplace research. Or, it may be internally-focused, working with management either on longer-term strategic initiatives such as the design and implementation of new corporate structures and work processes, or, advising on shorter-term day-to-day workplace operations.

This section focuses on literature that falls into the latter category, one that aligns with a domain that Marietta Baba identified as "organizational behavior and management" (2006). While I group these anthropologists together for the sake of this discussion, in fact, their work is quite diverse, and overlaps in some cases with the work of anthropologists who work in the field of design, a second category that Baba identified as "ethnographically-informed design" (2006). An apt representative of this overlap is Lucy Suchman, an anthropologist hired in the late 1970s by Xerox's research arm, the Palo Alto Research Center, or PARC. While Suchman is well-known for her part in work that resulted in the green "start" button on Xerox copy machines, she actually began

her career at PARC as a graduate student, with more of an interest in work practices. As her work developed, she moved to the study of human-machine interaction, conducting research on how people worked, often together, to use complicated technology (Baba 2006; Jordan 2003). Her book, *Plans and Situated Actions: The Problem of Human-Machine Interaction,* acknowledges the role and the importance of context in work practices, and specifically in problem-solving related to office machines. She compared employees' actual problem-solving activities with machines' automated "help" responses, showing how human problem-solving responses were situationally-based, and depended in large part on what actions had been taken immediately prior (Baba 2006; Jordan 2003). Her work was ground-breaking, and eventually led to the design of improved automated help systems.

Suchman's colleague at PARC, Julian Orr, also focused on work practices within organizations, observing and interviewing copy repair technicians as they performed their work, problem-solving out in the field (Orr 1996). He found that the technicians, instead of trying to use largely inadequate company-produced manuals, worked together, recounting to each other tales of successful resolution of related past problems. Even as they were effectively creating a collective oral repair manual that was continually passed on to fellow technicians, when asked later how they had solved these problems, none of them reported, or seemed to remember these collaborative interactions. Orr's work points to one of the distinctive and important benefits of ethnographic fieldwork methods in the study of work in organizations: direct observation of work performance can yield a

far more accurate picture of how work actually gets done, when compared to after-the-fact interviews or surveys which rely on self-reporting.

The work of Suchman and Orr at PARC is often recognized as some of the first real forays of anthropologists into the world of work organizations (Wasson 2006). Other early pioneers in business ethnography were among the first to look deeply into seemingly ordinary phenomena within organizations, "making the familiar strange" (Geertz 1973), by deconstructing socially constructed corporate activities such as meetings (Schwartzman 1989), identifying and analyzing multiple sub-cultures within high-tech organizations (Gregory 1983), exposing different notions of time within biotech corporations (Dubinskas 1988), or examining the influence (and implications) of technological advances on CT scanners' work (Barley 1986).

A number of scholars, the majority of whom here are anthropologists, have focused more exclusively on the nature of work, both within and outside of organizations. Some emphasize the broader and changing contours of work, viewing it as situated within larger economic, regional, technological, or even household and familial contexts. Others focus on the more concrete, tangible aspects of work itself, focusing on specific occupations and work practices. Some researchers, of course, combine these two perspectives, moving from in-depth analysis of peripheral forces and larger contexts, to the effects of those forces and contexts on work and workers. For example, Casey (1995) begins her book by examining how and why work has changed, and how those changes have affected society, work and management, and worker identity, and then moves to an in-depth ethnographic study of an organization where these changes are playing out

through a real company, and real employees. She includes in her study a rather critical look at management's design and imposition of a family-like corporate culture, and the varying ways employees responded.

Darrah (2001), Darrah, Freeman and English-Lueck (2007), and English-Lueck (2002), all look at work in context, and how it is shaped by, and itself shapes, a particular place and its residents. Over the course of the last decade, these anthropologists have studied workers and their families in the Silicon Valley region of Northern California, a place where high-tech companies abound, cutting edge technologies are highly-valued status symbols, and the people who create those technologies are accorded rock star status. Here, the very notion of work is in flux. For many working in the Silicon Valley, for example, ideas about time have shifted: it becomes less an impediment and more a tool that can be manipulated. New technologies allow more activities to be compressed within small amounts of time, and for employees of multinational firms who work in global teams, time zones no longer matter. In addition, as people and resources from all over the world move in and out of the region, cultural and ethnic differences blur, changing the landscape both within and outside of organizations, fostering new social mechanisms and forms of community.

Some scholars, however, have focused more specifically on work practices within certain industries and occupations. Barley (1986; 1996), for example, is well-known in organization studies for conducting in-depth ethnographic research that captures the details of work, and specifically, technical work. Perhaps one of the first organization researchers to advocate capturing this level of detail about this specific occupation, he

argues that only by truly understanding the work practices of technicians, can organizations hope to successfully make the internal structural changes necessary to adapt to a world of work that will soon be dominated by technology, and the people who work with technology. Barley built on this line of research in editing a volume of essays written about technical work (Barley and Orr 1997), and, more recently, producing an ethnography about temporary contract workers in the high-tech industry (Barley and Kunda 2004).

Vinck (2003) focuses on the work practices of engineers, editing a volume of essays written by authors trained in both engineering and social science who use ethnographic methods to study how engineers engage in every facet of their everyday work: from initial brainstorming and innovation, to drafting prototypes and creating products, to the technical writing of orders of operations and manuals. Vinck writes that the main impetus for this book was the hope that it would aid future engineers in understanding what their everyday work would look like. Darrah (1996) conducted ethnographic research about learning and skills acquisition in context at two different manufacturing companies. He describes how workers at both companies learn how to perform their jobs while on the job, again, through their social networks and ties with coworkers, and often under the radar of company-sanctioned training and established procedures.

Recurring themes that run throughout these studies are that work and work practices are best understood in context, and that learning at work is socially situated, and socially constructed. These ideas were introduced in the late 1980s by Jean Lave and

Etienne Wenger (1991) at the Institute for Research on Learning (IRL), a non-profit research firm and think tank whose goal was to support learning through research and improved understanding of learning processes. Researchers at IRL, (most of whom were anthropologists or social scientists whose theoretical and methodological approaches were informed by anthropology), focused on social environments, including workplaces, where learning typically takes place. Lave and Wenger questioned the simple information-transfer model of learning, in which the learner passively receives knowledge from an instructor, and postulated that learning, particularly at work, is inherently participatory and social. Lave and Wenger introduced the concept of Communities of Practice (CoP), or social groups where learning and work take place. Communities of Practice were certainly in evidence in the studies of how technical workers learned and worked that were described above (Barley 1986; Barley and Kunda 2004; Barley and Orr 1997; Darrah 1996).

Ethnographically-Informed Design

Anthropological studies of work and the field of design intersect in the domain of ethnographically-informed design (Baba 2006). In this domain, business anthropologists work, usually in interdisciplinary teams, alongside designers, collaborating not only on the design of products, but also the design of services, and systems, including work processes (Baba 2006). The hiring of Lucy Suchman at Xerox PARC and her work on the design of the green start button is often referred to as the birth of ethnographically-informed design (Wasson 2000:381). Suchman was the pioneering member of a larger group of anthropologists who eventually came together as the Work Practice and

Technology group at PARC. Other members of this group included Julian Orr, Jeanette Blomberg, and Randy Trigg. Together, they developed an approach to design which involved moving continuously between ethnographic workplace and user studies, and the actual design process. The researchers at PARC used video cameras to record activity and user interactions as part of their ethnographic research methods (Baba 2006; Blomberg, et al. 2003).

The Work Practice and Technology group at PARC grew, as did their reputation, and eventually was asked to collaborate with the Doblin firm, a design and strategy consulting firm, on a project to research the future of work and workplaces for Steelcase, the office furniture manufacturer. During the work for this project, Rick Robinson, then the head of research at Doblin, was first exposed to, and then enthusiastically embraced the idea of using ethnographic methods as part of the design process. Robinson capitalized on this idea and co-founded E Lab, a design firm eventually hired Christina Wasson, another now well-known anthropologist working in the field of user-centered design (Baba 2006).

One of the many advantages of combining ethnographic research methods with the field of design is that researchers can engage with and observe users (or consumers) and their activities in context, or in the environments where they actually use the technologies or products of interest. This is dramatically different from relying on after-the-fact self-reporting on work practices, product-use, or even shopping behavior (such as filling out questionnaires or surveys, or using focus groups). An example of this is Susan Squires' work for a company that wanted to move into the development of new breakfast

foods. She used a video camera to observe and record a family and their activities in their home during a busy morning. Her analysis led to the discovery that breakfast was either eaten on the run, or not at all, and a new product called "Go Gurt" was developed (Squires and Byrne 2002).

In addition to consumer product design, anthropologists working in the area of ethnographically-informed design often collaborate with the designers of technology, particularly technology for use in the workplace. In so doing, some also work on designing work systems that rely on that technology. In the design of such technologies, attention to work practices and the organization of work where the technology will be used is a critical component of the participatory design process. Blomberg, Trigg, and Suchman (1996), for example, conducted an ethnographic study of a Silicon Valley law firm. In analyzing what was commonly thought of as a single work task, referred to as "document coding," at the firm, they actually identified several very different kinds of work involved with this task, including activities such as search, retrieval and coding of legal documents. The findings from their study were used to inform the development of new image-scanning and analysis technology.

Bonnie Nardi conducted ethnographic research aimed at understanding how people actually use spreadsheet software. She found that, despite designers' intentions, the use of spreadsheet software within the context of work was highly interactive: users shared spreadsheets, working on discrete parts of them, and then passing them along to a coworker. Each person tended to have her particular area of expertise within the software itself, such as the use of graphics capabilities, or macros. Her work contributed to the

design of improved spreadsheet software (Jordan 2003). Nardi extended her work understanding technology-use, to the access and use of information within organizations, noting that different people find and make use of information in different ways. She studied the use of information and information technologies, coining the term "information ecologies" to explain the benefits of embedding information in a richly varied environment (or, a "healthy ecology") that includes people and physical resources – there are then multiple ways that different people can find, access, and use the different types of information they need (Nardi and O'Day 1999).

In the late 1990s, Nardi and a number of other scholars working in this domain published work that recognized and analyzed the implications of invisible aspects of work (Nardi 1999; Sachs 1995; Star and Bowker 1995). Nardi (1999) described how organizations typically do not recognize invisible work when designing or redesigning work systems. She identified four types of invisible work: (1) work that is performed "behind the scenes," such as the reference work that librarians perform, (2) work that is performed by invisible people, such as housekeepers or janitors, (3) everyday problem-solving that is performed in the process of work that is commonly thought of as manual or routine, and (4) informal or unofficial work, such as spontaneous meetings, gossip, and storytelling (Nardi1999). These examples of work may not be visible, but their performance is what drives the organization and actually facilitates the performance of visible work. In addition, when this type of work is not recognized during the design or redesign of work systems, it may be unintentionally eliminated entirely by upper management, simply because they are not aware of it.

Sachs (1995), in describing her experiences as a consultant assisting organizations with work systems re-design, provides a revealing summary of two contrasting views of work and of work systems: one from the perspective of the organization, and the other from her perspective, what she calls the "Work/Activity View." For example, the assumption about work in the organization's view is that "people produce human error," while from the work/activity view, "people discover problems and solve them" (Sachs 1995:43). Another organizational assumption is that "social interaction is nonproductive," while from the work/activity perspective, "communities are funds of knowledge" (Sachs 1995: 43). In identifying these two contrasting views of what work is Sachs, like Nardi, shows how capturing and understanding actual work practices can reveal invisible work, so that the design or redesign of work systems can, in fact account for *all* of the work being performed within the organization.

Implications for Understanding Benton

Because the performance of work is interconnected with many different aspects of organizational life, knowledge of members' work practices can provide researchers with understanding and insight into an organization's structure and hierarchy, the nature and distribution of knowledge-sharing, information, and communication networks, and the access and use of technology. As I will demonstrate in following chapters of this thesis, these organizational properties—all of them inherently social—together inform the ways in which members perceive, understand, and interact with the organization, their work, and their material work environments.

Materiality, Built Environments and Anthropology

Before moving to a discussion of the study of humans and built environments, the concept of materiality itself must be addressed. As can be seen in the previous sections of this chapter, rarely do business anthropologists or organizational communication scholars consider material aspects of organizations and work in their research. Except for the occasional workplace study, or research on the use of technology either in the workplace or in workplace communication, most of these scholars tend to view organizations as abstractions, and members of organizations as disembodied, or separate from their existence as physical beings working in, and interacting with their material environments. The conceptual stepping-stone between the abstracted, or social organization and the physical organization is the notion of materiality.

Materiality

There has always been a sense of contradiction, even a degree of tension in the way humans regard and relate to their material worlds. As Miller (2005) notes, some of this tension can be traced back to major religions such as Buddhism and Hinduism, which call for believers to resist the seduction of material goods and wealth, because they are, in fact, illusion, hiding the "real," more permanent truth. True wisdom comes out of understanding the illusory nature of the material world, and the ability to transcend it, thereby attaining enlightenment. Interestingly, as Miller (2005) also points out, these same religions find expression through material objects, such as elaborate temples and statuary, offerings, and ritual clothing, for example. In fact, for most of us, the material is so deeply embedded into the fabric of our spiritual, ideational, and social worlds that it is

almost taken for granted. And yet it is not uncommon to see the human and the material expressed as a duality, often in the form of "subject and object" for example (Miller 2005:3). Dale (2005) provides an example of how this duality plays out in academia, as she describes how the social sciences in general either take materiality for granted or ignore it entirely: the material world is instead considered appropriate for study only in the "natural" or "physical" sciences (Dale 2005:652).

Within anthropology, however, there has been renewed interest in materiality. In particular, in the subfield of material culture studies, scholars such as Arjun Appadurai and Daniel Miller have been exploring how the material, the social, the ideational, and the cultural are deeply intertwined. For example, Appadurai (1986) explores commodities and what actually determines their value. He questions the traditional economics of commodities and their exchange, i.e., that commodities are "value-free," that markets are neutral, and that a commodity's worth is simply whatever it cost in labor to produce it. Instead, Appadurai postulates that, far from being value-free, commodities are value-laden, and that value is socially and culturally—and economically—constructed. Value is determined rather subjectively, and those determinations are grounded in cultural rules and criteria. In addition, Appadurai claims that objects have a history of exchange, or a lifecycle, and one can trace the different meanings it acquires as it moves through commodification processes.

Miller (2005) recognizes humans' conflicted relationship with the material world we simultaneously want to engage with the material and transcend it—and looks deeply into that relationship. In so doing, he urges readers and colleagues to move away from

understanding the material and the human as a simple duality, one that, like Dale (2005) acknowledged, usually privileges the human. Perhaps in response to Appadurai, who regards material objects as free agents that are reflective of the social and cultural, and which have their own life cycle, Miller (1987, 2005) argues that not only do material objects reflect the social and the cultural, but they actually constitute the social and the cultural.

However, as Dale (2005) points out, it is difficult to apply either Appadurai's or Miller's ideas about materiality to organizations. First, although both scholars acknowledge that material objects are deeply woven into the fabric of larger social and cultural contexts, they both nonetheless conceptualize materiality as composed of separate, distinct objects. Dale argues that materiality is more than "things," it is an entire realm that encompasses and "is imbued with culture, language, imagination, memory; it cannot be reduced to mere object or objectivity" (2005:652). Perhaps most important, Dale (2005) posits that as humans, we are actually part of the material world and we engage in a fluid, two-way relationship with it: we shape the material in assigning and enacting the social and cultural to and through it, and the material, in turn, shapes us. Rapoport's (2005) conceptualization of built environments echoes Dale's interpretation of materiality: we engage in a dynamic, two-way relationship with our built environments: we shape and are shaped by them. He is more precise, however, in describing exactly how this relationship operates, which will be discussed in following chapters.

Another problem Dale (2005) identifies, particularly in applying Appaduari's work to organizations, is in his exclusive focus on consumerism and the exchange of material objects, whether as gifts or commodities. This emphasis on exchange and consumerism, which would not seem to apply to all material objects, also implies that humans always have a choice (as in consumer choice) in how they relate to these material objects. This certainly does not hold true in organizations, where choices that employees make about material objects and their material worlds, if indeed they are allowed any, are framed, if not entirely regulated by the organization.

In her discussion of how the human—specifically, the social—and the material are intertwined, Dale (2005) identifies periods of change as occasions when the nature of this fluid integration is revealed most clearly, and offers up the metaphor of a river and its banks to explain this idea. A river is typically described as an active and powerful force that acts upon the riverbank, while the riverbank is described as rather fixed and passive. However, not only are the material composition of the landscape, the river bottom and its banks important in determining the action and course of the river, but Dale reminds us that the river also acts in league with the river bottom and banks, picking up rocks of all sizes and carrying them along, which also affects its course. The river, then, can also be considered a suspension of rocks and water, acting together to change the landscape, the path and the form (as in oxbow lakes, for example) of the river itself. Dale notes that even with the use of scientific modeling, rivers and their courses remain largely unpredictable (2005:654-655).

This metaphor works in two ways. First, it dispels the idea of the human (or social) and the material as a duality: the material, in this case the riverbank and the river bottom, is not fixed, passive, or inert, and the river itself is not the only active force. Second, it shows how it is through change itself that we are able to see the details of how the river (the human, or the social) and the riverbank (the material) interact. In the same way, I will show in upcoming chapters that looking at Benton Corporation through the lens of organizational and environmental change reveals the nature and details of employees' perceptions of and interactions with their built work environments.

Built Environments and Anthropology

In general, anthropologists make a distinction between material culture and the built environment. Material culture refers to objects or artifacts that are moveable, while the phrase "built environment" refers to the more stationary "...products of human building activity. It refers in the broadest sense to any physical alteration of the natural environment, from hearths to cities, through construction by humans" (Lawrence and Low, 1990: 454-455). Built environments include not only buildings, but also rooms and interiors within buildings, shrines or temples, and defined, but not necessarily enclosed spaces (such as streets or plazas) (Lawrence and Low 1990:454).

The first anthropologists exploring the built environment did so only as it fit into the broader cultural milieu under consideration: the built environment was just one cultural product among many, and was believed to "mirror the cultures that produced them" (Lawrence and Low 1990:456). Published in the late 19th and early 20th centuries, these studies reflected the dominant theoretical perspectives at the time, (mainly

evolutionary and functional perspectives), and focused largely on ritual and house form, particular construction techniques and materials, and the role of the built environment in maintaining the society as a whole (Lawrence and Low 1990).

More recently, anthropological approaches to the study of humans and built environments have varied in their focus rather widely, ranging from the fairly broad view to the more granular: from explorations of the roles of history, society, institutions, and power on built environments and our relationships with them, to studies of meanings of built environments, to how individual perception and behavior is affected by and reflected in built environments and space. Regardless of the approach or the width of the lens, however, most scholars studying the built environment are exploring the question of how humans collectively and individually produce and shape, and are *re*produced and shaped *by* built environments.

For example, Foucault's (1975) well-known book *Discipline and Punish: The Birth of the Prison*, serves as a classic, but apt example of one of the broader studies that explores the impact of social forces and processes on built environments, and of built environments' reproduction of those social forces and processes. Foucault (1975) uses the prison as an example of the built environment as political tool, or "technology," that is used in creating "a docile body that may be subjected, used, transformed, and improved" (Lawrence and Low 1990). Foucault uses Jeremy Bentham's 1787 panopticon as a specific example of this type of technology, as its design ensured that the inmates living in it could not ever see the warden, and so would never know when they were being watched. Because of this, the inmates were compelled to behave as if they

were being watched at all times, thus becoming self-policing. Foucault extends this example to other built environments (most notably to factories), showing how built environments can act in concert with social and institutional forces to enforce power differentials among groups of people.

In addition to factories, Foucault's prison and the panopticon can also be extended to white-collar organizations. In fact, Dale (2005) cites Foucault in her discussion of organizations and power, noting that open work environments, as they work in tandem with organizational values, policies, and politics, also facilitate self- or peer-policing, in the way they reduce or eliminate employees' personal space and privacy. Without the shelter of an enclosed cubicle or full office, employees in open work environments are not only exposed to the constant gaze of their supervisors, but also of their colleagues, and are essentially compelled to at least appear to be working all the time. Dale notes, however, that there is some disagreement among scholars about the degree to which organizations can be considered true institutions, and thus about the true applicability of Foucault's prison and the panopticon to white-collar organizations and the built work environment (Dale 2005:663).

Another example of a rather wide-angled perspective on social processes and built environments is Giddens' (1984) theory of structuration. Rather than specifically focusing on built forms, however, Giddens' theory addresses the larger roles of space and time in social behavior, and how rules for social behavior are continually produced and reproduced within spatial and temporal contexts. Specifically, based on the premise that social interaction of any kind takes place in space and time, Giddens posits that "locales,"

or settings, create the context for, and inform the nature of everyday social interactions. These locales are "collections of conditions that both enable and constrain action possibilities...can vary greatly, and can span both space and time" (Fitzpatrick, Tolone, and Kaplan 1995:9). Locales can be an actual physical setting, such as a conference room or office, or they can simply be associated with specific activities and can be virtual, such as online bulletin boards, or videoconferences.

Everyday interactions that take place within the context of locales, according to Giddens, are learned and become ingrained and taken for granted through socialization: they make up the fabric of the social world, of social action, and of social change. Socialization then can be a form of social reproduction, because it is a process that simultaneously shapes both the individual and, through everyday, learned social interactions, larger social structures. Giddens calls this process structuration. Through his identification of locales and their integral role in the process of structuration, Giddens suggests here that space may operate implicitly in facilitating the production and reproduction of social worlds and social action and change, even within organizations.

In fact, the concept of locales plays an important role in the anthropological study of space and place. As they have with material culture studies, anthropologists have shown renewed interest in aspects of space and place, an area that had previously suffered from some neglect. Scholars such as Low and Lawrence-Zuniga (2003) have been increasingly focusing on the spatial aspects of culture, (rather than merely touching on those aspects as general background information in their descriptions of groups of

people), noting that "all behavior is located in and constructed of space" (Low and Lawrence-Zuniga 2003:1).

This new interest in space and place has stimulated discussion about the distinctions between space, landscape, and place, and has introduced new perspectives on the concept of locales in ethnographic research and writings. For example, Hirsch (1995) develops a new conceptualization of "landscape," one that recognizes its common use in anthropology as an "objective" framing device that effectively situates a group of people, while also recognizing that landscape includes the "subjective" or the meanings that those same people assign to their environments. Hirsch posits that these two ways of understanding landscape exist in tension: that the objective can be seen as the "foreground," or real, everyday ordinary life, which is set against the subjective "background," or the idealized and imagined. Hirsch expands on this tension, explaining that "...landscape's foreground actuality is to background potentiality, as place is to space, inside is to outside, and image is to representation" (Hirsch 1995:4). In extending this notion of landscape cross-culturally, Hirsh describes how people look to the imagined or background potentiality as they face everyday life. Hirsch's conceptualization of landscape is important because it distinguishes between place and space, and links people with their physical environments by providing a mechanism through which people assign meaning to those environments.

Low and Lawrence-Zuniga (2003) also discuss distinctions between space and place, describing built environments as "inscribed spaces," or spaces on which humans have "written" their presence, or assigned meaning. The metaphor also describes how

anthropologists themselves produce written texts, or ethnographies, that explore not only the relationships participants have with their built environments, but also their own role in the study of those relationships. When people attach meaning to space, or "inscribe" those spaces, and when those spaces become embedded with experiences, "space" becomes "place" (Low and Lawrence-Zuniga 2003:13).

Rodman (1992) goes further, and suggests that anthropologists begin to move away from the relatively simple conceptions of place as locales, or settings within which social interactions occur, to understanding place in the same way they understand the concept of voice. "Places," Rodman argues, "have multiple meanings that are constructed socially. The physical, emotional, and experiential realities places hold for their inhabitants at particular times, need to be understood apart form their creation as the locales of ethnography" (1992: 205). Further, she states, "It is time to recognize that places, like voices, are local and multiple. For each inhabitant, a place has a unique reality, one in which meaning is shared with other people and places," culturally and historically (Rodman 1992:208). It should be noted that Rodman emphasizes that places are "culturally and socially constructed in practice" (Rodman 1992:207). The premise of this thesis echoes Rodman's argument here: employees at Benton Corporation each understand and engage with "places," or their built work environments, differently, at different times, through different practices. Thus, the socially and culturally constructed built work environments at Benton exist as different realities for different people, apart from their existence as conceived by designers.

As these anthropological perspectives suggest, space, place, and by extension, built environments are constructed socially, culturally, experientially, and, through actual practice. These constructions develop, evolve, and are negotiated as people imbue space, place, and built environments with meaning, and, in turn, built environments become "...expression(s) of culturally shared mental structures and processes" (Lawrence and Low 1990:466). Different scholars have worked to articulate and understand the nature of these meanings, as well as how built environments express or communicate meanings at different levels, to different people, taking what Lawrence and Low call a "symbolic approach" to the study of built environments (1990:466).

Some who take this approach view built environments as actively representing and communicating ideal social or political structures, through certain characteristics, or relationships between characteristics of built forms, site plans, or the geographical arrangement of settlements or towns. Obvious examples of this in a work environment would be the characteristics of offices and seating arrangements within an organization: executives work in large, fully enclosed offices with high quality furniture, while administrative assistants work out in the open, in the middle of the office floor in small, partially enclosed work areas with little or no furniture. Executives' offices and administrative assistants' work areas represent and communicate their status in the organization to their colleagues and to visitors. The overall arrangement of the office represents the mental map that employees have of the hierarchy of the organization. Instigation of large-scale social or political change become occasions for the

manipulation of these meanings, and scholars who take this approach often examine how meanings are manipulated to represent or communicate "new" values or status relations.

Other scholars find that built environments, among the many different tangible manifestations of social and cultural life, represent collective unconscious mental structures, an approach called "structuralism" (Lawrence and Low 1990: 467). Levi-Strauss (1963) is likely the most well-known of structuralism's advocates. In addition to incorporating linguistic theory into his work, he also characterized the collective mental structures of the groups he studied as consisting of a number of dualisms, such as "...periphery/center, married/unmarried, cooked/raw..." which were then represented in their built environments and other social and cultural attributes (Lawrence and Low 1990:468).

Both of the symbolic approaches just described have been criticized either for taking an entirely synchronic approach to the study of cultural and social groups and their relationships with their built environments (as with structuralism), or for attributing characteristics of built environments only to underlying human unconscious mental processes, without recognizing the role of experience, action, or practice. Levi-Strauss has also been criticized for relying so heavily on dualisms, in his binary oppositions for his analysis, a device that some claim imposes his own contrived order on ethnographic data (Lawrence and Low 1990).

It should be noted, however, that Bourdieu's concept of *habitus* addresses most of these critiques, and lays the groundwork for later scholars such as Giddens and his theory of structuration. *Habitus* is a rather complex concept that can be described as

"...unspoken shared understanding and physical perception" (Wilk 2001:115), or a system of dispositions that is generated, and regenerated (sometimes unknowingly) through social interaction and practice (King 2000; Lawrence and Low 1990). Bourdieu calls those practices "praxis, the improvisational and pragmatic action of everyday life faced with constant problem solving" (Wilk 2001:116).

The concept of *habitus* is important here not only because Bourdieu links social interaction and praxis with the production and reproduction of social structure (before Giddens and his theory of structuration) but because he includes spatial dimensions and built environments in his description of *habitus* and how it operates. Using the Kabyle (an Algerian ethnic group) house as an example, Bourdieu shows how inhabitants' behavior patterns and social structure are not simply the result of unconscious mental processes, but are learned through social interaction, practice, and spatial cues within the home, which is considered a metaphor for the organization of the universe (Lawrence and Low 1990: 470). While Bourdieu focuses on the Kabyle home, his ideas—particularly his ideas about social interaction, praxis, and the production and reproduction of social structure—can be applied to other groups and types of built environments, such as organizations and built work environments.

Implications for Understanding Benton

The study of material culture and built environments had, until relatively recently, either been neglected entirely, or relegated to general background information for ethnographic research focusing on other topics. Anthropologists have shown renewed interest in these areas, however, moving away from dualistic notions of the human/social

and the material, and toward more fluid, dynamic and interactive characterizations of the relationships between people and the material world. The idea that humans influence, and are influenced by their material worlds is fundamental to anthropological perspectives about built environments, both classic and modern. In addition, anthropologists have studied how different people assign different meanings to their built environments, based on conscious and unconscious processes, social, cultural, and political contexts and interactions, and practices. All of these ideas, while explored mainly in domestic and large-scale urban contexts in previous research, underlie the conceptual framework and the premise of this thesis: understanding the paradoxical nature of employee-relationships with material work environments in the context of an organization.

CHAPTER TWO: RESEARCH METHODOLOGY AND ORGANIZATIONAL SETTING

Research Methodology

The data that this thesis draws upon came out of a larger project sponsored by Herman Miller, Inc., a company that designs, manufactures, and installs office furniture and office "systems," or environments. Although the goals of this study and the goals of Herman Miller, Inc. differ, both were concerned with capturing, describing, and interpreting individual employee-responses to material work environments. Ethnography was deemed the most appropriate research methodology. While ethnography is most commonly linked to the discipline of cultural anthropology, its use has spread not only across academic disciplines, but also outside of academia altogether and into the private sector and commercial worlds. In fact, ethnographic studies have been used in the areas of education, health care, social work, and business. Herman Miller, like many other organizations today, has embraced ethnography as a tool for understanding how customers use the products they design, as well as to inform the design process for future products. The director of the research department at Herman Miller asked Dr. Darrah to work on this project specifically because of his knowledge and expertise in the study of work and in the use of ethnography in work settings.

Ethnography is, simply put, an approach to studying social and cultural life (LeCompte and Schensul, 1999). Although the term ethnography is used variously, both within academia and industry, to refer to a product, a method, or a technique, it is best thought of as a research methodology. This methodology, or larger system of research principles and practices, can include ethnographic methods and ethnography as product,

as well other qualitative and quantitative methods. Ethnography has a long history of use in the social sciences, and within industry and the corporate sphere (Agar, 1996; Bernard, 2002; Fetterman, 1997; Kunda, 1993; LaCompte & Schensul, 1999; Pelto and Pelto, 1978; Schwartzmann, 1993; VanMaanen, 1998). Ultimately, this longevity, varied application, and use of both quantitative and qualitative methods are testament to its flexibility and effectiveness as a research methodology.

The goals of ethnography as a methodology are two-fold: to describe and understand social and cultural life as it would be described and understood by those who live and work within those social and cultural worlds (called the emic perspective); and to build on the details and understanding of those social and cultural worlds to develop new cultural theories, often to conduct comparative analyses between different social and cultural groups (called the etic perspective). In order to do this, the researcher spends time personally living or working with those whose viewpoints she is attempting to describe and understand. This time and personal involvement, called fieldwork, is the hallmark of ethnography, and is the most common way to capture ethnographic data. Fieldwork usually involves such activities as participant-observation, or completely immersing oneself in the social or cultural world being studied, and unstructured and semi-structured interviewing, or talking with members of that social or cultural world, in order to get their unique, "insider," or emic perspectives.

When conducting ethnographic fieldwork, the researcher does not usually arrive at the field site with a hypothesis to test. Rather, she may have a research problem or question, or simply an idea of what she wants to understand. As the research process

unfolds and data are gathered, that research problem, question, or idea may change, informed by that new data, and a new set of problems, questions, or ideas may be generated. More data are then gathered based on this new set of questions. Eventually, a stable pattern or model may emerge out of this process. This cyclical process, called abduction (moving between induction and deduction), or recursive analysis (LeCompte and Schensul 1999), is another distinct characteristic of ethnography. The ability to continually adjust the focus and scope of data collection while in the field is, in large part, what makes ethnography so flexible and effective. This flexibility and effectiveness in turn increases the amount, the breadth, and the depth of data that can be captured. Participant-observation, unstructured and semi-structured interviewing, and recursive analysis were all used in the collection of data for this study.

The Research Site

The client that Herman Miller selected as the subject of this research project is a global manufacturer and marketer of many well-known brands of consumer products. Data collection was conducted at the headquarters of the apparel division of Benton Corporation (a pseudonym), located in the southeastern region of the United States. The division sells several popular lines of sports wear, outerwear, intimates and hosiery, and men's, women's and children's underwear to numerous large and small retailers.

The division has experienced considerable change in the last few years and continues to be in a period of transition today (2005). There have been three different CEOs in as many years, and at the time this research was being conducted, there were plans to spin off the entire apparel division from the parent company by early summer of

2006. It would then be a separate publicly held company. Additionally, 350 employees were laid off in July of 2005, and there were rumors that more layoffs would occur after our final visit. Some members of the department at the center of this study, or Customer Support (CS), were affected by the July 2005 layoffs.

Employees in Benton's apparel division currently work in several different buildings which are scattered across the rolling hills of a sprawling, five-square-mile business park. All CS employees work on the second, third, and fourth floors of what they refer to as "Benton corporate headquarters," or the main building in this area. The data collection for this study took place in this main building, and focused on a group of approximately 30 CS employees who were selected by the facilities manager, and who all worked in one area of the third floor. However, with the permission of the facilities manager, we conducted observations throughout the entire third floor, as well as in parts of the second and fourth floors. As we walked about the different areas and observed, we were sometimes approached by employees not on the original list who asked to talk with us. We included all observations and all contact with employees in our data, whether they were casual conversations or unstructured or semi-structured interviews. In addition to participant observation and unstructured and semi-structured interviews, we included in our data and analysis documents distributed to employees concerning the move into their new work environment that were published jointly by Benton and Herman Miller.

Data Collection

Participant-observation was one part of our data collection strategy at Benton. This involved walking around different areas on the second, third and fourth floors at

Benton, and observing employees as they worked, and as they engaged with each other and their work environments. Because the physical work environment was such an important component of the project, our work also included observations of the work environment itself. We would note, for example, the physical details of conference rooms or meeting areas, the differences in how people personalized their work spaces, the differences in layouts and materials between entire floors, or any modifications, either temporary or permanent that employees made to the environment. Occasionally we had the opportunity to interact socially with the employees we were observing, either when they approached us to ask what we were doing, or through impromptu meetings in the elevator, the cafeteria at lunch, coffee areas, even the restrooms.

Throughout this process, we recorded field notes, or "jottings" in small steno notebooks that we carried with us. There were times, of course, when it was not feasible to take notes at the immediate time that an event or an encounter was occurring. In those cases, we would commit the incident to memory as best we could, and move to a more appropriate place as soon as possible to record our observations. While participant-observation is often referred to as a discrete, bounded activity with a distinct beginning and end, in reality, the researcher is engaging in participant-observation constantly, throughout the entire time spent at the field site. This is because the primary tools of the ethnographic researcher are her eyes and her ears: her powers of observation, in general. The quality of the data gathered using this method depends on thorough note-taking, and the frequent "fleshing out" or elaboration of those notes.

Although participant-observation clearly played an important role in the overall data-gathering process, interviewing employees at Benton was the primary method of data collection for this project. When we arrived at Benton for our first visit, the facilities manager there provided us with a list of about thirty employees who were willing and able to participate in the project. The people on this list represented a fairly wide range of job titles, from administrative assistants, to managers and directors, to vice presidents. However, as mentioned earlier, as both participant-observation and interviewing progressed, employees not on that original list approached us to talk. In fact, we met one of our key informants in this way. We were referred to still more employees—again, people not on the original list—through interviews, when employees would tell us, "You really should talk to Cindy about this. I'll introduce you." In effect, what at first seemed to be a rather restricted and limited sampling of Benton employees became larger and broader. Because of this snowball effect, our data include a greater number and wider range of employee experiences.

The interviewing component of our data collection progressed in stages, and began in a fairly structured manner, with an initial set of questions and probes that we wanted to ask the employees (see Appendix A). As time went on and we talked to different people, new aspects of the employees' work, of their engagement with the work environment, and of the overarching organizational structure and pressures became apparent. We modified our questions to account for this new information, and interviews became at once more focused and less structured, as they would begin with a specific

topic or question, but would then typically develop into a wider-ranging, often more personal conversation.

Dr. Darrah and I divided the initial list of 30 employees in half, each interviewing the same sets of 15 people for the duration of the project. Staying with the same group of employees throughout allowed us to develop rapport and trust with them. In addition, as mentioned previously, we encountered and were referred to other employees while we worked at Benton. Our interviews were intentionally brief, usually consisting of only three or four questions at a time, out of consideration for the interviewees' time and work. We conducted a series of two or three of these interviews with each person on our list during the course of our one-week visits. However, most interviews lasted for longer periods of time, usually 30 to 40 minutes: once people began talking, their enthusiasm and their interest in the conversations grew.

The semi-structured interviews began with fairly specific questions about the interviewee's job title, job responsibilities, and then, about the actual job-related tasks they perform on a daily, weekly, or monthly basis. After learning more about the types of work being performed, we asked questions about the interviewees' "work groups," or who they needed to work with, on a daily, weekly, or monthly basis to get their jobs done. Finally, we asked questions that focused on the impacts of the larger organization on interviewees' work, on their working relationships, and on their use of the material work environment. In almost all cases, interviews would begin with very specific questions, and then would develop into less structured conversations, because new questions and ideas would arise out of the interviewees' answers, and because both the

interviewee and the interviewer would become more comfortable with each other as the conversation progressed.

Due to the brief and very casual nature of these interviews, we chose not to use audio-recording equipment for this project. The decision to use such equipment for ethnographic research must be based, at least in part, on the effect that equipment might have on the comfort levels of the interviewees and, by extension, on the quality of the interview and the data gathered from such interviews. In some cases, as when research has been conducted in high-technology companies in Silicon Valley, interest in the equipment itself becomes a conversation-starter. This assumes a level of comfort with the equipment, and with technology in general, that we could not assume existed, and indeed was not evident, at Benton. Additionally, it would have consumed valuable interview- and employee-work time to advise the interviewee of the use of such equipment, to get the consent of the interviewee, and then to set up and test the equipment. As such, the use of audio-recording equipment was determined to be too intrusive and off-putting, and to have acted more as a barrier than a tool in the interviewing process.

While most researchers usually take some notes during interviews, even when using recording equipment, note-taking took on greater importance in this project because we did not use such equipment. As mentioned earlier, Dr. Darrah and I divided the initial group of 30 participants in half, and interviewed the same group of 15 people for the entire data collection period. I would prepare for each interview by studying any previous interviews with this particular interviewee, making sure that the questions I

would be asking were appropriate, and would add to the information already gathered during previous interviews. I would also note any contextual information about the person, any previous encounters, and the current situation. During the interview, I would quickly jot down key words and phrases, writing as much as possible while maintaining rapport with the interviewee, and without distracting her, or interrupting her train of thought. Immediately following the interview, I would return to my work area and elaborate on my jottings, writing down everything I could remember about the interview, particularly specific words and phrases used by the interviewee. Every night, I would type up all of my notes, including all interviews and all observations, fully fleshing them out into what would be a final set of notes for the entire day. It should be noted that throughout this thesis, I use pseudonyms to protect the confidentiality of all of the participants in this study.

Data Analysis

Because the goal of this study was to understand Benton employees' relationships with their material work environments, and consistent with the practice of ethnographic research in general (LeCompte and Schensul 1999:4), qualitative methods were deemed the most appropriate for the analysis of our data. Quantitative methods require numerical data in order for researchers to apply and calculate statistical analyses. In the case of this research, however, we did not capture numerical data: indeed, there was nothing to count. Instead, we were attempting to capture, identify, and understand Benton employees' perspectives, and the meanings they attributed to their material work environment. By definition, counting this type of information would be irrelevant.

Dr. Darrah and I each recorded daily notes in the manner described above every day that we worked at Benton. The entire collection of these daily notes, and the documents obtained while at the field site, constitute the data set used for the Herman Miller project, and that I used for this study. As described earlier, some recursive analysis of the data began while we were in the field: as we gained information through observations and interviews, new questions and ideas developed, informed by that new information. Subsequent interview questions and observations focused on those new questions and ideas. I conducted further data analysis after all fieldwork had ended. This involved carefully reading the entire set multiple times and reflecting on this data over a period of several months.

As I examined the data, I would note any recurring words or phrases, and attempt to connect those words or phrases to larger theoretical concepts. In order to better see relationships between these recurring words and phrases, and how these recurring words or phrases might relate to theoretical concepts, I constructed a matrix using an Excel spreadsheet. I copied and pasted applicable key words and phrases directly from interview and observation data into cells in the spreadsheet. This organized the data, both functionally and visually, and allowed me to see larger emerging patterns, or themes.

Research Issues

As is the case with most research projects, there are several issues pertaining to this study that need to be considered, and that warrant some discussion here. First, the notion of researcher bias often arises in reference to ethnographic research, and to social scientific research, more generally. Ethnographic research in particular requires that the

researcher herself act as the primary tool for data collection, and that she spend extended time and personal engagement with her informants. It is at least in part because of the very personal nature of ethnographic research that questions of objectivity are raised at all. However, ethnographic methods have been well-defined and rigorously used by many different researchers in many different settings. Through the systematic and proper application and use of those methods, researchers can gather high-quality data, and ensure that other researchers can replicate their procedures, regardless of field setting (LeCompte and Schensul1999). In all cases, the quality, the depth, and the accuracy of ethnographic data depends on this personal connection between the researcher and her informants, and particularly, on the ability of the researcher to establish and maintain rapport with them.

Second, our sample was determined, at least initially, by the gatekeeper to the organization. However, our interest was less in the actual quantity of employee experiences than it was in gathering as wide a variety of experiences as possible. Although the initial list of participants given to us by this gatekeeper included only one department within the organization, that department did include within it a wide variety of official positions and different types of work performed, as well as a fairly complete vertical cross-section of job titles within the organization, from administrative assistants to vice presidents. Additionally, we were free to roam throughout the second, third, and fourth floors of the organization in order to conduct participant-observation. In the course of such observations, we were approached by people who questioned what we were doing. In some cases, further conversation developed during which we could gain

valuable insights into different areas of the company, and different types of work. Some of these same people even became key informants over the entire course of our research. We were referred to still more employees who were not on the initial list of participants by interviewees. Overall, despite the rather limited initial sampling conditions, we were able to gather a wide variety of employee viewpoints and experiences at Benton over the course of the data collection period.

Finally, our time at Benton Corporation coincided with a period of considerable change both for the company and for its employees. In particular, the department where we spent the bulk of our time and where we collected most of our data was one of those affected by the layoffs that occurred at approximately the midpoint of our data collection period. During each of our visits to Benton we were present and collecting data while employees were anxiously awaiting news about layoffs and how they would affect their work if they kept their jobs.

Amid this climate of uncertainty and fear, employees at Benton at first reacted to our initial questions about their work with some suspicion. In fact, one of our informants told us that most people thought we were actually management consultants. Eventually, as we spent more time with them, and, after repeated assurances that we worked for Herman Miller and were interested only in their work environment and how it affected them, they grew more comfortable with us. Our work of building rapport and trust with our informants reaped great rewards when we returned after the layoffs. Although a few of our informants were gone, and the survivors, for the most part, appeared to be anxious

and more focused on their work, our informants were nonetheless warm and willing to talk.

The organizational changes occurring at Benton highlighted certain aspects of the relationship between employees and their work, and the built work environment; aspects that may not have been as apparent in the absence of such organizational tensions and dynamics. In some cases we were able to observe not only how the employees themselves responded to such changes, but also how organizational dynamics affected, and in turn were affected by those same changes.

The situation at Benton also points to one of the strengths of ethnography. Ethnographic researchers work in field settings that they do not control in the ways researchers running experiments might. This means that the researcher must be flexible, immersing herself in every new setting as a student would, learning the ways of the people in that site, and getting an accurate sense of what is going on through the perspectives of those living and working there. This not only allows for a truly local, and usually more accurate, picture of what is really going on, but also, to a certain degree, dampens the affect of the researcher on the research itself.

While unexpected at the time of our work, the organizational changes we witnessed are not uncommon in corporations. The situation at Benton points to a greater need for researchers from all academic disciplines to study and understand organizations not as static entities, but as dynamic organisms. Rather than being disruptive and damaging to this type of work, then, insights from ethnographic research that tackles such

organizational change may in fact be useful to other companies in the throes of similar transitions.

Organizational Setting

Benton Corporation has operations in 58 countries, markets its branded products in nearly 200, and has approximately 150, 400 employees worldwide. Our research was conducted at the headquarters of one of several apparel divisions of Benton Corporation. The division sells several popular lines of sports wear, intimates and hosiery, and men's, women's and children's underwear to numerous large and small retailers.

At the time of our fieldwork visits, there had been three CEOs in as many years, and there was much discussion among employees about imminent plans to spin off the entire apparel division from the parent company in the coming months. (Eventually, the division became a publicly held company, operating independently of the parent company.) Additionally, during the month before our last visit there, the organization either laid-off or offered voluntary retirement packages to 350 employees. Some participants in this study were directly affected by this reorganization.

Employees in the apparel division currently work in several different buildings which are scattered across an approximately five-square-mile area within a business park. Although corporate headquarters for the parent company is in a large city in the Midwest, the department where we conducted our research is on the second, third and fourth floors of the main building in this area. Once this division is officially separated from the parent company, operations were to be consolidated into this main building, and a new building next door, which was under construction at the time of our fieldwork. The two buildings would be connected with an elevated enclosed walkway. The people we talked to seemed to look forward to this consolidation. The general consensus seemed to be that

it would simplify their work and save time, because they would no longer have to get into their cars and drive to the other buildings for meetings and other functions.

The built environment that CS employees were working in was actually quite new to them. Only three weeks prior to our arrival for our first visit, CS had been moved from a traditional, enclosed-office-and-cubicle environment, to an office system which Herman Miller calls Resolve, consisting of groups of relatively open "pods" in lieu of cubicles. In this new environment, members of upper management (including executives, directors, and managers) no longer have enclosed offices, and work in pods out on the main floor along side their administrative assistants and other employees.

Fixed and Semi-Fixed Elements at Benton

I will begin by providing a general description of Benton's built environment, specifically, the fixed and semi-fixed elements of the built environments that the majority of employees at Benton encounter and engage with most often. Amos Rapoport describes fixed, semi-fixed, and non-fixed elements as being the most concrete of his conceptualizations of the built environment. According to Rapoport, examples of fixed elements are "infrastructure, buildings, walls, floors, ceilings, columns, etc...semi-fixed elements are the 'furnishings' of the environment, interior or exterior." (Rapoport 2005:32.) Non-fixed elements of the environment are the people who inhabit such environments, as well as their activities (Rapoport 2005). For the purpose of this discussion, I will include spaces such as walkways, conference rooms, and Community Rooms, as part of the fixed and semi-fixed elements of the built environment at Benton.

The employees we talked to spend the majority of their workday on the floor where their pods, or personal workstations are located (either the second or the third) in the four-story brick headquarters building described earlier. They use the elevators to go to different floors fairly regularly, to deliver or retrieve materials, to meet with people from different departments, or to take their meal breaks in the cafeteria. The elevators are located in the center of the building, so that, on any given floor, they often act as a hub for encounters and interaction with coworkers. Occasionally, people must drive to other buildings down the road from the headquarters building, again, usually to retrieve or deliver materials, or to meet with other employees.

Employees on the third floor at Benton work in Resolve workstations, or pods, which are clustered together in groups of six to eight pods on the third floor. These clusters are laid out across the floor in an organic fashion, with meandering pathways threading between and around them. We also spoke with three employees who work on the second floor in traditional cubicles with high, gray walls. These cubicles are laid out in rectilinear fashion across the middle of the floor, while executives work in fairly large offices with floor-to-ceiling walls and doors, which line the perimeter. The two summer interns we briefly talked with worked in Resolve pods as well.

There is a single, large, open "Community Room" on the third floor, designed for use as a central gathering place for meals, short breaks, and informal meetings. The Community Room is adjacent to the elevators, and is equipped with a kitchen, including a sink, refrigerator, coffee maker, and microwave. It is furnished with a television and a VCR/DVR, higher counters and tables, and barstool-like chairs. The Community Room

on the third floor is much larger than the combined mailroom and kitchenette that is tucked between a bank of Loft rooms on one side, and a copy and printer room on the other. Support staff appeared to use both the mailroom/kitchen and the copy and printer room more than they did the Community Room. This is likely due to the requirements of their work, which included sorting and delivering mail, and photocopying and printing documents.

There were four traditional conference rooms on the third floor at Benton. Three of these rooms faced the Community Room along an external wall, and had to be reserved in advance electronically, usually by support staff. The largest of these rooms had a wall of windows on one side, and a large conference table in the middle. It was equipped with a variety of presentation technology that was, according to our interviewees, rarely used. Flanking both sides of 3B were two separate, smaller rooms which were designed and equipped similarly. The fourth and smallest of the traditional conference rooms was located adjacent to the Human Resources department, and did not have to be reserved in advance. Two other, still smaller meeting rooms were referred to by employees as "concept rooms" rather than conference rooms. These rooms were located in the Casual Wear department on the third floor and were actually one larger room that could be divided or expanded using a moveable wall.

In addition to conference and concept rooms, there were places on the third floor that were designed for informal, impromptu gatherings, and that did not require reservations. There were nine Loft rooms, intended for groups of two to three people, which were equipped with a small table and chairs, a phone, and a sliding opaque, frosted

glass door. There were also four stand-alone, mobile pieces from Herman Miller that were designed to accommodate slightly larger groups of people. These pieces were whimsically designed and varied in size. The smallest could accommodate approximately six people, and was shaped like an igloo. The largest was literally a large tent on wheels, and could accommodate up to ten people. While the Loft rooms were used regularly, employees said that they rarely used the stand-alone Herman Miller pieces.

Walkways, elevators, balconies, and restrooms in the headquarters building—what I refer to as public areas—were also frequently used. Some of this use was, of course, out of sheer necessity, and purely functional. However, as is true generally of most built environments, use does not always align with the purposes intended by designers, the facilities department, or management. The specifics of how different groups of employees used or engaged with their built environments, (whether officially sanctioned or not), and possible reasons for those uses and engagement, will be discussed in the following section.

Non-Fixed Elements at Benton

In addition to fixed and semi-fixed elements of the built environment, there were non-fixed elements, such as Benton's organizational structure, that should be included in this discussion about organizational setting. In fact, just prior to our first visit to Benton, upper management had made rather dramatic changes to both the material work environment and the organizational structure. Employees had previously worked in a traditional enclosed-office and cubicle environment, and were grouped together into

teams that were aligned by customer. When Benton executives made the decision to change their business model and begin the shift from general holding company to one that was more integrated and operational, they also changed the internal structure of the organization. Where employees had once worked in cubicles or offices, and on teams aligned with the customer they served, now, former team members are scattered individually across the third floor, working in pods alongside people who share the same job function, but may belong to different levels of the organizational hierarchy.

In addition to the changes made almost simultaneously to both the material work environment and the organizational structure, at about the midpoint of our fieldwork, 350 employees were asked to voluntarily retire, or were laid off. Not surprisingly, all of these changes affected the ways that employees at Benton perceived and understood the organization, their work, their built work environments, and our research. The nature, implications, and effects of these changes, including the effects on employees and their interactions with their built work environments, will be discussed in Chapters Four, Five, and Six of this thesis.

Conclusion

This study is concerned with exploring the paradoxical nature of interrelationships between employees and their built work environments. The use of ethnography and ethnographic methods as discussed in this chapter allow for the capture, description, and interpretation of individual employee-responses to physical work environments, as well as to the meanings that employees attribute to those environments, to the organization they work for, and to their work. In so doing, we can articulate specific elements of the

complex interplay between employees, the organization, and built work environments, and begin to understand why employees speak in contradictory terms when describing their perceptions of, and interactions with their material work environments.

CHAPTER THREE: ENVIRONMENT-BEHAVIOR STUDIES AND CONCEPTUAL FRAMEWORK

Environment-Behavior Studies (EBS)

The conceptual framework that informs this thesis was developed by Amos Rapoport, one of the founders of a relatively young, but growing area of research called Environment-Behavior studies, or EBS. In this first section I introduce and describe EBS, briefly outline its history, and then review a sampling of literature produced by EBS scholars, including some of the more important theoretical contributions and perspectives that have come out of this field.

EBS brings together scholars from a variety of academic disciplines who are interested in understanding the relationships between built environments, human behavior, and design. The ultimate goal of those working in the field of EBS is to better understand end-users and their needs in order to create (or modify) built environments that will best satisfy those needs, that will support and facilitate activities that take place within those environments, and that are cost-effective and aesthetically pleasing. Thus, EBS includes architects and designers, urban planners, social and behavioral geographers, human factors scholars, social and environmental psychologists, anthropologists, and some management and organization scholars.

Given the variety of academic disciplines represented within EBS, it is not surprising that EBS scholars approach their work from different theoretical perspectives and conceptual orientations, and employ a number of research methods, both quantitative and qualitative. In fact, as EBS first began to take shape as a distinct field of study in the late 1960s and early 1970s (Duffy 2000; Lang 2000; Lawrence and Low 1990; Moore

and Marans 1997), this diversity in perspective and method was readily apparent in seminal works by architects (Oliver 1969; Prussin 1969), social and environmental psychologists (Altman 1975; Barker 1968), and anthropologists (Rapoport 1969).

These works were considered ground-breaking, because they were among the first in studies of built environments to attempt to fully integrate "...cross-cultural or regional variability...ecological (construction materials and methods, and climate), social organizational (household and community), and symbolic (cosmology and meaning) factors" (Lawrence and Low 1990:458). Prussin (1969), for example, studied the variety of domestic built forms in six different villages in Ghana, and described how each type of dwelling was informed by a confluence of historical, economic, technological, and social organizational factors (Lawrence and Low 1990). Oliver (1969) surprised those in the architectural field by suggesting that architects, instead of studying exclusively "classical" or formal architecture, should instead be studying both current and historical representations of vernacular, or everyday, common architectural forms, and that these vernacular forms should be documented and preserved (Lawrence and Low 1990).

While there has been recent discussion about the lack of unitary, coherent theory, or theory-building within EBS (Moore 1997; Rapoport 2000; Rapoport 2005), there have been notable theoretical and conceptual contributions. Moore (1997:22), for example, acknowledges that Barker (1968) is considered by some in the field to be one of the few scholars to produce a major theory of EBS. Barker, an environmental psychologist, developed an ecological theory of behavior settings, or "...a standing pattern of behavior that occurs in a physical environment – the milieu – for a particular time period. Thus the

same physical setting can afford many behavior settings. The world of everyday experience – the ecological world – is seen as a system of settings" (Lang 2000:85). Barker's concept of behavior settings is important because it represented a theoretical move away from the emphasis on the visual world and visual perception that architects up to that time had favored, and put forth the idea that environments could be conceptualized as settings that actually facilitated physical action and behavior (Lang 2000). The concept also translates well to organizational contexts and environments, and foreshadows Rapoport's later work with activity settings (1997, 2005), which will be discussed in detail in the next section.

Altman, a social psychologist and another seminal figure in the development of EBS, conducted research which also applies directly to organizational contexts and environments. Altman's (1975, 1977) most well-known work focused on the spatial dimensions of behavior, and considered the nature of privacy and territoriality and their relationship to space and the physical environment (Moore and Marans 1997). Privacy, according to Altman, is defined as "...selective control of access to the self or one's group" (Lawrence and Low 1990:479), and the enforcement or maintenance of that control may or may not be supported by built environments. Additionally, Altman found that the desire for privacy varies substantially across different cultures, and that it is regulated less through built environments than through behavioral rules, either because environmental manipulation is not sanctioned, or it is not feasible (Lawrence and Low 1990: 479). Altman's research raises the question of what privacy means to different

groups of people, and, particularly in the context of this thesis, what it means to different end-users within an organization.

Rapoport, one of the most influential EBS scholars and considered by most to be the founding father of EBS, approaches the study of built environments from a (broadly) cultural and cross-cultural perspective. At the time of his first publications in the field, this perspective was unusual, as the standard explanations for the wide variety of built forms found across different human groups tended to be largely ecologically-based. Rapoport emphasized the importance of multi-causal, holistic, and socio-cultural factors in studying the variability of built forms cross-culturally (Lawrence and Low 1990:458). He also discussed the importance of cultural meanings and influences on end-users and the design, construction, adaptation, and use of built environments. Most of Rapoport's work centers on domestic built forms, but he acknowledges that this is more for ease and consistency of explanation: domestic dwellings occur across all cultures, while other built forms can and do vary. Rapoport stresses throughout his work that his ideas can be applied to all types of built environments and groups of end-users. Aspects of Rapoport's most recent contributions to the field of EBS underlie the conceptual framework of this thesis, and will be discussed in greater detail in the following section of this chapter.

More recently, other EBS scholars have published work in the areas of architectural education in the United States (Groat 2000; Janz 2000), space and place (Canter 1997), cultural aspects of design (Goodsell 2000; Kent 2000; Low 2000), urban and large-scale residential environments (Anderson and Weidemann 1997; Nasar 1997; Weisman 1997), and the integration of neuroscience, design, and EBS concepts and

methods (Zeisel 2006). Topics addressed by the scholars above include an ethnographic study of how use patterns within a community plaza in Costa Rica are based on latent meanings associated with specific areas of the plaza (Low 2000), symbolism and mnemonic meanings embedded in the architecture of American capitol buildings (Goodsell 2000), how to improve the design of built environments for aging populations with cognitive impairments (Weisman 1997), and consideration of how the human brain and perception, along with ethnographic methods, can be integrated into the design process for improved built environments (Zeisel 2006). This is but a small sampling of current work being conducted within the field of EBS, but shows the remarkable diversity of theoretical approach, method, and subject matter of current work within this area of study.

EBS and the Workplace

More germane to the subject of this thesis, however, is research conducted by EBS scholars concerning organizations and the workplace. EBS work in this area ranges from fairly broad theoretical considerations of organizations and the material world in general, to more specific empirical studies, some of them proscriptive, of the influence of the built work environment on employees. Gagliardi's (1990) collection of essays, for example, brings together papers from a diverse group of scholars who address subjects such as how meanings are embedded in physical work settings and the influence of those settings and their meanings on work processes, the role of material artifacts in understanding and addressing cultural issues within organizations, and material artifacts and organizational control. Gagliardi is widely recognized as one of the few organization

scholars to recognize and study the role of material artifacts and the material world in organizations—including built environments—and symbols and meanings embedded in those artifacts and environments.

In another collection of publications by EBS scholars, editors Moore and Marans (1997) include two very different studies of the workplace. In the first, Zimring and Peatross consider the implications of culture and cultural differences on the arrangement and use of space within organizations. The authors use Hofstede's cultural dimensions (e.g., individualism vs. collectivism and power distances) to analyze the different ways space is allocated and used in American and Japanese companies during attempts to integrate the different societal and corporate cultures of an American regional office with those of a Japanese parent company. Also in Moore and Marans (1997), Gifford, Hine, and Veitch, in a modern take on the Hawthorne studies, collected and combined data from a number of previous studies in order to perform a new statistical "meta-analysis" on the effects of lighting levels on office task performance. The results of their meta-analysis showed that increased lighting levels actually increased task performance, but as employees adapted to those increased levels, performance decreased slightly. The real purpose of this study seemed to be the methodological exploration of meta-analysis, however, and to put forth the idea that data from previous design studies can, and should be compiled and reanalyzed when possible.

A number of studies have been published that focus on individual employee-responses to various characteristics of physical work environments. These studies tend to emphasize the effects of the work environment on employees (and sometimes customers)

in general (Bitner1992; Davis 1984; Domahidy and Gilsinan 1992; Fried 1990; Hatch 1987; Oldham and Rotchford 1983), or on employees' stress levels (Sutton and Rafaeli 1987), and do not address any specific effects on work performance or work and communication practices. Most also approach the subject from psychological or behavioral perspectives, are based on quantitative data gathered through surveys and questionnaires, and rely on statistical analysis in producing their results. The earliest of these studies make the claim simply that the work environment does indeed affect employees and their responses and reactions (Davis 1984; Oldham and Rotchford 1983), an idea that today, of course, is hardly groundbreaking.

Other scholars approach the study of physical work environments from architectural, commercial real estate, or facilities management perspectives. Again, most are quantitative studies, emphasize the impact of the physical workspace on business performance, cost-effectiveness, or general productivity, and are clearly aimed at organizational executives and management (Becker 2004; Becker and Steele 1995; Duffy 1997; Duffy 1998; Olson 2001). Some of the more recent work in this area capitalizes on the organizational change movement, and advises organizations on how to adapt to change, often through modification of the physical work environment (Becker and Sims 2001; Duffy 2000; Haynes and Price 2004). Most of this advice advocates opening up the workplace to take advantage of complex networks and spontaneous interactions between employees (Stephenson 2004), as well as to reduce square footage per employee. Duffy (2000), an architectural consultant, also suggests that end-users and their needs be included in the design process, a position that I take in this thesis.

EBS and Open Work Environments

The idea of the open work environment was developed by a German management consulting firm in the late 1950s. The concept of *Burolandschaft*, or "office landscape," was a response to previous rigid, authoritarian management styles with their associated rectilinear, systematized office layouts. New floor plans reflected modern management thinking and were designed to accommodate communication and work processes, emphasizing free-flowing layouts, small-group work areas, increased accessibility to management, and efficiency both in space and cost. New lightweight and flexible furniture was produced to accommodate the fluid, organic floor plans. This new "office landscape" concept proved to be short-lived, however, both in Northern Europe and in the United States, and soon the work environment took on the look that is familiar to many today: office floors filled with rectilinear mazes of high-walled cubicles with enclosed offices around the perimeter (Antonelli 2001; Becker 2004).

Variations of the open floor plan began to reappear in the American workplace during the 1970s and 1980s, some designed with completely open floors and no interior walls or partitioning, others with minimal partitioning in the center and enclosed offices around the perimeter of the floor. Organization scholars, psychologists, architects, and facilities managers began to study the effects of these open work environments on employees and their attitudes about their work, most using questionnaires or surveys and quantitative analysis on data collected.

For example, Oldham and Brass (1979) found that employees overall expressed dissatisfaction with their work and colleagues after moving from a traditional cubicle-

enclosed office environment to an open floor plan. The authors focused on actual work tasks in their study and found that certain aspects of those tasks changed after moving to the open environment, which, they speculated, could account for that dissatisfaction. Hedge (1982) also focused on work tasks but found that those employees who felt their work was less demanding, such as clerical workers, had more positive feelings about moving to an open floor plan. Those who felt their work was more demanding, such as managers or technical workers, were not as positive about the move. In addition, Hedge noted that loss of privacy and increased disturbances were identified as major problems in the new environment. Similarly, Zalesny and Farace (1987) found that "low-status" employees (such as clerical workers) viewed the move to an open floor plan more favorably than did the "high-status" employees (such as executives), based on changes in perceived personal privacy, job characteristics, and job satisfaction. Higher-status employees perceived a loss of personal privacy with the loss of their enclosed or semi-enclosed offices, while lower-status employees, who had previously been more exposed, perceived an increase in personal privacy and thus were more favorable towards the open environment.

A selection of the more recent research concerning open work environments presents less favorable results. Evans and Johnson (2000) attempted to simulate an open environment by increasing general noise in the work areas of a sample of female clerical workers. They measured an increase in employees' urinary epinephrine levels (chemicals indicating physical stress), noted that they made fewer attempts to solve complicated puzzles (indicating, according to the authors, a lack of motivation), and made fewer

ergonomic adjustments to their office furniture than a control group working in a quiet environment, although the control group did not self-report less stress. The authors cautioned, however, that there were physical stress effects due to the constant low-level noise in open office environments and that further studies were needed to address the issue of noise in these environments.

Brennan, Chugh, and Kline (2002) conducted one of the few longitudinal studies of employees who were moved from a traditional to an open office environment. In this study, the authors administered surveys to employees just prior to their move to an open floor plan, one month after the move, and six months after the move. Questions on the surveys related to the physical environment, physical stressors, team member relations, perceived performance, and office protocols. The authors found that employees responded negatively on all of the above measures, reporting decreases in satisfaction with the physical environment, increases in physical stress, decreased team member relations, and lower perceived job performance. In addition, these negative reports did not diminish over time, but stayed the same, or actually increased over time spent in the new environment.

Dale (2005) takes a critical look at issues of organizational control and built work environments in her case study of a large utilities company which moved its employees to an open work environment. While she admits that she viewed the new open environment at this company as reminiscent of the panopticon (discussed here earlier), conversations with employees after the move revealed that 91% of the employees viewed the move favorably. Dale observed, however, that, as the company hired more employees and did

not increase the square footage of the open environment, conditions became increasingly crowded, and what had been a fully open environment with little or no territorial demarcation between individuals and small groups of employees, became more demarcated and partitioned, usually through the use of filing cabinets or other furniture as the floor became more crowded. Dale speculated that as conditions became more crowded, employees became more territorial, and desired more privacy.

Throughout many studies of work environments, notions of privacy are identified as central issues as employee report on their attitudes about their physical environments, and their work. Most of the earlier studies focus on privacy and work environments in general, and employ the use of questionnaires or surveys, and quantitative analysis. Sundstrom, Burt and Kamp (1980), for example, noted that two types of privacy appeared in their work. The first type was psychological, and fit Altman's (1979) definition of privacy: a sense of control over access to oneself and one's group, including "control over transmission of information about oneself to others and control over inputs from others" (Sundstrom, Burt, and Kamp 1980:102). The second type of privacy was architectural, or "visual and acoustic isolation supplied by an environment" (Sundstrom, Burt, and Kamp 1980:102). The authors found that psychological privacy was consistently associated with architectural privacy, and that privacy in general was associated with job satisfaction. The authors also speculated that employees who were moved to work areas with less privacy tended to adapt, maintaining control over the amount of interaction they had with coworkers and supervisors. Sundstrom, Town, Brown, Foreman and McGee (1982) found that employee perceptions of privacy were

most strongly correlated only with the amount of physical enclosure in their work area. Those with fully-enclosed offices rated their areas as most private, while managers and administrators reported higher privacy ratings than accountants, who reported higher privacy ratings than secretaries.

More recently, research concerning privacy in the workplace gives more attention to specific characteristics of the built work environment, including open floor plans, and employs qualitative methods in data collection and analysis. Kupritz (2000; 2003) for example, conducted two different studies of the effects of open work environments on employee notions of privacy. In the first (2000), a study she had been asked to conduct by executives and facilities managers at Gulfstream Aerospace Corporation, she interviewed and observed engineers who had been moved to an open work floor plan. The executives and facilities managers were concerned that engineers' reported lack of privacy was affecting their performance. Kupritz found that issues such as traffic flow around and through work areas had more of an impact on the engineers' sense of privacy than did physical enclosure design elements, such as partition wall height, and that both acoustic and visual distractions increased with exposure to traffic flow. Kupriz advised the executives and facilities team that no single design element could ease privacy concerns and both acoustic and visual distractions, and that various combinations of free-standing walls, sound-dampening wall materials and proper distancing between work areas would be most helpful.

In a second study, Kupritz (2003) focused on the differences between the privacy needs and concerns of older (60 years of age and older) and younger (ages 35 to 50)

employees within open work environment at one organization, and which elements of the built work environment accommodated those different needs. She found that both younger and older workers associated similar elements of their built work environments with the regulation of privacy, but that the two groups of employees ranked those elements differently in terms of importance. Younger workers felt that having adequate amounts of enclosed space was important for conducting private conversations, while older workers placed more importance on acoustical privacy. Kupritz notes that this may be due to the physiological effects of aging. Interestingly, both groups of workers identified adequate lighting, having flexible furniture and equipment that could be rearranged to fit different work needs, and having workspace located away from traffic flow as being most important.

Instead of focusing specifically on open work environments and privacy, Vischer (2005), takes a step back and looks at employee perceptions and attitudes about space, and, at space change within organizations more generally, whether those changes mean transitioning to an open work environment, or simply reducing in some way the amount of space allocated per employee. Vischer claims that instead of privacy, territoriality is the main concern of employees facing organizational space change, and that territory or space is the key, but usually implicit and unspoken, component in the social contract between employees and the organization.

Traditionally, as employees progress up the organizational hierarchy, they are rewarded with more space, in recognition of their increased status, and for their loyalty, reliability and productivity. When space is taken away from employees, for any reason,

it upsets this unwritten social contract. In today's business climate, with organizations seeking to reduce costs through reduced square footage per employee, reductions in space allocation are commonplace. Vischer suggests that in order to institute successful space change, it is helpful if employees are able to maintain some sense of control over "their" space, and so must be empowered environmentally, through increased information dissemination, and participation in the planning and the implementation of change.

New "Flexible" Ways of Working, New Environments

In addition to open work environments, organizations today are exploring other ways to adapt to an increasingly volatile business environment, while increasing communication, knowledge exchange and innovation, and reducing costs by shrinking their real estate footprints. While some have encouraged their employees to telecommute, most organizations, for a variety of reasons, have not fully embraced this practice. Instead, there has been a new emphasis on organizational "flexibility:" in adaptation to external environments, in organizational structures, in employee work practices, and in the conceptualization and design of built work environments.

Some organizations have sought to stimulate entirely new ways of working, and thereby increasing innovation, by disentangling the very notion of work from place and time. To do this, some have instituted what is called "hoteling" or "hot-desking," eliminating assigned personal work space within the organization completely, encouraging employees either to work off-site, or to work in spaces that are most appropriate to their job responsibilities on-site, providing a number of unassigned work areas where they have access to power and to the office network. One such firm, an

advertising agency in London, has consciously dismantled both its organizational structure and the physical work environment: there are no bosses, job responsibilities can and do change based on peer feedback, and there are no assigned work spaces (Coutou 2000). According to the company founder, they deliberately "...destabilized the workplace so that employees never know where they'll be working on a given day...[they] want to defeat habit...creativity is the defeat of habit by imposing originality and change" (Coutou 2000: 146).

Although hoteling and hot-desking is relatively new, a number of scholars have considered the practice as they study organizational adaptation, change and built work environments. Van der Voordt (2003), for example, explored how employees have responded to completely flexible work environments at two companies in the Netherlands. Van der Voordt used two commonly cited benefits of this type of environment – increased productivity and increased employee satisfaction – to measure the success of flexible working at these two companies. His results largely echoed the results of studies discussed previously in this section: employees did not like the lack of privacy and control over their own work environment. In particular, they cited increased disruption—whether it was the risk of, or actual disruption—both visual and acoustic, and as a result, rated their own productivity lower. These feelings increased as job complexity and status within the organization increased.

Millward, Haslam and Postmes (2007) explored the relationship between hot-desking and degrees of organizational or team identification among two groups of employees at a financial institution: those who worked in assigned work spaces, and

those who were hot-desked. They found that organizational identification was higher in a completely flexible, hot-desked work environment, while team identification was higher in more traditional environments where employees had assigned personal work spaces. The authors posited that the built work environment affects not only *how* employees tend to interact with others in the organization (i.e., electronic communication or face-to-face), but *who* they are most likely to interact with. In this study, employees who worked in assigned spaces placed a higher value on face-to-face communication, and identified with their team most strongly. Those who hot-desked valued electronic communication more highly and identified with the organization most strongly. While previous studies have cited general proximity as an important indicator of how employees communicate, and who they interact with, this study suggests that this dynamic is far more complex, and that the built work environment, or physical arrangement, plays an important role in employee identification and interaction.

Finally, Schwarz (2003) describes some tensions inherent in organizations' (and designers') visions of these new, flexible workplaces. One vision depends upon proximity and an open environment to foster increased sociality and communication, teamwork, spontaneous knowledge exchange, and innovation. The other vision depends upon various mobile technologies which allow flexibility, mobility, non-territoriality, and the ability to work in different locations and settings. These two visions in some ways contradict each other: when employees do not have assigned work areas, they are continually seeking out places to work, and they are not always in physical proximity to the people they need in order to perform their jobs. In addition, this activity encourages

reliance on technology, not on their colleagues. Schwarz adds that mobile technologies "push mobile social forms, and further reinforce individualized patterns of work" (Schwarz 2003:111).

This review of EBS scholarship has introduced some of the important issues that have been identified by scholars who seek to articulate more precisely how humans understand, interact with, and are affected by their built environments. These issues include the links between physical settings and human action and behavior, privacy and territoriality, the importance of social and cultural meanings and influences on the built environment, and the use of ethnography in the study and design of built environments. As has been demonstrated by the scholarship in the latter part of this review, all of these considerations can be applied to organizations, employees, and built work environments. Indeed, in the following chapters, I will describe how these issues played out with employees and their built work environments at Benton Corporation. First, however, I will explain the conceptual foundation that informs these chapters.

Conceptual Framework

As noted earlier, Amos Rapoport is widely recognized as one of the main founders of EBS, and it is his conceptualization of the relationships between humans and their built environments that lies at the heart of the conceptual framework for this thesis. Throughout his career as a scholar, Rapoport has fought against prevailing notions of architecture and design as "free artistic activity" driven mainly by the personal whims and creative impulses of the architect or designer. Instead, he has argued that architecture and design should be considered largely problem-solving activities, and has called for the

fields of architecture and design to become more research-based and scientific (Rapoport 1982; 2000; 2005).

Most important, however, Rapoport has sought to change architects' and designers' focus entirely: from concerns mainly with their own creative impulses and desires, to concerns for the needs and desires of end-users. Designers, Rapoport suggests, should, in fact, be "acting as surrogates for end-users, making the true purpose of design to create environments that suit those end-users. The products of design must come out of an understanding of human, or end-users' characteristics, and must fit and be supportive of those characteristics. Design, then, must be based on knowledge of how people and environments interact" (Rapoport 2005:1).

Understanding the nature of human-environment interaction lies at the core of EBS as a field of study, and as such, is a primary goal of EBS scholars. In fact, Rapoport characterizes EBS as a whole as being fundamentally structured through three main questions that address the mechanics of this interaction:

1. What bio-social, psychological, and cultural characteristics of human beings (as members of a species, as individuals, and as members of various groups) influence (and in design, *should* influence) which characteristics of built environments?
2. What effects do which aspects of which environments have on which groups of people, under what circumstances, (i.e., in which context) and when, why, and how?
3. Given this two-way interaction between people and environments, there must be mechanisms that link them. What are these mechanisms? [Rapoport 2005:10]

Rapoport suggests that the concept of culture underlies all three questions, and that employing the concept is a useful way to begin to answer them: indeed, he claims that "consideration of culture is inescapable in EBS and environmental design" (Rapoport

2005:37). He acknowledges, however, that "culture," as a theoretical construct, is too abstract, and too general, and so is nearly impossible to use in this context. The solution, Rapoport says, is to deconstruct the concept, and he does so, breaking culture down into progressively more specific components. Culture, he says can be thought of as a group's *worldview*, which is composed of *values*. Values are expressed through *ideals*, *images*, and *schemata*. These values, ideals, images, and schemata lead to *lifestyles*, which in turn lead to *activity* and *activity systems*. He notes that attention to activities and activity systems, while the most concrete expressions of culture—expressions that architects and designers are most familiar with—must also include attention to latent aspects, or meanings associated with those activities and activity systems, which architects and designers are not accustomed to recognizing or articulating (Rapoport 2005:95).

Based on this conceptualization of culture, Rapoport argues that it becomes a particularly useful tool in approaching the three fundamental questions of EBS. Explaining that culture itself is what uniquely defines us as humans, he notes that, at the same time, culture is a lens through which we make distinctions between different groups of humans. This "paradox" is precisely what makes the concept of culture a useful tool in identifying important characteristics of humans, and in identifying the characteristics of environments that affect different people in different ways, thus addressing the first and second of the fundamental questions (Rapoport 2005:38). In exploring the third question, Rapoport identifies possible mechanisms that drive the interaction between people and their built environments: *physiology, anatomy, perception, cognition, meaning, affect, evaluation, action* and *behavior*, and *supportiveness*. Together, these

mechanisms form a continuum, beginning with the more concrete, physiologically-based aspects of human-interaction with environments, and moving toward the more abstract, cognitive, symbolic, and meaning-based aspects. Rapoport suggests that all of these mechanisms are themselves cultural, are related to culture, or vary with culture (Rapoport 2005:12-13).

Having identified the core set of questions that informs EBS, and deconstructed the abstract concept of culture which fundamentally underlies and links those questions, it is necessary to then conceptualize the concept of "environment." Rapoport describes "environments" as "(a) the organization of *space, time, meaning* and *communication,* expressed physically as (b) *cultural landscapes*, which consist of (c) *systems of settings* within which systems of activities take place. The cultural landscape, the elements comprising settings and their cues, and the activity systems are made up of (d) *fixed,* and *semi-fixed elements*, and both are created and occupied by *non-fixed* elements (mainly people) (Rapoport 2005:24). The elements of this conceptualization are also best thought of as lying on a continuum: progressing from the most abstract components of space, time, meaning and communication, to the more concrete components of the fixed, semi-fixed, and non-fixed features. And, once again, culture and cultural considerations figure heavily in aspects of each of the elements.

In this thesis, I explore the nature of human-environment interaction within the context of an American corporation. This particular context necessarily directs attention to a certain type of built environment, a certain type of end-user, and certain types of end-user activities and interactions. Specifically, I explore the nature of relationships between

a group of employees and their built work environments by articulating characteristics of the employees, including larger organizational, cultural, social, and technological contexts they work within, and characteristics of their physical work environments. In so doing, I draw upon the details of those employees' work activities, and their interactions with each other, the organization, and their built work environments, to gain a better understanding of the paradoxical nature of those relationships.

Rapoport's fundamental characterization of the dynamic, fluid, two-way interaction between humans and their environments naturally informs my broader theoretical perspective and my approach to this thesis, but it is the mechanisms driving that interaction, and Rapoport's conceptualization of the environment itself which will actually structure my description and my analysis. Specifically, I will describe three different groups of employees and their work practices, their built work environments, and the ways they engage with those environments within the framework of immediate and more distant contexts. I will structure each of these contextually-based descriptions using Rapoport's conceptualization of the environment, beginning with descriptions of the more concrete elements of employees' environments, and ending with the more abstract of these elements. Throughout, I will highlight several of Rapoport's driving mechanisms that appear to be present as employees engage with these elements of their environment. Chapter Four will focus on the immediate and distant worlds of support staff at Benton; Chapter Five, on the worlds of managers and directors; and Chapter Six, on the worlds of vice-presidents, or "VPs" at Benton.

In each of these chapters, I will first describe the employees' immediate worlds: their work practices, their interactions with the people and material objects, or props, that they need to in order to perform their work, and how these activities affect their engagement with, and their understanding of their built work environments. Next, I will move on to their distant worlds: describing larger business, organizational, social, and cultural factors that affect these employees' perceptions and interpretations of their built work environments and how they engage with them. Ultimately, the purpose of these three chapters will be to explore how the built work environment matters to these different groups of employees. What matters to Benton employees, and how they engage with their built work environments, ultimately depends upon the details and the workings of both their immediate and their distant worlds. What matters to them is based on what they do, who they need and want to interact with in order to do what they do, and the larger social forces that act on them.

CHAPTER FOUR: THE WORLD(S) OF SUPPORT STAFF

Introduction

We interviewed eight members of Benton's support staff, and talked briefly with two summer interns who were temporarily employed at Benton while we were there. Of the eight permanent employees, two worked on a lower floor of the building, in a department that had not yet transitioned to Resolve and the open work environment. It is worth noting that the support staff we talked to – all of them women – used different terminology when identifying themselves and their colleagues. Some of them referred to themselves and other support staff as "secretaries," others, as "executive assistants," and still others, as "admins." It appeared that how they self-identified was based primarily on their tenure at Benton, and perhaps secondarily on what appeared to be their age relative to the other support staff.

Two of the women who had been there the longest—one of them for more than 20 years—referred to themselves as "executive secretaries" and to fellow support staff as "secretaries." The two support staff working on the lower floor referred to themselves and their colleagues as "executive assistants" and "assistants." One of these women said that she had been working at Benton for 15 years. Those we talked to with shorter tenures at Benton, and who also appeared to be younger than the other women, identified themselves and their colleagues as "admins," short for administrative assistants.

While these different forms of self-identification are certainly due to the fact that Benton has simply changed the titles of support staff over the years to adapt to modern business conditions and trends, they may also reflect the different ways support staff

themselves view their positions in the organization, their roles, and their work. Those women who were hired at Benton at a time when support staff might have performed more "traditional" secretarial work, still prefer to call themselves executive secretaries, despite the modernization of their roles and their work, while those who were hired relatively recently have embraced the title of "administrative assistant" or "admin." Just as the roles and work of support staff have shifted and modernized, job titles for support staff have also changed, from "secretary" to "executive assistant" to "admin." Throughout this thesis, when referring to specific support staff at Benton, I use the same terminology that they use to identify themselves.

The Immediate Worlds of Support Staff

Work Practices of Support Staff

The nature of secretarial work or administrative assistance in most businesses is to quite literally support others in the organization. In fact, when we asked support staff to describe their jobs, they would, at least initially, use the word "support" in their own descriptions of their work. Before we moved onto more in-depth questions about their work practices, their first responses would usually be, "I support Allan Harkin and the Amco team." Although they officially "reported" to one person, (the person who writes their performance appraisals and the person they might go to for help in prioritizing work load), most of the support staff we talked to felt responsible for, and accountable to, many more people. One admin told us that she was responsible for all 300 people in C.S. When we asked Loreen, another admin, to describe who she considered her "work group," she laughed, and said, "Well, everyone! Anyone can come to me for anything!"

In general, support staff work for VPs and teams, and typically some combination of both. "Supporting" VPs means arranging their "T and E" or travel and entertainment, submitting and tracking their expenses electronically, managing their electronic or paper calendars, and answering their phones when they are away from their desks. Supporting managers and directors will occasionally mean answering questions or solving problems with expense reports and calendars, but usually involves some type of data entry, sorting and delivering mail, photocopying documents, arranging meetings (including finding rooms, food, and drinks), and keeping track of some of the more valuable office supplies, such as printer cartridges. For several of the admins, it also means being a "key operator," or someone who is responsible for answering basic questions or solving minor problems with the photocopy machines.

Although some of the executives at Benton (and to some degree, the designers at Herman Miller, as well) spoke of becoming a completely "paperless" office, at the time of our research, people were working mainly with stacks of paper that they called "decks," so there was considerable paperwork that support staff handled. This was true especially for the HR department, which had several cabinets full of employee files. Several of the support staff we talked to also participated in some type of voluntary community-service or charitable activity, such as organizing and participating in blood drives. One woman implied that such involvement was expected, saying, "Benton wants us to be involved in the community." This kind of activity, usually performed on personal time after work hours, was not limited to support staff, however, as we heard from managers and directors who were involved in community service, as well. None of

the managers and directors we talked to spoke of this type of work as being an expectation of the organization, however.

In general, the day-to-day work of support staff at Benton appeared to be highly varied, although certainly the extent of this variety depended to a large degree upon whom they worked for. Most support staff said that they appreciated this variety. The secretaries who had been employed at Benton for longer periods of time, usually 20 years or more, spoke laughingly of being "the information source" or "the go-to-gal" in their department. These more experienced secretaries are known by most to be general repositories of knowledge about all things Benton: its history and its personnel over the years, who to go to for quick resolution of problems, who among them has the "best" collection of office supplies, and, of course, the latest news. A large part of their work, they told us, was answering general questions. They seemed to take some pride in their ability to do so, and in their unofficial roles as "go-to-gals." Mary said, laughing, "[I've] been here a long time, and people just seem to think [I] know all the answers!" When asked who they needed to interact with in order to do their work, several of the support staff said that the people they needed and interacted with most frequently were fellow support staff across the organization.

All of the support staff we talked to seemed proud of their places within Benton and of their work, and felt that they were, if not entirely indispensable, at least valued by those they supported, and by the organization as a whole. Kirsten, an admin for the human resources group, (and perhaps not coincidentally also one of the younger people we talked to), said with some pride that the work of admins had changed, for the better, in

the last four or five years. Now, she said, admins are recognized as an integral "part of the team," something that, by implication, had not been the case in her past experience.

Support Staff and Their Built Environments

When asked directly about their comfort, and satisfaction with their built work environments, in general, support staff spoke less about the mechanics of their built environments and their own physical comfort, and more about convenience and accessibility to the people and material objects, or props, that they needed in order to perform their work. Loreen, an executive secretary, seemed a bit puzzled when asked about her overall satisfaction with her work area. After thinking for a moment, she said that it was hard for her to answer that question, as she rarely sat for any period of time at her desk – she was usually on her feet, going somewhere to retrieve or deliver something, and, she said, that was actually the way she preferred to work. She added, almost as an afterthought, that she had swapped her Aeron chair (the more expensive chairs that were distributed to all the employees on this floor with the move to the Resolve workstations and the open environment) for a "regular" chair because the Aeron chair seemed to exacerbate her injured hamstring.

Mary, a 20 year veteran at Benton, seemed quite happy with her Resolve pod, and said, "...everything [in her Resolve workstation] is convenient," and within reach when she is seated at her work station. Another secretary reported that she asked facilities personnel to lower the wall on one side of her pod. Now, the wall looks like a walk-up service counter: it makes it easier for people to see her, and perhaps feel more comfortable approaching her with their requests. This lower wall also has given her a

direct view of the outdoors via the large bank of floor-to-ceiling windows adjacent to her work area.

Management of office supplies, however, has become more difficult for support staff in their new open environment. Where there was formerly a central supply storage room, management now decided that each member of support staff would be responsible for her own team's store of supplies. This typically means that each secretary or admin stores her group's supplies in a cabinet located outside her pod. It also means that support staff must rely upon their own informal networks to keep track of who has a surplus or a deficit of what types of supplies. According to Cassie, this gets confusing, and is probably not the most efficient way of managing office supplies. In addition, she commented that in her case, because the supply cabinet is placed flush against her pod wall, whenever someone opens one of the cabinet drawers, her entire pod shimmies and shakes. She noted that others had experienced this as well, due to the light weight of the pod wall material.

Visual Issues

Despite some early hesitation in talking about their physical interactions, with time and further questioning, support staff began to describe some of the more concrete, or sensory aspects of their reactions and experiences with their work environments. These sensory aspects include visual responses to, and interactions with the built work environment. More than one person, for instance, complained about the lack of task lighting in their pods. Kirsten, an admin lucky enough to have a pod tucked into a corner between two sets of windows, said that she used the light coming from those windows to

compensate for what she perceived as low light levels and lack of task lighting. She and her two pod mates make use of these same windows' reflective properties to look at each other while talking, and to see who is coming around the corner of their group of pods, all without having to get up out of their chairs. Kirsten also said that she can look into the windows to see if her colleague is busy concentrating on something, on the phone, or with someone in her pod, and will wait until she is free before approaching her.

Support staff spoke frequently about keeping track of their superiors and their coworkers. "Keeping track" meant literally seeing where people were and what they were doing, of course, but it could also mean monitoring the organizational, political, and social statuses of those same people at any given time. The latter seemed to take on increased importance with support staff as our fieldwork progressed, perhaps due to the many organizational and personnel changes that began occurring near the end of our time at Benton. As people were shifted around the organization, promoted, demoted, hired or laid off, support staff assignment and reassignment, at times, appeared to fall through the cracks. In fact, sometimes managers, directors, or VPs were hired, or moved into different groups, only to find that they had no support staff at all. Usually support staff agreed, at least informally, to help these new people only as their time allowed, and only until formal assignments could be arranged. Again, support staff seemed to rely upon their own informal networks to discover where these gaps in administrative support existed within the organization, and then to decide who among them was best positioned to fill those gaps.

Certain elements of the built work environment served as tools that support staff used to maintain visual awareness of their coworkers and their activities. Several spoke to me about the white board "doors" at the entrance to each pod, a white board attached with hinges to Resolve pods that could swing open and closed. While at Benton, we saw the door used in several ways. It was fairly common to see a pod with the door "closed," with the occupant either on the phone, or engaged in what Benton employees called "heads-down" work, meaning work that demanded some degree of concentration and relative quiet. From what we observed, this "heads-down" work usually meant that the person could be found hunched over a stack of paper, a calculator, or a computer.

In addition to signaling the performance of a certain type of work to others, people also used the doors as a way to communicate with their coworkers about their schedules or their activities. We frequently saw white boards with vacation days written on them, meeting times and locations, or other notes, when people were away from their pods and wanted to let others know where they could be found. The support staff we talked to all said that they appreciated the white board doors and found them to be very useful, because it was a quick and easy way to keep track of their superiors and their coworkers – with a short walk and a glance, and without disturbing anyone, they could see where people were, and how long they would be gone.

One of the oft-cited advantages of the open environment – increased visibility leading to increased communication, according to Herman Miller personnel, members of Benton upper management who drove the third floor reconfiguration, and some EBS scholars – appeared to play out as hoped for with some of the end-users at Benton.

Indeed, simply standing up in one's pod and looking around was described by some of the people we talked to as being the quickest and easiest way to see who was where and doing what. "Being tall is useful," noted Cassie, an admin. She said that she would often just stand up and look out over the sea of pods to get a broader view of what was happening on the floor around her: noting who was in their pod working "heads-down," who was on the phone, or who was not there.

Auditory Issues

Auditory considerations also featured prominently in conversations with Benton employees about their built work environments. Almost everyone reported that "noise" was, if not a problem, definitely noticeable. Concerns with "noise" at times appeared to be conflated with concerns about distractions, and to a lesser degree, confidentiality, (both will be discussed later in this chapter), but all of these issues certainly loomed large in most people's minds. Noise was also one of the first issues addressed in the printed material published by Herman Miller and distributed by facilities personnel at Benton. This information, actually a packet of several different flyers called "New Community Workplace Guidelines," was given to all employees who had moved into the reconfigured workspace: most found the packet on their desktops on their first days in the newly designed workplace. The flyers offered some suggestions for adapting to, and working in the new open environment, including one called "Emily Post for Benton." Most of the guidelines on this flyer concerned how to manage interruptions, distractions, privacy, and personal security in the new open work environment, as well as some ground rules for the display of personal items in workspaces.

Without knowing about these informational flyers and the guidelines at the time, one of the first things we asked participants upon our arrival at Benton was to imagine that they were helping a new employee get started at Benton: what "rules" for good citizenry while working in this environment would they pass along to the new employee? Many of the participants, regardless of their position within Benton, would answer this question with "Keep your voice down," and next, "... no more speaker phones." At the time we were surprised at the consistency with which we heard these same answers. Only later were we to learn how heavily publicized these ideas were, not only in the information packet, but also by Herman Miller personnel themselves, members of Benton facilities department, and executive management who were instrumental in driving the move to the open environment. It seems likely that the issue of noise was being addressed proactively, perhaps based on prior knowledge of and experience with similar transitions to open environments, where noise and distractions were cited as concerns.

Several support staff noted that working in the new open environment now allows them to hear other people's phones ringing, perhaps more so than in the previous environment. Apparently, the acoustics on the reconfigured floor now make it difficult for people to locate the sources of sounds, either because of the noise-canceling affect of the air conditioning system, or because of the layout, structure, or material of the Resolve pods. Mary, for example, said that she thinks she hears her phone ringing, and races to her pod to answer it, only to find that the ringing was coming from another phone in a different pod. She also noted that "...you have to be quieter," and that "directionality" combined with the small distances between pods is an issue: "...people may be on

different sides of a pod wall, but if they are facing each other, the noise is unbearable."

Cassie noted that she deliberately turns her own phone's ring tone down to its lowest level so that only she can hear it when she is working in her pod. She said pointedly that she thought everyone should do that, because hearing all the phones ringing was very distracting. However, it is likely that few people in the organization, other than fellow support staff, shared Cassie's concerns. No doubt managers, directors, and VPs were not as sensitive to the issue because they were not responsible for answering others' phones: the sound of ringing phones was simply part of the background noise of the office, and, ultimately, was the responsibility of someone lower in the organizational hierarchy.

Not surprisingly, there were some areas on the floor that appeared to be particular centers or magnets for noise. Support staff whose pods were located near conference rooms, the kitchenette and copy room, or major walkways told us that they were frequently disturbed by noise – from work activities around the copy machine or printers, noise from the machines themselves, or, more commonly, loud conversations taking place in those areas. Conference room activity and noise from within the rooms was not a problem, according to Kirsten, whose department's pod cluster is adjacent to a popular conference room. Rather, the noise problem occurs as meetings end: people continue their loud conversations as they leave the conference room, forgetting to modulate their voices once they are back out on the floor. This seemed to be the case throughout the more heavily trafficked walkways as well: once people were out of the relative privacy and quiet of their individual pods and had moved into these major "thoroughfares," they

felt more comfortable raising their voices to levels that sometimes disturbed those around them.

Support Staff and Meanings of Their Built Work Environments

The immediate worlds of support staff include engagement with, and understandings of the fixed and semi-fixed elements of their built work environments. These fixed and semi-fixed elements are themselves quite concrete and tangible, and are perhaps some of the more obvious elements of the built work environment. The immediate worlds of support staff also include, however, their ideas and interpretations of space, privacy, democracy, identity, and aesthetics, all of which could be understood as aspects of Rapoport's second, slightly more abstract conceptualization of the built environment: the organization of space, time, meaning and communication (Rapoport 2005: 24). Although the organization of space, time, meaning, and communication is ultimately dictated and controlled by decisions made in "distant worlds" by designers, facilities personnel, and executive management, they are expressed through the built work environment, and they affect, and are understood and interpreted "on the ground" directly and immediately, by those who work within those environments. Once again, the nature of those effects, understandings, and interpretations depend upon the work practices of the end-users and what matters to them.

Space

According to Herman Miller designers, executive management, and facilities personnel at Benton, the move to an entirely open work environment was intended to move people quite literally out of offices and cubicles, and into more open and

collaborative spaces. The idea was that this more open environment would lead to increased numbers of encounters (both chance and planned), which in turn would lead to increased communication and ultimately to increased innovation. The elimination of offices and the larger cubicles, however, placed a premium on conference rooms, and reduced the number of spaces where small and mid-sized groups of people could meet. Conference rooms were designed for larger groups of 15 to 20 people, while Loft rooms were designed to accommodate groups of three to four people. In addition, Benton employees were not allowed to keep second chairs or other furniture in their individual workspaces, a rule apparently intended to discourage meetings in pods, even one-on-one meetings.

This new lack of space for smaller and mid-sized groups directly affected the support staff at Benton. In fact, in our conversations with them, support staff talked frequently about the trouble they had arranging meetings for their superiors. This activity, while certainly not the most important part of their job, had apparently become in their view needlessly complex and time consuming. This was due in part to an online reservation system that was not being used properly, but it was also due, according to what support staff told us, to a chronic lack of appropriately sized meeting spaces. Cassie, an admin, told us that the "prime" number at Benton was eight – when she is asked to reserve a conference room, it is usually for a meeting of eight or more people. This is problematic because rooms that can accommodate this number of people, and that are actually available, are hard to find. People often reserve these rooms online and meetings get cancelled, but the rooms are not "released" back into the reservation system.

Support staff must then call around to find out if conference rooms are actually being used.

In actuality, conference rooms were too large for only eight people. Employees at Benton, regardless of title, told us that they needed more meeting spaces for medium-sized groups, such as for eight people. Loft rooms, intended for three to four people at most, are much too small for a group of eight. The informal meeting areas, such as the rolling tent and the igloo, were designed by Herman Miller precisely for these types of meetings. However, the people at Benton, at least during the periods of time that we were there, seemed reluctant to use them. Some complained that pieces such as the igloo felt claustrophobic; others noted that none of the pieces were particularly sound-proof, and that they thought their meetings would disturb those seated near the pieces. Several noted that some of the pieces had been "taken over" by VPs as their private offices. Still others were concerned about others overhearing discussions about proprietary information. Kirsten said that as an HR admin, she and those in her department were particularly afraid that people might be able to hear discussions taking place in these pieces.

Privacy

In fact, privacy, and the protection of confidential or proprietary information—whether that information was on a computer screen, on paper, or being discussed during conversations—proved to be a common topic during our discussions with employees at Benton. Concern about these issues cut across job titles, and different types of spaces, but actual meanings of privacy and definitions of confidential or proprietary information

varied considerably. Different types of privacy were discussed, such as acoustic, visual, informational, or personal privacy, but were either not often identified as such, or were conflated with other issues. For example, interviewees referred to "noise issues," or "overhearing" or seeing something they felt they were not supposed to hear or see.

Acoustic privacy in the open environment, in particular, was one of the greatest concerns for the Benton employees whom we interviewed. However, unlike managers and VPs at Benton, for support staff this concern was less about the possibility of distractions and interruptions, or inadvertently sharing or overhearing confidential or proprietary information, and more about overhearing personal conversations and breaking general "rules" suggested by Herman Miller and facilities personnel about the use of speaker phones and the need to be mindful of their own noise levels. Laura, a secretary, said that now "...you can hear everything." Here, she was referring to the fact that she could hear everything that was going on in the pods around her, including personal telephone conversations, which she felt she was not supposed to hear. Another secretary, Mary, expressed discomfort with the fact that because of the position of her pod relative to her boss's pod, she felt "right on top" of his meetings. Interestingly, her boss, Matt, a VP at Benton, had moved a small table into his pod where he conducted these meetings, despite the "rules" expressly forbidding this type of activity in individual work spaces. It seemed that Mary's discomfort had more to do with the fact that she was overhearing her boss's meetings at all, than with the possibility that she was actually overhearing confidential information.

The issues of visual and personal privacy, and the protection of confidential or proprietary information, were often conflated at Benton. Typically, with the move to an open work environment, end-users experience a reduction in visual privacy, often interpreted as a loss of personal privacy. Indeed, there is no longer much individual "back stage" space and, for most people this means that there is an increase in the amount of work involved in their "performance" of work. Support staff at Benton, however, almost universally reported that they had more visual privacy now, than they ever had in the previous environment. Several of them said that formerly they had worked at desks that were located out in the open, in the middle of high-traffic areas on the floor. Laura, a secretary, said, "I get a lot more done now, because I was out in the open...it was harder to remain focused...[now] someone has to really want me to find me." Now, too, she can type up organization charts (which are considered confidential), and, she said with a laugh, "I can blow my nose!" Another secretary said that now, people do not come to her for "every little thing," presumably because she is less visible.

However, almost all of the support staff I talked to said that they were concerned about confidentiality and the protection of proprietary information in this open environment, even though these were not really problems for themselves. They said it was a very real problem for managers and directors, though, and especially for VPs, and the HR department as a whole. It seemed to be common knowledge that VPs and the HR department regularly handled performance reviews, longer-term organizational plans and strategy, organization charts, finances, and other sensitive information that should be protected.

One member of the support staff at Benton who proved an exception to this was Kirsten, the admin for HR. She noted that she regularly had to handle employee files, and that those files were stored in a bank of locked file cabinets located near the HR department pod cluster, but out in the middle of a public area. She told me that she felt uncomfortable accessing those files, because she felt like people in the area would watch to see which files she was working with: was she pulling an A file or a B file? She also said that the problem was simply magnified once she got the files back to her pod. There, people can easily approach her from behind, and she must quickly close the file, or turn it over. She also said that she was "deathly afraid" of leaving confidential papers in the copy room, or in the printer or shredder.

Another issue for Kirsten, and the entire HR department, was the care with which they had to arrange private meetings with employees. Typically, employees would avoid going to the HR department in person: no one wanted to be seen approaching or interacting with the HR department, because that was usually interpreted to mean that there was some kind of trouble, either with the employee or with the employee's colleagues or superior. Instead, the employee would communicate with HR personnel via email or phone to request a meeting with them. Then, Kirsten said, the HR person would always suggest that they meet in a "protected" spot, or an area where they would have some visual privacy, on a different floor, in order to avoid the prying eyes of the employee's colleagues. Paradoxically, Kirsten admitted that she is often approached in very public places, such as the cafeteria or even the restroom, by employees needing to talk to her about confidential personnel issues. Nonetheless, in Kirsten's case, and for the

HR department as a whole, the issues of visual privacy and the protection of confidential information seemed to be a very real concern.

Democracy and Status

In addition to issues of privacy and confidentiality, there were other, slightly more abstract aspects of the built work environment for support staff at Benton. In fact, although they might not have articulated it as such, employees assigned certain meanings to the built environment, while the built environment, in turn, was actively communicating certain meanings to them. One such meaning was the idea of workplace or organizational "democracy." The word democracy is contained within quotation marks here because it is not being used by employees at Benton in the formal sense of the definition: e.g., employees do not vote for their VPs or CEOs. Instead, employees we talked to at Benton seemed to use the word casually, and rather broadly, apparently as an adjective for the look and feel of a new open work environment that was actively signaling more of a flattened organizational hierarchy, or a new aesthetic egalitarianism, through the elimination of managers' and VPs' offices.

Support staff appeared to have mixed feelings about this new "democratic" work environment. Some appreciated the new aesthetic egalitarianism. Kirsten, an admin in HR, talked about liking the new environment "because it's more democratic." She explained that she likes the fact that her bosses now sit in cubes just like hers, and that they are not always in an office with the door closed. She also said that she likes being right next to the people she supports, and that she feels more "a part of the group." Others, like Mary, a secretary, said pointedly, "I don't think the VPs should be working

in a cubicle just like mine, sitting right next to me: they should have their own offices." When asked why, she appeared to be stumped. She took some time to think about it, and finally said that it was because "they must deal with lots of confidential information!" While not specifically stated, the assumption here seemed to be that status markers still mattered, and some were expected: some employees needed more privacy than others, simply by virtue of their position within Benton's organizational hierarchy.

At the time of our research at Benton, all employees, regardless of position, were still adjusting to the new open work environment. It was clear, however, that most support staff remained acutely aware of some of their superiors' dissatisfaction, discomfort, and even resentment about the new open environment and the loss of their offices. Apparently, despite this new "democratic" work place, there still existed the inevitable pull of hierarchy, status and status consciousness among employees, and status differences clearly did still exist at Benton. Laura, a secretary, noted that while the open environment is an improvement for her, it is not for the people who had offices in the previous configuration. "They must feel it's open all the time," she said. Mary, another secretary described a CFO, who, the day before had apparently exploded in frustration, and stomped out of her pod yelling, "I hate it! I hate it! I hate it!" She said that she did not approve of the CFO's behavior, though, saying, "She shouldn't have done that out in the middle of everything like that!"

While support staff appreciated the Resolve pods' white board "doors" as tools that signaled "do not disturb," they still seemed a bit uncomfortable working in an environment that lacked the unambiguous signals of closed office doors. Cassie, an

admin said that she "feels bad" when she thinks she might be interrupting executives when they appear to be engaged in "heads-down" work, and she does not like doing it. However, some support staff reported that they now have more access to the people they report to and support. This, they said, makes their job easier. It should be noted that Linda, an executive assistant on the second floor—a floor which had not yet been reconfigured into the new open arrangement—said that the hardest part of her job is getting "face time" or access to her boss. It seems that support staff on the third floor, while still adjusting to a new "flattened" (or, at least aesthetically flattened), office landscape, are nonetheless seeing some benefits in that new landscape.

Aesthetics

The aesthetic qualities of the built work environment – qualities that are often treated quite casually by everyone except designers and architects – were a part of support staff's immediate worlds at Benton, and proved to be one of those new-found benefits. In this new open environment, everyone now has equal access to natural light, and to views of the outdoors. In the previous environment, because offices lined the perimeter of the floor and cubicles filled the middle areas, only those with offices (usually VPs) had that kind of access. Now, with the elimination of offices and the introduction of pods with low walls, everyone on the floor enjoyed exposure to natural light, if not full views of the outdoors. The views and the natural light both contributed to an overall fresh and modern aesthetic at Benton.

This new modern aesthetic was cited by Herman Miller, facilities department personnel, and some members of management, as potentially attracting younger

employees. In addition to the natural light and views of the outdoors, Resolve pods are whimsically designed, and there are flashy images of models wearing Benton products splashed across external pod walls that lined the walkways. Indeed, our conversations with two summer interns, Lexi and Justin, who were both college students and appeared to be college-age, seemed to confirm this attraction, although they both had some of the same concerns as the permanent employees we talked to.

Justin and Lexi both said that they loved the environment "right away" as soon as they arrived. Justin, who had never worked in a corporate environment before, said that he liked "...the openness, the natural light, [and] the colors they chose," and that it all looks very "modern." He also liked the spacious walkways, and that there was room to "move around." He pointed out, however, that he was distracted by "indirect" interruptions, or, being able to hear everything going on in pods around him. "You can practically hear the person on the *other* end of the phone conversation next door," he laughed. Lexi thought that the work environment at Benton looked like a set on the MTV show, "Real World," but said that the first thing she noticed was the noise, "...but that's good in a way!" When asked why it was good, she said that people *should* be aware of how loud they are being, what they are saying, and who might be around. She shrugged matter-of-factly, as if to say, "It's just common sense." Ironically, when asked about her ideal work environment, she promptly answered, "I'd want a closed office, with walls, a ceiling. You know."

The Distant Worlds of Support Staff

Because of their position within the organization, support staff are perhaps more removed from their distant worlds than are other groups of employees at Benton. Not surprisingly, they have very little, if any, voice in the decisions that are made in those distant worlds. Those decisions, however, directly affect them and their immediate worlds: their work and how they perform it, the people with whom they must interact in performing that work, and, their built work environments. Decisions made in support staff's distant worlds are based on the world views, goals, and practicalities of the Benton organization (executive management and facilities personnel, for example), and designers. These worldviews, goals, and practicalities often move forward on their own trajectories, of course, and do not always align with the interests or the requirements of employees/end-users in the organization. This seemed to be true in the case of support staff at Benton, and their sometimes invisible work.

Effects of Organizational Change

For example, Benton executives made the decision to restructure the internal operations of the customer support group, breaking up teams of employees who worked together based on the customer they supported, and forming new groups based on business function (e.g., women's outerwear, or children's socks sales). People who had worked next to the same colleagues for years, now found themselves located in different areas of the third floor, sitting next to entirely different people. In the general confusion caused by this restructuring, managers, directors, or VPs who require administrative support now simply to go to the support person located nearest them, whether that person

is officially assigned to them or not. As Laura explained, she and another secretary now unofficially support a new VP, who arrived to find that he had not been assigned a support staff member. He asked her if she would support him, and she directed him to her boss, who told him no. Laura said that she felt bad for him and commented that "...they ignore the administrative" when senior executives make announcements concerning personnel and organizational changes. "They just assume it will happen." And, as Laura's experience shows us, "it" does end up happening: support staff at Benton usually end up working together, informally and on their own, to fill any gaps in support.

Despite the fact that support staff do the important work of providing administrative support to those in the organization, this work is often invisible to others, and the support staff themselves appear to be susceptible to falling through the cracks of the organization. This is especially true in an atmosphere of almost constant organizational change, such as existed at Benton at the time of our fieldwork there. Indeed, support staff at Benton do not share a formal group identity or officially recognized affiliation with other support staff. Managers, directors, and VPs generally have weekly or monthly meetings where company news is communicated, ideas are shared, and problems are aired and discussed. Support staff do not have these meetings. Instead, they rely on informal networking and ad hoc hallway or cafeteria encounters to get their news, share ideas, and resolve issues that may arise. Mary, a secretary, noted that when she or her colleagues are wrestling with a thorny problem, they rely on each other, and will often seek the help of a secretary in another building who has been with Benton for more than 35 years. Even the performance evaluation system at Benton does

not currently recognize or accommodate support staff, or, as Laura noted wryly, employees who do not "sell." Laura went on to say that when she asked her boss, a VP, how she should complete her evaluation, the VP told her to "just wing it," and that she would go back and "fix it later." Another secretary admitted that she did not know how her performance was actually evaluated.

Benton executive management, facilities personnel, and Herman Miller designers made the decision to work together to create, plan, and install a new work environment at Benton. With the elimination of offices and the new open work configuration, the built environment at Benton now signals a new flattened organizational hierarchy, or, "democracy," in the words of some employees. Despite this new aesthetic "democracy" represented by the open environment, support staff I spoke with appeared to remain acutely sensitive to the existing organizational hierarchy. Some support staff expressed overt disapproval of the new arrangement, saying "it isn't right that my boss sits in a cube just like mine," and maintained that executives have special needs for more space and privacy and should have their own designated meeting areas. Another observed that the VPs she supported were informal with each other, always sticking their heads over their pod walls to communicate with each other, but that she did not feel that she could—or should—communicate with them in the same manner. She noted that she took care to walk around to their pod doorways to talk to them face-to-face, because she thought it was more respectful.

Although the organization and the designers hoped that the built environment would express a certain egalitarianism and increase communication, end-users, and

especially support staff, recognized that the same organizational hierarchy was still firmly entrenched, and were reluctant to change the way they approached and interacted with their superiors. In fact, the lack of status markers and unambiguous signals (such as closed office doors), added to the interpretive work of support staff: it took effort on their part to determine when they could interrupt their superiors, and when they should not.

It seemed that all three of our visits to Benton coincided with some degree of organizational change, and our conversations with employees almost always circled back to how they were adjusting, almost continually, to these different kinds of changes. Support staff at Benton bore the brunt of some of these changes, from the relatively minor effects of the increasing "churn" of managers, directors, and VPs, to the more traumatic after-effects of a substantial reorganization that included a combined voluntary retirement and layoff of 350 employees. Learning how to recognize and accommodate the different needs and preferences of those they support is a large component of support staff's work. When the roster of those they are responsible for supporting is constantly changing, it means that support staff are continually adjusting to the needs and preferences of new people.

However, it was hard for support staff to complain about the added stress of this continual adjustment or about the redesigned work environment, when coworkers were disappearing, either voluntarily, or due to layoffs. In fact, on our last visit to Benton, we found that Cassie was gone. Mary informed us that Cassie had been out on medical leave, and then decided to take the voluntary retirement package. Mary went on to describe an atmosphere in the department that was thick with tension and a sense of

foreboding, where employees seemed to be keeping their heads down, and holding their collective breaths: "everyone's just waiting," she said, to see what happens next. Kirsten, the HR admin, however, said, "...being at [Benton] is all about change—but that's good!" She then told us that it was important to learn to love change, and not resist it like some people do, and that one has to learn how to become adaptable and flexible. Whether Kirsten's attitude was due to her naturally sunny disposition, or the influence of her HR superiors, was not clear. It is clear that support staff face an uncertain future at Benton, and that more change is imminent. Tom, a VP who was one of the main drivers of the move to the new open office environment and to "changing the culture" at Benton, stated that he seldom interacted with his secretary, and thought that they [support staff] should, or would be eliminated.

Conclusion

Knowledge of support staff's immediate worlds, or, their work practices and interactions with the people and material objects that they need in order to perform their work, lends insight into their direct engagement with, and understandings of the organization, their work, and their built work environments. Similarly, knowledge of support staff's distant worlds, or, the larger social, cultural, and business arenas where decisions are made that affect the organization and them, calls attention to how those decisions actually play out and are interpreted "on-the-ground" at Benton, including the role that the material work environment plays in the communication and execution of those decisions.

There are several lessons that can be drawn from the experiences of support staff at Benton. I will briefly identify those lessons here, before discussing them further in the final chapter of this thesis. First, as demonstrated in this chapter, while specific characteristics of the material work environment certainly matter, larger forces heavily influence how employees perceive, understand, and engage with their work environments. In particular, the organization and organizational issues actively shape and constrain how employees respond to the work environment, including communicating to employees how they should feel about it. Second, although some organizational goals can be achieved through manipulation of the material work environment, not everything can be designed: indeed, support staff designed their own systems when necessary. Third, the open environment both aids and impedes employees as they manage horizontal and vertical organizational change: the open environment in some ways eased, and in other ways increased the volume and types of work for support staff as they dealt with the effects of these changes. Fourth, end-users' past experiences and their points of comparison matter as they evaluate their material work environments: is their new work space more or less exposed? Are their superiors more accessible, or less accessible? Finally, the descriptions in this chapter highlight distinctions between space and place: through support staff's understandings and experiences, the material work environment seems less a passive space comprised of neutral characteristics, and more an environment that consists of sets of places, imbued with end-users' expectations, meanings and judgments, and that actively influence those end-users.

CHAPTER FIVE: THE WORLD(S) OF MANAGERS AND DIRECTORS, OR, "THE MIDDLE"

Introduction

We interviewed 17 managers, and nine directors at Benton. Women were well represented in both groups: 12 of the managers, and 6 of the directors were women. I have called this group of managers and directors "The Middle" because they fall into the middle tier of Benton headquarters' third floor organizational hierarchy, where support staff occupy the lowest tier, and VPs occupy the top tier. I have grouped both managers and directors together in the middle tier, because their work practices, responsibilities, and status as a group differ substantially from those of support staff and VPs, but less substantially from each other.

It should be noted, however, that there are some differences between managers and directors at Benton. Directors occupy a higher position in the organizational hierarchy than do managers, and they usually have larger groups of people reporting to them. Directors also have more responsibility, such as long-term business planning and strategy development, and can be in charge of entire areas of the business, usually expressed in millions of dollars. Managers report to directors, have fewer direct-reports and responsibilities, and appear to engage more in "number-crunching" activities rather than long-range strategic planning.

"The Middle" can also be categorized more broadly into two major groups, each of which includes both managers and directors. The first group is responsible for external customers of Benton, and includes sales directors, account managers, and people who are responsible for sales logistics, systems, and processes. The second group of

managers and directors works for customers inside of Benton, and includes the human resources department (HR), retail planning, communications, and "casual wear." This second group is more of a functional group, and bridges different areas, as HR, retail planning, communications, and casual wear, all support people across different customer areas within an entire division of Benton. This distinction, between a focus on external and internal customers, is important in understanding how these particular employees work, engage with, and interpret their built work environments, and will be discussed in more detail later in this chapter.

The Immediate Worlds of Managers and Directors

Work Practices of Managers and Directors

Although certainly the specific work tasks of individual managers and directors in different groups vary, it is possible to summarize the work practices of managers and directors as a group category. Almost all of the managers and directors we talked to said that they spend their work days in their pods, using their computers or talking on the phone, often engaging in both activities at the same time. Any significant amount of time they spend outside of their pods is spent in meetings: with other managers or directors, with VPs or members of executive management, or with customers, either at Benton or at a customer site. In fact, meetings of all kinds figured heavily in our discussions with this group of employees, several of whom said that they use meetings to define who they interact with or work with: "The people I am in meetings with." Managers and directors alike made a clear distinction between people they meet with, and people they might be

physically near and chat with, or who may even perform similar tasks, and the people they report to and who report to them.

Managers and directors also frequently handle different kinds of material objects, or "props" in performing their work. Most will work with stacks of paper at some point; often spreadsheets, organizational charts, or printouts of PowerPoint presentations, which are updated, compared, and analyzed. Others work with "representation boards," or large cardboard posters affixed with collections of advertisements, or with actual "product," or items of clothing that are stored on large rolling racks. As they described their work and the props they need, managers and directors at Benton talked about the need for both analytical and creative skills in their day-to-day work. Their analytical skills are used while working with data and spreadsheets, for example, while they might use their creative skills in negotiating with different kinds and levels of people, or in developing solutions to problems.

Throughout our discussions with managers and directors at Benton, the analytical aspects of their work were often stressed more than the more creative aspects. They frequently reported a need to concentrate for significant periods of time, gathering data from different sources, then compiling and analyzing that data. Both the sources and the product of this analysis were often deemed proprietary or confidential, so that discussions about the need for time and space for this kind of "heads-down" work were accompanied by talk about the danger of interruptions and the need for privacy, both auditory and visual.

In addition to this solitary analytical work, managers and directors also described frequent collective analytical work, which required meeting with one or two of their coworkers in their pods, usually over their computer screens, or over paper documents. While this type of group work probably included a certain degree of problem-solving, it seemed to be less of the "brain-storming" variety, and more incremental and routine, based on data. This kind of close work with small groups of colleagues also demanded a degree of privacy, both auditory and visual, because data they were working with were often considered proprietary or confidential.

Overall, managers and directors at Benton seemed to feel that the pace and the sheer volume of their work were increasing dramatically. While this was almost certainly due to the recent and sizeable layoffs affecting several different departments at Benton, it was also due to a shrinking global marketplace, and heightened global competition and demand. Terri, for example, a merchandising manager, explained that the increase in her workload was due in large part to the acceleration of the entire production and delivery process across the seasons, saying "...we used to work in one season, now we work in three." In the summer, Benton is shipping fall and winter goods, beginning to manufacture spring material, and creating ad boards for the following fall: this increases the volume of props that need to be stored in one's pod at any one time, as well. The sense that workload-volume and pace were increasing, along with pressure, was a common theme in our conversations with managers and directors at Benton. As alluded to above, all of these issues affected their engagement with, and their perceptions and understanding of their built work environments.

Managers and Directors and Their Built Work Environments

Like support staff, most of the managers and directors we talked to at Benton appreciated the basic efficiency of their Resolve pods. Marianne, manager of communications for CS, admitted that although she had worked in an office previously and knew that it had more space, that space was actually not very useful. She said that she was always getting up and walking around her desk to get what she needed off a bookshelf. She does not need to do that anymore. Betsy, a marketing manager, seemed to concur, and said that she thought the pod itself is really an efficient layout. She can be at the phone and reach to get to materials and never have to get up.

Although they were asked to jettison most of their accumulated paper upon arrival in their new workspaces, the new space efficiency of their pods also seems to have inspired a new awareness of paper usage and paper storage in general among managers and directors. "I don't pack-rat like I used to. I've become smarter about how I file," Marianne noted. Dan, a marketing manager said, "This environment has forced me, and others, to be more efficient," and to deal with their paperwork more promptly – at least more promptly than they used to. Danielle, a manager of sales logistics, said that, in general, employees at Benton suffer from "paper dependency" but "they are trying to wean us." She admitted, though, that she prefers to work with paper, because she can jot notes down as she works, and it is easier on her eyes.

There were a few people who were less enthusiastic about their individual workspaces. Terri noted that while people are generally pleased with the convenience of having everything within reach, those who work directly with props and "product" do

have some trouble with space and storage in their new pods. She does not have enough room for some of her props, for example, especially her "representation boards," or the approximately 30-inch by 25-inch paperboard posters they use to review and develop advertisements. She also has trouble with accessibility to products, and some display items. It would be nice, she said, not to have to roll big clothing racks across the floor whenever she needs to work with product, and declared, "...this [environment] is just not laid out for someone working with this stuff. It's laid out for people who work with files." Dan criticized the materials used in construction of the pods. Although they were designed specifically to be lightweight and flexible, like admin Cassie, he thought that the pods were too flimsy. He noted that when his group's shared printer is running, all three of the pods in their cluster are shaking. "It's just flimsy construction," he said with some irritation.

Visual Issues

Many managers and directors we talked to pointed out some new capabilities facilitated by the open environment. One was an increased visibility across the floor and within their work groups. Several talked about how they can now look out over the floor and quickly get a sense of what is happening, not only within their immediate pod cluster or work group, but also across large areas of the floor. Pamela, a director, had a specific word for this activity: she called it "prairie-dogging." But Hope, an HR manager, cautioned that this new visibility may be somewhat superficial, and even misleading. She said that a few of the people who she supports recently remarked that they never see her anymore. She realized that because it was so easy now to just stand up and take the pulse

of the place, she was not actually walking around and talking to people as much as she used to. Hope noted that any knowledge gained by this new visibility can actually be quite thin, because it is not based on real conversations and connections with people. "You think everything is all right, but it might not be," she explained. She said that she is now making more of an effort to actually get up and walk around more, to reestablish contact with "her people."

Ironically, while many people claimed that the new open floor plan provided better visibility, others felt that the open layout and the break-up of customer-aligned teams combined to cause a new *lack* of visibility. Specifically, managers and directors said that they had a hard time either finding people, or "tracking people down." A common complaint we heard was that it took valuable time to "plan" to meet a coworker. Here, the word "plan" seemed to mean calling or emailing the person ahead of time, and then walking across the department. Betsy said she will call first, to make sure the person she wants to talk to is there, because it is a "far walk." While there is certainly new distance between people who need to work together due to the break-up of teams, in most cases, a walk was likely no more than 30 or 40 seconds. Lanie, a sales systems manager, pleaded with us to talk to "someone" about placing a floor map and directory by the elevators. She noted that people who are unlucky enough to be located on main walkways frequently get asked for directions, or, about where to find certain people.

However, the majority of managers and directors whom we talked to at Benton said that the open work environment, with its increased visibility, has also increased the amount, and the variety of communication that can take place between coworkers. Dan

said that when they first moved into the open environment, he and his coworkers would get up and walk around to each other's doorways when they wanted to talk. Now, they just talk to each other through the pod walls whenever they have a question, or something to say. He said that he appreciated the fact that this environment gives them the ability to have a conversation with their coworkers anytime, to "butt in when you know you have a piece of information that they need, or a perspective that you feel it's important that they understand."

Like Dan, several other people noted that the open environment facilitates more opportunities for impromptu communication: people overhear a conversation taking place in an adjacent pod, and will pop their heads up and chime in if the topic is something that applies to them. Michelle, an HR director said that new environment actually drives her colleagues in HR out and about on the floor, which stimulates conversations that sometimes lead to quicker resolutions of problems, or prevent those problems from escalating. Lilian, an HR manager agreed, citing an example of how the open environment allowed her to quickly bring together three different people to help her resolve a problem. Because of the new visibility, she easily brought together the people she needed, corrected the problem, and, at the same time, made sure that everyone understood the problem and the solution in the same way. Lilian said this instance of problem-solving was both flexible and immediate, something, she admitted, that Benton is not known for. "We came up with an on-the-spot solution because everyone is accessible, visible," she said, pleased. Lilian added, however, "...the other side of the coin is that I interrupted [the two other people]. I didn't make an appointment." She

explained that people are "very formal" at Benton, and are "appointment-meeting driven." One problem with this, of course, is that by making so many appointments to do the simplest of tasks, they open themselves to breaking appointments, which they also do. Now, whenever possible, she said, "I pop over," [to the person with the information she needs.]

Auditory Issues

The issue of interruption was a common, but complicated, topic of conversation among the managers and directors we spoke with. In fact, being interrupted was often conflated with the related issue of impromptu problem-solving, as Lilian related above, and ambient noise and other disturbances. Samantha, a director, noted that while problem solving is easier in this environment, it sometimes creates more interruptions for her. She would rather have people bother her and get things resolved right away, than have it the other way around, she admitted. It was acknowledged by most, that, in addition to using the whiteboard "doors" in their pods, people are trying harder to convey through body language both when they are approachable and when they are not. Without an office and a door, people are forced to respond immediately, and they are learning to be explicit in signaling "bad times" such as by holding a hand up or shaking a head to indicate "not now/bad time" raising a finger ("wait a minute") or making the telephone receiver signal for "call me."

Marianne noted that, at the same time, people around her are becoming more accustomed to blocking out sounds, being able to work and focus and not hear every little thing around them. Dan, after acknowledging the new ease of communication thanks to

the open environment, said, "On the flip side, it's annoying," especially, he said, when he is trying to concentrate on "financials" and there are people meeting at the table near his pod out in the middle of the floor in his area. He then said a bit sheepishly, "I can't blame them, because I do the same thing." He meets with people at these same tables, and, he admitted, he gets excited and passionate, and he knows that he is disturbing the people who work in the pods that back up to the table. But then he said, shrugging, "So what? This is business!" Dan's reaction here is similar to Lexi's, the intern, who also shrugged and seemed to say, "It's just common sense—it is work!"

Like the support staff at Benton, managers and directors also talked about the new official and unwritten rules for good citizenship in the open environment. For managers and directors, however, the unwritten rules seemed to center more on how to engage with coworkers without disturbing others, and how, and when, to confront noise problems firmly, but tactfully. Marianne, a manager, said that people must be respectful of their neighbors, but also must learn when it is appropriate to be assertive about problems. "If something bothers you then speak up. Voice your opinion and know the difference between common sense and about what doesn't make a difference." Danielle, a director, said, "You need to develop a 'pod voice.'" Kevin, an HR director, was very explicit about impromptu interactions with coworkers, and said, "No more ad hoc conversations." He thought that these types of conversations now should take place in Loft rooms.

Although many people we talked to said that there were rules about having meetings, and "guest" furniture in pods, usually these same people also said that they meet frequently in pods with one or two other people, and either need, or already have

furniture for this purpose. They also talked about the need for computers, "decks," and other props to support meetings in their pods. In fact, Samantha has a low stool that she keeps in her pod specifically for people to sit on when she is meeting with them one-on-one. Apparently, this type of meeting happens frequently enough that she brought the stool in from home to accommodate her pod guests. She said that her coworkers love it – it gets moved around, borrowed constantly, and people always tell her that they want one, too. The people sitting around her also bring in small folding chairs that can be stored between their secure personal cabinets and file cabinets, to use for this same purpose. Samantha said that she realized that she was not "allowed" to have this little stool, and that the people around her were not "allowed" to have their folding chairs. (In this case, the quotes are hers.) She speculated that senior management wanted to discourage what she called "loafing" and that having guest chairs in pods might actually encourage this "loafing." She did not think that her meetings were disturbing her colleagues, however.

Managers and Directors and Meanings of Their Built Environments

In addition to work practices and direct and tangible interactions with their built work environments, the immediate worlds of managers and directors also include less tangible aspects of their engagement with their work environments, including their understandings of space, privacy, aesthetics, and status, and the meanings they attribute to their material work environments. While more abstract, these aspects none-the-less directly affect how managers and directors see the organization, interact with their colleagues and superiors, and perform their work.

Space

Many of the managers and directors we talked to said that they *needed* to meet one-on-one with colleagues in their pods, usually because they were working with something on the pod resident's computer. But the nature of the pods themselves—their size and, for most, the lack of "guest" furnishings—makes this work difficult. In addition, it was clear from our conversations with managers and directors that this type of activity in pods was explicitly discouraged, either by Herman Miller, or by Benton facilities personnel and senior management. Most people felt compelled to seek out other spaces for these smaller meetings. In fact, managers and directors told us that a significant amount of their time was spent searching for appropriate meeting spaces. As Ed, a retail planning manager said, "I'm constantly looking for a place to meet."

Sometimes the common need to use a phone and a computer at the same time make moving to a Loft room or an NOL piece impractical. Table surface area in both types of spaces is limited, and if there are three or four people, there is not enough room. Lofts are "no-man's land," Ed declared, because they are quite small: he tries to never be in one with four people. Betsy, a marketing manager, said that she finds lofts too "...claustrophobic...[for] regular sit-down meetings." There was the perception among many people, too, that Loft rooms are not sound-proof, because of a variable gap that could be as large as ¼ -inch between the sliding "barn" doors, and the walls. Terri, a merchandising manager, confirmed this perception, saying that Lofts are "...useless for privacy" because of the gap between the doors and the walls. Although the Loft rooms were not designed by Herman Miller, Benton employees understood them to be part of

the Herman Miller-designed environment. Accordingly, judgments about the Loft rooms affected how the Herman Miller small-group meeting areas were evaluated.

In general, the search for appropriate places to meet, regardless of the size of the group, did not appear to include considerations about technological capabilities, but only about the amount of space available, and even then, such calculations seemed rather haphazard. Rod, director of operations for one of Benton's largest customers, put this in stark terms, saying that 85% of the time, the choice of a conference room is based on need for space and not technology. Betsy echoed this, telling us that scheduling a room is basically about seating and not access to technology. Reserving conference rooms, which are larger and thus more desirable, is impractical for most of the people we talked to, simply because the kinds of problems they deal with can arise and become critical very quickly, and reserving a day or two ahead is not feasible.

For this reason, many last-minute meetings occur in unlikely places. Hope, an HR manager, for example, said that she rarely uses conference rooms at all, and said that she attends many ad hoc meetings in the cafeteria. In fact, she said, all of her team's staff meetings occur there since it is a room that can hold many people. Furthermore, because it is open "you can see who is around," and when someone comes in, or gets close "you can lower your voice." The Community Room is sometimes used for meetings for the same reason. When she has meetings with two to three people she prefers to meet in the cafeteria or on a balcony. She noted that decisions about meeting spaces—for her, and for the HR department as a whole—are largely determined by seating, number of participants, and sometimes the need for space, but not by technology.

The Herman Miller-designed small-group meeting areas such as the rolling tent and the dome-shaped pieces were installed to compensate for this perceived lack of small-group meeting space, and were intended precisely for the type of informal, impromptu meetings that were discussed above. However, most managers and directors we talked to seemed reluctant to use them, citing a variety of concerns. When asked about these whimsically-designed pieces, for example, Rod was concerned about confidentiality, and claimed that they provide a visual barrier, but not an auditory one. He went on to explain, "You get a false sense of security," that no one can hear "once that door is closed" but of course everyone walking by can hear. In fact, those who did not work near one of these pieces, or who had no prior experience with them, believed that they did offer this auditory privacy. Dan, who works on another part of the floor where there are none installed, said that he had moved with a group of people to one of the dome-shaped pieces, specifically because they knew their discussion would get heated, believing that it would prevent them from disturbing others. Lilian had some difficulty articulating precisely why she did not like these areas, commenting that she had never been invited to a meeting in one, nor had she initiated a meeting in one, because "...they just feel so bizarre! I have no rational reason. I don't know. I wouldn't go in one by myself."

Benton managers and directors seemed to assign certain negative meanings to the use of these pieces, and to the use of certain spaces, as well. Ted, a marketing manager, said that he had used one of the pieces once, but did not like it. When asked why, he paused, apparently having to think about it. Finally, he said, "It's just not my style – it's

too formal." He went on to say that when one is in the dome, "it's like, 'Okay. We're having a meeting now.' You're too consciously '*meeting*.'" Ed noted that use of the Community Room, in general, is "rare." People do not even use the Community Room for lunch. When asked why, he said, "We are entitled legally to breaks. No one would say we don't deserve breaks. But we tend not to take breaks, and being in the Community Room shouts, 'I'm not at my desk working!'" The "culture says, 'Hey, we can work even harder.'" (Presumably this feeling was inspired by the very real fear of losing their jobs.) Sometimes the Community Room is used for meetings in the same way that the cafeteria is used, precisely because it is so empty and people can see exactly who is around.

Privacy

Meanings about what work is, and how it is, or should be performed is also changing at Benton as a result of the open environment. The continual search for appropriate meeting and work spaces has become a new form of work for many Benton employees, and has added to the perception among most managers and directors that their workloads, in general, are increasing. In addition to seeking out places for meetings, some people said that they frequently need to seek out private spaces to meet perceived needs for confidentiality. For example, Kevin, an HR director, frequently has to move out of his pod to a balcony or a Loft room to field sensitive phone calls from his remote supports. He wears an ear piece for this reason, and said that he is careful not to let on to his callers that he has had to move. He said that one of the most important aspects of his work is "managing employees' perceptions." In other words, making sure that

employees know and feel that their information and their phone calls are private. Several employees noted that they had to put extra care into thinking about, even anticipating the different directions conversations could possibly take, because conversations can shift unpredictably: they start out "safe," but voices get louder, or the topic shifts to something more sensitive.

Lilian, an HR manager talked both about this new, more implicit form of work, but also about the addition of explicit work due to the open environment. She said that it can actually be fatiguing, not only to worry about the protection of confidential information, but also protecting her own ability to concentrate, saying, "...it is tiring to be in this [open environment]." Until recently, she said, the recruiters were seated next to her, and apparently they would talk all day on the phone. There was a constant drone that "...wore me out trying to block them out." She said, very pointedly that this was a kind of work. Lilian also said that the open environment has quite literally increased her workload because she is more visible, and people are much more likely to ask if she will help out. For example, HR needed to conduct severance interviews during the layoff. She had never done this type of interview before, but the layoff was so massive that they needed help, and she was visible: "They saw me as someone who could help. They *saw* me."

The open environment also changes the nature of the performance of work, also a form of work in itself. Maxine noted that in the previous environment, people would often engage in loud, confrontational phone conversations, for example, in order to demonstrate to both real and imagined audiences that they "took control of that

situation." According to Lilian, the open environment has virtually eliminated that type of performance, and has enhanced civility. "We've developed a lower tone" of speaking, she said, and they are more civil because "you never know who is listening." Yet, ironically, it has also increased actual confrontations. She cites the case of the loud recruiter who used to sit next to her. She and some nearby HR employees all approached him, "otherwise it would fester." They told him, "You must be quieter. Talk softer." They were very nice, but insistent. "You can't hide," she says, in this new environment.

Democracy and Status

This new civility is also leveling the organizational playing field, by making it harder for people to make unreasonable demands on other people or departments. Lilian provided an example of this, explaining that production people, who are generally lower status, have historically tended not to "forcefully push back" when unreasonable demands are made of them. The new visibility and exposure afforded by the open environment shines a light on those making unreasonable demands, as well as on the very act of doing so. The open environment makes visible both good, as well as bad, or abusive behavior, exposing certain people or departments guilty of this type of behavior, and it facilitates a certain kind of peer pressure, so that the abusers can no longer get away with it.

As managers and directors at Benton experienced new visibility and exposure in the workplace, they were forced to grapple with issues of status, and of privacy. For some, simply working in a pod meant a loss of status. Hope, for example, said she overheard a coworker saying that they were "not proud to bring my child to see this" because they had been in an office with a window before, and the child would see this

[working in a pod] as a demotion. Others, primarily directors, appeared to conflate status and the need for privacy, saying that they missed their offices, and saying that there were needs for privacy that they in particular, as directors, required. Rod, a director of operations, said that he really "needs a door" because of his position as director. He needs privacy, he continued, because people report to him on sensitive issues and he needs to have confidential interactions, both personal and business. Pamela explained that the very nature of work changes as you climb up the organizational ladder, and that, as a director, there is a real need for a privacy that allows you to conceal some information from your group, and to have the quiet to support concentration for long-range strategic thinking. Leonard, director of communications for CS, said that lack of privacy and confidentiality were his main concerns, particularly when he was negotiating salaries for the five people who report to him. He then stated flatly that he thought productivity in general throughout the customer support group had been hurt.

Aesthetics

One of the more abstract, and subjective, aspects of the built environment is its aesthetics. Aesthetics are not unimportant, however, especially in the workplace, where the look and feel of an environment can affect how employees feel about coming in to work, and about the work itself. Even as they discussed some of the drawbacks of the new environment, almost all the managers and directors we talked to at Benton said that they appreciated the aesthetics of their new work environment. Betsy, for example, said that she likes the fact that she can see out the windows to see the weather, and that people like the physical environment at Benton: "it's cheerful!" Her workplace is cheery, she

added, and so she enjoys coming to work. Many of the managers and directors we talked to said that they loved having access to natural light. Pamela said that she loves the new availability of both natural and artificial light, but that access to these different types of light is actually quite important to her department in their work, because they need to know how product colors will look in both kinds of light.

The Distant Worlds of Managers and Directors

It might seem that managers and directors at Benton would be less removed from their distant worlds when compared to support staff. This did not appear to be the case, however, with the managers and directors we talked with. Decisions were made at the top levels of management, plans were put into place, and actions were taken, but the reasons for such decisions, plans, and actions were not communicated downward, not even to the managers and directors. When asked about certain organizational changes, managers and directors were able to describe the varied and numerous effects of those changes, but they could only speculate as to the thinking or the strategy that drove those changes. Some expressed frustration about this, but usually with more of a sense of futility than with the belief that they could take any real action. In each case, for managers and directors, decisions, or the effects of decisions made by senior management were conflated with, communicated through, or exacerbated by changes to the built environment. Paradoxically, however, at the same time that the material environment was becoming more open and transparent, the organization itself, including its strategy, plans and decisions, was becoming more opaque.

Effects of Organizational Change

As discussed earlier, one of the decisions made in managers' and directors' distant worlds was to break up teams that had been aligned with customers, and reform the teams along function or product line. When combined with the new open work environment, one of the effects of this decision was an increase in tension between coworkers responsible for different Benton customers, and heightened fears about the "leaking" of what was considered proprietary information. Ironically, the open work environment that allowed for increased communication also increased the possibility that a person working with one customer might overhear proprietary information about a different customer, or inadvertently share proprietary information about their own customer. Some of the directors who felt that they needed more privacy were not just concerned about protecting their direct reports' salary information; they were also worried about coworkers overhearing customer-related proprietary information, like planned promotional or sales dates. In addition, many managers and directors told us that they were not physically near the people they needed as they performed their work – the very people who they thought might actually benefit from overhearing.

This increased concern with protecting proprietary information and the resultant tension between coworkers together served to blur the distinction between organizational identity and team identity, and, to cause some confusion among Benton employees. Indeed, despite the new functionally-aligned teams, a sizable portion of employee compensation was still being calculated based on customer numbers, not product line or business function. So, there was little need or incentive for managers and directors to

work with coworkers across customer lines. The lack of communication about the break-up of teams, and the inconsistency with which it was reflected in employee compensation, all contributed to a general climate of uncertainty at Benton. Sharon, a marketing manager, speculated that the break-up of teams was "a business-model thing," but said that it was not being communicated fully from "the top" (VPs and execs), down to other employees. Instead, she said, due to a lack of any other kind of information, this change was being interpreted and understood by employees largely through the shift to the open-plan work environment.

However, not all of the managers and directors we talked to felt this same tension or sense of competition with their coworkers. Some, particularly those who worked only for people inside of Benton, had no reason to compete with the people they worked with, and were more comfortable speaking to the benefits of the new arrangement. Lilian, for example, an HR manager, reacted positively to the restructuring of the teams, and talked about how working closely with people across different groups inside Benton not only strengthened group identity, but also increased knowledge of the larger business unit as a whole. People are moving "outside of their own worlds," she said, and learning more about the [work]group and its place in the business, or the larger group. Lilian said that she hoped this continues, and that people learn to recognize and understand the functions in other areas. By reducing the barriers, by increasing the interaction "between silos," you start "knowing the other guy's world," she said. This understanding will increase interaction, and increased interaction will lead to more and better problem solving. She has already seen this happen, she added.

Danielle, a sales manager, agreed with Lilian's assessment. She believed that the team restructuring in combination with the open environment helped with communication: "There is a culture of silos here at Benton and it is breaking down." She thought that the move to the open environment had facilitated that process, adding, "you can't help but overhear," and that much of what you overhear is relevant to your work. Several different people told us that "overhearing" often leads to the discovery that two or three people are working on the same problem, although they did not know it at the time. Sometimes this means that the lessons one person learned are relevant to one's own situation, but other times it means that there is a cause or a source of the problem that is producing effects in different areas, so the effort to solve it is double or triple what it needs to be. Danielle continued that she thought it would still take awhile to get a group sense, but when people see more advantages to sharing information and knowing about each others' jobs then things will change more. "I can hook up with them [coworkers in different departments]. They've already gone part way down this road [that we are on]." This will allow people to capitalize on each others' ideas. "Things you'll hear will lead to 'ah-has,'" Danielle added.

Despite an apparently growing sense among managers and directors that the team restructuring might have some future benefits, we heard from several different people that the sheer amount of organizational change occurring at Benton has caused a fair amount of confusion among employees, in some cases making their work more difficult. In the words of Sharon, a marketing manager, the atmosphere at Benton has become "...unbearable. [You cannot] pick up the phone and get straight answers. Every six

months there is a new reorganization." It seems like it is just constant change, she added. You can't "...find the right person to answer a question. If you find them, they can't answer because they're so new." She speculated that for sales people out in the field, this difficulty and confusion must be magnified. "People are afraid. You become numb. You don't want to make things better." She admitted that she is starting to just not care, to be "beaten down," so she just comes in and does her work and then goes home.

This confusion and general sense of uncertainty caused anxiety among some employees, and was certainly exacerbated by the layoffs, and the perception that members of senior management were unpredictable and were withholding information. Samantha, a sales director said that she understood that layoffs were based on numbers, but said that the way the recent layoffs had been conducted was mind-boggling to most employees. Employees that people thought *should* have been cut, because they were perceived as "slackers," she said, were not cut. And, she continued, people who were well-liked, that were meeting their numbers, and that were doing a good job, got cut. Samantha noted that this has been horrible for morale: obviously, she said, it is not all about meeting your numbers. "You can do all that – you can do everything right – and still lose your job!" Samantha complained bitterly about the "all-hands" meetings that Theresa, the CFO, was conducting in the Community Room, calling them "cheerleading sessions." Everyone leaves these meetings "rolling their eyes," she said, because people are getting laid off seemingly randomly and yet they still conduct these "cheery" meetings.

The open work environment at Benton played a variety of roles during this time of tremendous organizational change. The built work environment served as a type of "text" that employees tried to "read" for clues about the decisions being made in distant worlds, when information appeared to be lacking from other sources. And the built environment literally opened up the work environment so that all employees' daily activities and work practices were exposed, and in facilitating more open communication. When asked directly how the work environment was affecting the handling of the layoffs, Lilian, the HR manager, confirmed that the open environment has increased everyone's visibility, noting, "You can see who is busy, who is engaged, how much they are engaged." Also, she said that just recently, Theresa, a CFO, gathered everyone – from VPs to support staff – together in the community room for coffee and updates, and people were yelling questions across the room and she was answering them. This was "awesome," and very different than if she had just taken her senior management team into a conference room, who then would have relayed her words to their people, Lilian noted. This was direct confrontation: she did not hide. "This wouldn't have happened in the walled environment," Lilian said.

Perhaps in the face of this organizational change and uncertainty at Benton, there seemed to be a heightened awareness among managers and directors that their jobs and their work practices were changing. In fact, larger external customers were providing new data tools to Benton account managers, and were in turn demanding that those managers become more facile with data and numbers, and act as real business managers instead of just account managers. According to Karen, a sales director, this means that an

account manager must now know the marketplace and the brand competition. Shelly, an account manager, confirmed this, noting that customer account management is no longer about "schmoozing," it is all about the "data." She said that sales people at Benton need to be more analytical now, because they are collecting more data and being asked to fine-tune their analyses based on that data. Lanie, a manager of sales systems and processes for one of these larger customers, said that she is ultimately accountable to this customer in making the best use of the new data tools they provide, and that she must do this despite any infrastructure, personnel, or training issues that exist within Benton.

HR managers and directors at Benton were sensing this same kind of change in their own work. According to Kevin, there had been a shift from being leaders within the organization, to being partners with members of management. Under this model, middle managers do not just impose by fiat, they work with their customers to help them achieve their business goals. This means that the people in HR need to understand the business side much more than they had previously. However, Jeanette, an account manager, saw work itself simply become more change-driven. She predicted that people will tend to move into different areas as individual employees: they will no longer remain in an area forever. It used to be that you might change every five to ten years, now it could be every six months: "...we know we won't be here in six months." In other words, they just assume they will move again. One's destiny is increasingly being controlled by upper management. They will "suggest" responsibilities to you: "...this would be a great opportunity for you, Jeanette."

A by-product, perhaps, of this gradual shift to a more business-management, data-driven model of account management, is a sense, at least among managers and directors, that what they called "aggression" was becoming increasingly valued. Sharon, a marketing manager, said that she is "...very aggressive, although I don't understand how you can be too aggressive in business." She said that she is naturally aggressive, and added that she worked for six years for a boss who was very aggressive. "He supported that in me," she said. Samantha, a sales director, speculated that her former boss no longer manages her team because he was not "aggressive enough." His replacement, she said, is much more aggressive, and that in the long run it will be better for the group's financial success, because she thinks his replacement is a better businessman. However, Samantha also admitted that her former boss is a much nicer guy. Staff meetings used to be interactive, supportive, almost fun, she said, with a lot of "atta boys and atta girls!" Now, those meetings are grim affairs simply to be endured: no one says anything because if they do, they open themselves up to a slew of questioning, what she called "grilling" by the new boss. "It's belittling," she said, adding "You just never know enough." So, she said, it may good for her group, but "it sure isn't fun to work here anymore."

Conclusion

In this chapter, I described managers' and directors' work practices, their interactions with colleagues and superiors, their engagement with specific elements of the built work environment, their ideas and interpretations of the organization, space, privacy, status, and work, and the meanings they ascribe to their material work environments. These descriptions can be extrapolated to some broader lessons about

Benton, and about people and their built environments. I briefly identify those lessons here, and will discuss them in greater depth in the final chapter of this thesis.

First, changes to the material work environment can change work practices, which can influence organizational cultures. Managers and directors at Benton described instances when the new open environment allowed for spontaneous communication which led to quicker problem-solving: according to these employees, there are already signs that these new practices are changing deeply ingrained beliefs and habits at Benton. Second, work, and how employees think it is performed matters. Larger assumptions (about privacy and confidentiality, for example) and the current organizational climate color employees' judgments about how work is performed and how the material work environment supports, or does not support this work.

There are also broad assumptions about how organizations, work, employees, and open work environments *should* interrelate, usually based on models that rely on idealized notions of organizations and work (e.g., open environments foster harmony and "democracy" and increased innovation). These models rarely acknowledge or account for the ongoing tensions and conflicts that occur in any human organization, particularly one that is undergoing restructuring and reductions in force. While we certainly heard of the benefits of the open work environment at Benton, there were also drawbacks: in many cases, these drawbacks were the result of dissonance between the open work environment and the results of organizational changes.

Finally, managers and directors were quick to cite what they characterized as costs of the open environment, such as visibility, distractions, and conflict, but did not

recognize that there were certainly costs associated with the inaccessibility of people and information in the previous environment. This raises the issue of the distinction between what people say, and what they actually do: the new open environment was facilitating new ideas, attitudes, behaviors and practices, but many end-users were not yet able to recognize or articulate new capabilities, or the ways ideas, attitudes, behaviors and practices had already begun to change.

CHAPTER SIX: THE WORLD(S) OF V.P.S

Introduction

We talked to six VPs at Benton, three women and three men. We also had the opportunity to speak with one member of senior management. When compared to directors, the VPs had more years of related job experience, and they were responsible either for all functional aspects relating to one large customer, or an entire functional area for all of the smaller customers. For example, a typical job title for a VP was "VP of [Customer Name], or, VP of Marketing. The VPs reported directly to people at the division level, or, senior management, who were in charge of an entire business, such as children's underwear, or socks and hosiery. To protect the anonymity of our participants, however, I will not include job titles when I refer to specific VPs. Unless otherwise noted, all people referred to by their first names in this chapter are VPs.

It should be noted that Tom, a VP and key participant in this research, was part of a small group of people at Benton who drove, and planned the move to the open environment. This group worked with a senior management team led by Theresa, a CFO. Our interviews with Tom revealed that he was, not surprisingly, a strong advocate of the open work environment, an attitude which differed dramatically from most of the other VPs. Nonetheless, his perspective provided a valuable glimpse into the thinking behind the planning of the move, and, how that move articulated – or did not articulate – with the vision and strategic plans of the larger organization.

The Immediate Worlds of VPs

Work Practices of VPs

While support staff spent a good part of their day outside of their pods, and managers and directors worked mostly in them, the work days of VPs at Benton seemed to be more varied in this regard. In fact, the work of VPs was quite evenly distributed across three main work tasks: working on their computers, talking on the phone, and meeting with either Benton employees or external customers. There were, of course, seasonal variations when a VP might spend more time on the phone and out meeting with customers, and there were variations based on the specific type of business responsibilities. It appeared that, for the VPs, the bulk of the work they performed in their pods was related to long-term, strategic planning, and involved working with spreadsheets or organizational charts. In fact, when Doug was asked what he did at Benton, he said simply, "I prepare plans."

Tom's description of his day-to-day work seemed to be typical of most VPs we talked to at Benton. He estimated that he spends 40% of his time in his pod, 40% in meetings, and 20% with customers. In certain seasons, he will spend 20% of his time in his pod and 40% with customers. "Most [of his work] is reaching out through email and phone," he said. He also frequently works on the Internet, researching Benton customers, and thinking about how they can incorporate that research into Benton's strategy. In general, he said that he interacts with peers in the customer support department, some members of senior management, and occasionally customers or vendors, and that he goes to many face-to-face meetings. Tom noted that he interacts minimally with his secretary,

and clearly thinks that secretaries and admins are unnecessary and should be eliminated. This implies that he takes care of his own travel arrangements, photocopying, and other tasks normally handled by support staff. This was not the case with the other VPs we talked with.

As with managers and directors at Benton, time spent in meetings made up a sizeable part of VPs' daily work. Also like managers and directors, the VPs seemed to have little use for technological tools at these meetings. Tom confirmed that conference rooms are reserved almost exclusively for capacity and not for the technology they might afford. Videoconferencing is rarely used. Even though we heard many references to Microsoft PowerPoint software and slide "decks," Tom reported that they use PowerPoint only to prepare presentations, not to project those presentations during meetings. Culturally, he said, people at Benton do not project much on the screen, and distribute presentations to participants on paper. In addition to paper, any other material props used during meetings might be flip charts or whiteboards: those kinds of props are generally associated with "brainstorming," Tom said. Use of laptops in meetings is also generally not acceptable. Recently, Tom said he thought about it [taking his laptop to a meeting], but he has not actually done it because he feels he would be the only one with a laptop, and it "would be out of place." Doug said that he never uses a laptop at all, and admitted, "I am an outlier here: I work [only] off of paper." The new CEO, it is rumored, likes meetings with more technology and because all employees are being encouraged to "go paperless," use of technology may change.

Most of the VPs we spoke to did a fair amount of traveling as part of their work, usually to customer sites, but occasionally to other Benton offices, or to Benton headquarters in the Midwest. For many, though, conference calls were used to bring together people who were geographically separated. Kelly said that in her business, in particular, there are a lot of conference calls because of the number of people who work out in the field. She has a number of weekly meetings, and said that she also has weekly meetings at three other nearby Benton buildings. Between the conference calls and the off-sites, she said, "we're always [on-the-go]!"

VPs and Their Built Work Environments

All of the VPs we talked to at Benton had come to the new open floor plan from fully-enclosed, hard-walled offices with doors and ceilings. When asked about their overall comfort and satisfaction with their work environments, these VPs referred frequently to the loss of their offices, some with considerable regret. Unlike support staff and managers and directors, VPs seemed less enchanted with their pods, several noting a lack of space and visual barriers. Doug, however, was one of the few VPs who seemed to like the new arrangement, and said that he appreciated his pod. He admitted that he has less space now, but said that he does not mind that, because everything is "ergonomic" and he is not bumping into things. As a person who does not use a laptop at all and works only with paper, the move has forced him to clean house, and if it is going to stay clean, then, "I'll have to change what I hold on to—[this] should make me less paper-intensive."

Doug proved to be one of the few exceptions: except for Tom, who actively drove the reconfiguration of the third floor, the other VPs were generally critical of their personal workspaces. Todd, the VP of one of Benton's largest customers, emphasized that he came from a "nice, beautiful office with a window and a door," and said pointedly that he wants a door and a ceiling. Kelly said, "I've been in an office with a window for 25 years." She went on to describe what she does not like about her pod, particularly its lack of space, explaining that they work off of so many "decks," or stacks of paper, and she does not have the space either to lay them out as she works with them, or to store them. Even her briefcase is a problem – when she had an office, she said, she had a closet, which is where it went. There is just too much stuff in her pod, she admitted. However, when asked if her new work environment changes how she works, she said it does not really change much. "Offices don't matter. We're here to work," she declared.

Visual Issues

VPs did talk about a few benefits of the open environment, however. As with managers and directors, visual benefits, including increased visibility among coworkers, were almost universally cited by VPs as a positive effect of the open floor plan. Tom said that he has noticed more interactions, because "I see people more." The layout is important in this regard. He sees it as offering a variety of pathways to get between points, and depending on which he takes he will see different people by "happenstance." The downside is that there is "more distraction." It is hard to "read cues" that someone is or is not available. Kelly noted that the open floor plan makes it easy to see if people are in [their pods], and so to drop in on them. This is nice, she said, but added that it really

has no positive impact on the business. Doug says he really likes the open environment because he is "extroverted" and likes being able to see people, and they him.

As it did for managers and directors, increased visibility led to increased communication, both in amount and in variety. Tom offered up his interpretation of the benefits of this new visibility, saying, "I have this feeling that there are fewer barriers to interacting with members of this department," and that he simply believes "more human interaction is better," because it creates a dynamic in which people see each other more and maybe make small talk or even just greet each other. This then prepares people for smoother business interactions when they are necessary: "It's then easier to approach [each other] if we need a business interaction, if there is a social foundation." And, he said, the social foundation also leads to *more* business interactions. He said that he might hear people talking about something and "in my head [I'm thinking] that reminds of a time..." Because of the social foundation this thought will not just remain in his head, he may actually mention it to the person. This is good, he said, because "there are different ways of coming at" a problem or issue and your thinking gets clearer when you can draw upon them. He said that he has actually experienced this, saying "I've personally experienced that, and I have a sense that when I choose to tune in to a conversation two pods away, that it's a business conversation, and that it might not have happened otherwise [before the open floor plan]." While it is possible that Tom's perspective might be somewhat biased because of his role in the move into this environment, other VPs shared his view.

Doug, for example, said that the new arrangement "forces you to make friends with new neighbors." He volunteered that even though these people are not in his group currently, "maybe someday it will help my business." Doug's sentiment here contrasts sharply with the managers and directors we talked to, who said that they would not get to know the people around them if there was no business reason for interaction with them. Perhaps most interestingly, these managers and directors apparently did not foresee even a potential for future business connections with their neighbors, as Tom and Doug apparently did. Nonetheless, Tom maintained that this increased visibility, by also increasing interactions, might change the overall tendency at Benton to procrastinate in fulfilling coworkers' requests, and will force people to follow through on those requests. "Our culture is, 'I'll get back to you'," he noted. He clearly feels that the open environment will facilitate a positive change in that regard.

Doug also noted that it is easier to access people and information, especially for subordinates, who, in the previous environment might not have felt that they had that access. "We're trying to change from silos," he said. But that change is taking place rather slowly, and he cited as an example marketers and sales people who have been brought together from different locations, but who still tend to stay isolated from each other. They tend to problem-solve in isolation, he said. A result of this pattern is that they always come up with different solutions. He went on to explain that there may be three sales people in underwear, and there may be times when it is appropriate to have three different solutions, but often it is better business to have just one solution. If you talk and share more information and still arrive at three solutions then you will at least

know why you need them. Doug said, apparently with some sarcasm, "Now, God forbid that three underwear salespeople would problem-solve together!" Renee agreed that currently most collaboration occurs *within* teams, rather than *across* teams at Benton. But, she said that senior management has been going through a process that is intended to increase collaboration, and they are midway through it. When they are done it will be "rolled out" to the rest of the customer support department. And it will support that enhanced [cross-team] collaboration, she predicted.

Even VPs who were less enamored with the open work environment noticed that this new visibility was increasing interaction and communication with their coworkers. Todd, after stating flatly that there were no real benefits to the new open floor plan, in the next breath described how he can easily "throw an idea" out to the person in the pod next to him, just by talking in a slightly louder voice, and that person will answer. He admitted that this easy access to his neighbor benefits him, but qualified that slightly by saying that it is also an "interruption" to the other person. Kelly, in an interview that took place after the layoffs occurred, viewed this new ease of interaction more negatively. She first stated that she does not like the open floor plan, and then went on to say that with all the recent changes in the organization "you have no privacy. You can't pick up the phone to call from your pod." There is no "quick communication," and instead "everything has to be planned." Here, she is talking about how people learn about the layoff (who is gone and when), and the reorganization (who is doing what now), and that people talking about these issues must agree when to talk, or plan, so both are in places they deem safe to talk.

Auditory Issues

Despite a general recognition of the benefits of increased visibility leading to better communication among coworkers, auditory issues, especially unwanted communication or general distractions, were a common topic of our conversations with VPs at Benton. VPs we talked to had different ways of adapting to what they claimed was a noisier work environment with auditory intrusions. Tom said that he uses his IPod and headphones not just to help him tune out distractions, but also to communicate to others that he is doing "heads-down" work and does not want to be interrupted. But, he said the IPod can be a distraction if he is trying to compose [write emails, for example], so he will occasionally use ear plugs. He said that he is also sensitive to the fact "that my voice carries, so I keep it down."

Another way that Tom has adapted to the open environment is to actually "structure the day" differently. First, he clusters his phone calls. "Not all [of his phone calls], but ones that could be confidential or that I think could get louder." He tries to make these calls in a Loft room, and he will try to make or schedule them around the same time. Second, he often gets up and goes to others' pods to talk to them directly, and said that he prefers face-to-face interactions anyway. The open environment has also changed the way he uses different methods of communication with his colleagues, and the order in which he uses those methods. If he was still in a walled office, he explained, he would begin with an email, then, if he got no response he would call, then he would try to find the person. With the open plan, he still would likely use email first, but if he cannot reach the person, will next go directly to find them, and only last would he attempt

to call them. This is an example of how the environment has actually changed the way people at Benton communicate.

Renee has been less successful in adapting to the open environment. She reported that she has tried a sound-masking device, as well as MP3 sunglasses to mask sounds so that she can concentrate, to no avail. The problem, she noted, is people leaning over pod walls, and conversations taking place in adjacent pods. She adds that she is currently working on a very large complex chart of people, and to think it through she needs absolute concentration. She says that backing her is someone (Melissa, a member of senior management) who is too loud, and who, in fact, has just had a conference in her pod that has been disruptive. Kelly said that she most misses her ability to put on her speaker phone and walk around multitasking while on a [conference] call. But, she acknowledged, this is a personal thing, one that is easily solved by getting a cordless headset. "That's easy to fix," she admitted, and, "...when I need to focus, I use a Loft." She will usually not work in one alone, but with one other person. She maintained, however, that she cannot really "focus" in her pod, whereas before [when she had an office] she would just close the door.

Doug, however, said that he thinks Benton is a much livelier place to come to now. He admitted that one issue is watching your voice because you can have meetings in your pod and voices will rise. You just tend to forget how loud you are, he said, and that other people are around and you might be bothering them. He recounted a meeting in which precisely this occurred. The meeting was at the table in his pod and went on quite a while until someone nearby shushed him. (This was likely Samantha, a sales

director who sits near him, and who told us that she frequently has to talk to him about his voice levels.) Doug said that he was really embarrassed and felt bad about this. He had not meant to disturb anyone and was not trying to be arrogant, but he just forgot where he was and who could hear. Todd said pointedly, "I'd like my office back." He said that he wants to figure out how to "take [back] my quiet time" and that he is concerned about how to do it. He says that he and the person he shares a pod wall with can hear everything the other person says, and clearly is unhappy about that.

New Rules for a New Work Environment

When asked how he would advise a peer who is moving into this open environment for the first time ("What are the rules for good citizenship in this work environment?"), Tom answered by using an airport club as an example of a similar environment: it is a space, and one controls a small part of it, but it is an open space. If someone gets up and heads for the vending machine and you think of something you want them to get, he said, you would never yell across the room to them. Instead, you would get up and go talk to them. In this environment, people must be sensitive about what they are talking about. Tom went on to state some specific rules he would share with a newcomer to the open work environment: "Be aware of the open environment, your volume and topic." "Take advantage of the opportunities it provides." "Get up and walk around." "Don't yell [break the rule of good etiquette] and don't email [remain in your pod]. Learn about the symbolism of [white board doors] and how they signal people's accessibility. "Learn new boundaries." "Don't suffer in silence." By this he

means that someone might have a bad behavioral trait and you must decide whether "I can live with that." If not, then you must act.

Doug, who Samantha frequently complains about, said one of the rules he would share with a peer new to Benton would be to speak softly on the phone and avoid the speaker function. Renee, however, was much stronger in her dislike of the open environment, and said, somewhat sarcastically, "Stick individuality in your pocket. Leave it in your car." She said that she is concerned not only that she hears the other person [in an adjacent pod], but also, that in order to be a good citizen, she has to keep it down as well. All of this simply means that she cannot express herself in the ways that she would like. According to Tom, however, any behavioral changes that people are making as they adapt to the open environment they are making voluntarily, due more to self-policing, not because they are being told to change by other people.

VPs and Meanings of Their Built Work Environments

Space

While they did describe a general lack of meeting space, VPs at Benton did not talk about constantly searching for meeting space as managers and directors did, and they certainly did not identify any searching they did do as a new form of work. In addition, with the VPs, there were some territorial issues over meeting space which did not present themselves with managers and directors. Kelly noted that there are not many conference rooms, and they can fill up. In fact, she said, they are not large enough for her staff meetings. As she mulled over her options, she admitted that "Melissa has the [rolling tent] down there...people are a little territorial." She has met in one of the small-group

meeting areas when the number of participants in her meeting was too large for a Loft. She liked it, but prefers "to have a real table." The table in the particular area she was in "raises weird," she said, and is hard to use. It is not big enough when it is raised to support the stacks of paper they use.

Todd claimed that one of the Herman Miller-designed fixtures "is my external office," and that he uses it all the time when he has to make a confidential call. The downside, he said, is that "I don't know who's in that domed thing [the other half of the fixture]. Do they have their ear pressed to the wall?" He said that, rather than using this area for privacy, he will often go out on the balcony to make confidential calls. Tom confirmed both that Melissa has "commandeered" the rolling tent as her private meeting space, and that Todd has done the same with the fixture closest to him. Tom admitted that he will not use this particular fixture because Todd uses it as an extension of his pod. When Todd calls a meeting, Tom said, that is where it is likely to be. But, he said, it [this commandeering] is just a matter of proximity. He said that he has no problem with Melissa's expropriation because there are so many other options, but did not say as much about Todd taking over the area closest to him.

Tom provided a thorough summary and critique of meeting spaces available to the VPs at Benton. First, he said, if he is meeting with only two to three people he will meet in a pod or at the small table outside of his pod. If someone asked him to move, he would migrate to a Loft or the small-group meeting area because it is right there [by his pod]. He really only uses Loft rooms for private calls in which he does not want to be overheard, or for calls that he wants to take uninterrupted. Lofts are too small for even

three people, and he would not meet in a Loft with anyone as a first choice, he said, because it is too "claustrophobic." If he had to move a smaller meeting, he might also go to the Community Center, which he has done. In fact, he said that he saw people from off-site meeting there the other day. The advantage is that there is no time limit. Bigger conference rooms tend to be booked and so he would not even look there. If a meeting is six or more people, it requires a conference room, though. Balconies are used frequently, he reported. They are pleasant in most weather, spacious, and confidential. For a sensitive call he would use the landline in a Loft or his cell on the balcony, regardless of whether it was personal or business. Tom acknowledged that meeting space at Benton was now at a premium, and that he finds it a great "irony" that they now have this open work space and yet "constraining" meeting space area.

Privacy

Like the managers and directors we spoke with, most VPs expressed concerns about privacy, in all its forms: business and personal, auditory and visual. VPs, however, seemed a bit more divided in their opinions about the degree of privacy needed, either for their work, or for personal reasons. Todd claimed that the Loft rooms "are useless because the noise just flows out," [of the space between the sliding door and the wall]. He does not feel comfortable making confidential calls in them and he worries that he is bothering the people in nearby pods – "those people complain about the noise," he said. Renee complained that there is a "confidentiality issue" because you cannot talk there [in the open environment] in peace. It is "very inhibiting." She said, too, that "this is affecting my relationship with my employer." In fact, during our last visit to Benton we

heard from Melissa, the senior manager and pod neighbor who Renee had complained about, that Renee had, in fact, left Benton. Melissa said she left in large part because of the open environment.

Doug, however, said that he could not think of many business decisions that demand such privacy. He said that if you had a lot of reports, it might be an issue, but he has only three [so he has no such issues]. He has a small table in his pod and can bring them all together there when they need to meet. He said that he never worries about what people hear, but he has heard that many of the sales people do have that concern. Tom, when asked what kinds of information at Benton were actually sensitive, replied that retail price points and the timing of [advertising] circulars are the two main items. However, he believes that the sensitivity to confidential and proprietary information [among some of the managers and directors] is misplaced. "If you're really concerned you shouldn't have that conversation in the open." In the old days, teams were in cubicles and were clustered together more, and they might talk about that information. They felt they could do so safely because they were surrounded by their team, but, he says, even in that environment, you could never be sure there was no one from another team walking in the area. "It might have been only a 5% probability and it might be 80% now. But if it is that important to you [then] you should never talk about it in the open."

Tom did note that the small-group meeting fixtures tend to provide visual, but not auditory privacy, but that he really does not need the visual. However, he went on to say that with the open environment, you have meetings and do get interrupted much more. He told of meeting with several other people at one of the file cabinet meeting tables that

is out in the open, in the middle of the floor. Twice someone saw them there and interrupted to leave something with one person. Tom said it was an interruption, and while he said it did not bother him, it clearly did. He noted that this never would have occurred if the meeting was in a conference room. It appears that some type of barrier providing a degree of visual privacy, such as those provided by the small-group fixtures would actually have been helpful in that situation, although Tom did not seem to think of this.

Todd's opinion that privacy was important – and was distinctly lacking now in the open environment -seemed to be more the norm at Benton, however. In our second interview with him, he said again that he had come from having a "nice, beautiful office with a window and door. And ceiling. The door and the ceiling." He said that he is going to get a cordless phone so he can get up and walk into a Loft room and take calls without having to tell customers that he needs to call them back. He said that he now has to plan his sensitive communications. He cannot talk about certain things with people around. And, he does not even like to have certain emails open, because people look over the top of his walls and see what is on his screen. In his opinion the most important things [sensitive information] are pricing, performance reviews, compensation, and "org" charts. The issue with the latter is that they are changing so much that he does not want people to see what is coming up since it increases uncertainty. Todd admitted, though, that despite these difficulties, "it's on me to make this work. It's not going away."

Democracy and Status

Like support staff and managers and directors at Benton, VPs spoke in contradictory ways about the flattened hierarchy that the new open environment was intended to facilitate. According to Tom, one of the goals of reconfiguring the third floor to an open office environment was to create a more "democratic" atmosphere, apparently compensating for an organizational culture that he described as "too hierarchical." He claimed that the open environment would "reduce the status markers that promote hierarchy." In fact, Kelly seemed to agree, and used the word "democracy" during one of our interviews with her. When probed, she admitted that she was not using the term in the traditional sense, and did not mean that they will start voting on things. But, she said, it means that "every individual is valued proportionately equally." This means that everyone has access to sunshine, air, space. "It [this access] is the common denominator." When asked where the idea of democracy came from, she said with a laugh, "Herman Miller," and when asked how, she says it was brought in by the previous CEO. Kelly noted that what she really likes [about the open floor plan] is the sunshine, and there is a value that "sunshine belongs to everyone," and not just the people with offices.

Doug said, though, that the increased accessibility to people afforded by this new "democratic" environment does not really benefit him, personally. It is not really any easier for him to go into other people's workspaces than before, because, as a VP he has always been able to do that because "I'm at the top of the pyramid." But, he did acknowledge that people below him in the organizational hierarchy have never had that

access, and he thinks and hopes that the new configuration will help them do so. He then said that he has noticed that his boss's boss is nearby and that he now has much better access to her. Doug went on to say that the new arrangement "does wonders for breaking down functional title barriers," and will "break down hierarchical barriers." This is good, he said, because people will not be so inhibited and will feel that others are more approachable. Now, and in the old system, people *are* their functional titles. When people know each other, they do so based on those titles. What Doug seems to hope for is that people will have other bases for interacting that will establish them as people beyond their titles, and make them more approachable.

Although the notion of a new flattened hierarchy supported and communicated by the open environment was openly acknowledged and apparently accepted by VPs and senior management, at the same time a few of those VPs and members of senior management were not able to fully adjust to the reality of the new "democracy." Although Todd stated that the goal of the reconfiguration of the environment was to "...improve morale so everyone would have the sunshine," he in fact took over a public space (the small-group meeting fixture closest to him) for his own use, to compensate for lack of meeting space in his pod. On our last day at Benton, we noticed a message written in felt pen on a whiteboard standing at the entrance of this area that said, "Todd's conference room. Call x9999 [his secretary] to reserve." In addition, Melissa took over the rolling tent, presumably for the same reason. Mary, a secretary, told us about Theresa, a member of senior management who was also involved in planning the reconfiguration, who stomped down one of the larger hallways yelling "I hate it! I hate it!

I hate it!" Theresa, we were told later, ended up moving back up to the fourth floor with the other executive staff and members of senior management. Todd, after saying that he wants his office back for the quiet it affords him, admitted that the older system was nicer for him: "Did it matter? No." Here, he seems to mean that, because of his position, he had always had those types of benefits.

Aesthetics

The VPs we interviewed at Benton did not talk about the aesthetics of the open environment as much as support staff, or managers and directors did. When they did speak of the aesthetics, it was usually about the exposure to natural light and views of the outdoors, and, more with an eye toward the future of the company. Kelly said that she likes the light and the windows, and that she does not have to stick her head out to see the weather. Doug, after acknowledging that, "It's physically nicer than I ever thought possible," and that the only thing he regrets is that he used to have a better window view before, continued that he hopes that this environment, by being "more modern" will help attract new, young talent. He thinks both that they need to replenish the business by hiring young people and that young people want things to look a way that older people might not care about. He thinks that this place now looks like what he thinks a creative younger person might find enjoyable so it will help in recruitment. Melissa, a member of senior management, agreed, saying of Resolve and the small-group meeting fixtures, "...aesthetically it's beautiful, and modern," and that in order to stay competitive, Benton must appeal to all the young people coming into the workforce.

The Distant Worlds of VPs

The distant worlds of VPs extended beyond their superiors at Benton and the borders of the organization itself, and into the larger national and global business environments. At the time of our fieldwork there, Benton, like other businesses all over the United States, was learning that in order to remain competitive in a rapidly growing world market, they must adjust, both financially and organizationally. These adjustments would require moving toward a leaner business model and organization, large-scale reductions in costs, a much faster pace of manufacturing and product delivery, and, in some cases, entirely new conceptions of work itself. Reconfiguring the physical work environment, restructuring the organization, and the reorganization of the customer support department were seen as firm steps toward those adjustments.

Although ultimately, decisions to reconfigure the work environment and to restructure and reorganize the company were made, or at least finalized, in worlds that were distant to VPs, when compared to support staff and managers and directors, VPs had more contact with people at these higher levels of the organization. This meant that, even if they did not agree with them, they at least had more knowledge of the logic of those decisions. This knowledge allowed VPs to articulate in greater detail the strategic vision(s) and the logic that informed those decisions, as well as desired (and actual) outcomes. Our access to Tom, who helped drive the move to the open work environment, and to Melissa, a member of senior management, allowed us a glimpse into VPs' distant worlds, and some insight into the reasoning and visions of members of those distant worlds.

Shifting the Business Model

According to Tom, there is a distinct business advantage to the open work environment because it is much easier to deal with what has become the almost ubiquitous and continual organizational change, and there are true cost savings due to portability since it is simply easier to move people around. However, the "big picture," he said, is that Benton is moving from being a "holding company to an operating company." A holding company model means the higher level organization "holds" the lower level companies that in turn operate independently. There is more interaction and coordination in an operating company where the parts must dynamically interact. He says this shift seems to be occurring at the higher levels of Benton and there are parallels to what is happening in the Benton apparel division. Eventually they will be organized around functions and not the separate businesses that they have now.

To that end, Tom said, Benton is now moving from decentralized sales (different products, separated by brand) and bringing all sales together. As an example, all socks sales people will work together, all the bra sales people will work together, and all kids underwear sales together. According to Kelly, in the past, each division had its own sales force: now they are all together under one roof. There were definite limitations to separate sales forces. For example, someone could be selling one product and get feedback that 85% of women have problems with the straps. Then you could go to another product and be told that scratches are the number one problem. "There was no interconnectivity," Kelly said, and that meant that opportunities to solve those problems were missing. Different divisions would be selling to the same customers with no

coordination. No one even knew what the other guy was doing. And, because each division/brand handled its own marketing and sales, the customer buyers might have four to five points of contact with Benton.

So, by consolidating the sales force, they hope to provide that connectivity and the chance to solve problems rapidly. "Now we're customer-focused. Our vision had been inside." (By this she means looking into Benton.) They are now moving from a focus *within* Benton on their different brands (which each have multiple products), to a focus on different products regardless of brand, so they can better focus *outside* of Benton, on the customer. An extension of this vision informed the logic of breaking up the customer-aligned teams and realigning those teams along product line.

The goal here, said Tom, is to promote the sharing of information. However, Doug noted that, "We've grown up competitively," with different teams competing internally. There is a history of competition [at Benton] and even though the centralization is supposed to enhance cooperation, that new spirit of cooperation would be bucking a strong cultural trend. In fact, at the time of our fieldwork at Benton, compensation was still not tied to the new team structure. When an HR VP was asked if people at Benton actually have formal disincentives to collaborate, she said, "...yes they do," quite emphatically. "If my bonus is tied to my customer team performance then that's where I put my effort," she said. Todd concurred that there are indeed incentives to avoid cooperating with the other teams. A certain percentage of incentive pay is allocated to Benton apparel division, a smaller percentage to your team, and still a smaller percentage to you personally, he explained.

Tom clarified what he thought was the larger intent of this restructuring, explaining that the goal was not really to facilitate the sort of serendipitous collaborations that is reportedly fostered by the open environment. Instead, it was a lower level communication that is desired. For example, one customer team might have created a coupon promotion between a socks brand and a shoe polish brand, both of them being Benton brands. But other customer teams, also looking for a coupon promotion, might not know anything about it. The result is you have different Benton account teams operating independently of each other, not knowing what works, or does not work. They [those in distant worlds, senior management and the layout team] hope that the restructuring—and the environmental reconfiguration—will foster that sharing of information to eliminate such ignorance.

In the end, said Tom, the restructuring and the removal of people from their teams really is a legitimate concern because there are advantages in communication to having people together. But the other thing that we heard—that you are now surrounded by enemies—is "bogus," he said. There might be a few conversations a year that you should keep confidential and it is possible to do that. There just should be so much secrecy and competition among the teams. On the other hand, Tom admitted, they have not really gained that much by the dispersal. They had hoped that having the socks people and the bra people together might generate some synergy around those products, but it has not outweighed the costs of removing people from their customer teams. When asked how the new floor plan has affected the teams, Todd says he hears very little but what he does hear focuses on the dispersion of the team, and not the physical space. It [the open floor

plan] has not changed how they interact, he said, even though earlier he had explained in some detail how it had.

The Logic and Vision(s) that Informed Changes to the Built Work Environment

Tom, when asked how, and if, the open environment fits into a larger strategic vision that he (and presumably others above him) has for the company, said emphatically that it does. First, it will enhance [coworker] access by getting people together in close proximity and with fewer barriers. "If this space allows us to get together plus reduce psychological barriers to interaction" then it is a success. Increased interaction and information-sharing was, after all, one of the goals of moving from the decentralized to centralized organization. The risk, of course, is that just moving people closer does not facilitate better information sharing. Second, he says, "We're too hierarchical and this hopefully creates a more democratic situation" that reduces the status markers of hierarchy. Decision-making would rest with people or groups [as opposed to a few powerful individuals]. It would dampen barriers to information sharing by encouraging the sharing of points of view. Currently, there is no formal rule against lower level people approaching higher level ones who are not in their group "but in a white collar environment there's less ability to measure performance," he explained, and so people tend to become conservative and go through channels—hierarchies—just to be safe, even when those channels do not exist.

Tom said that they [the layout team] had a hypothesis "when we laid out" the floor. They could lay it out according to customer team, but thought perhaps they should cluster [people together] by category of sales. This was driven by the general view that

there was an internal need to foster more sharing of information. "We would benefit more by it as a company," he explained. When they actually physically laid it out, the constraints of people in this space and the actual fit of pods "wasn't as clean as we'd hoped," he said. The sheer size of one of the customer teams created a constraint on the layout. So they identified smaller workgroups, such as retail planners, and tried to place them closer together.

On Tom's side of the floor, (where we conducted the bulk of our interviews), the layout team assigned everyone the same standard Resolve pod, told them to try it, and then said to come back with modifications if the standard did not work. On the other side of the floor, in Casual Wear, they handled the reconfiguration differently. There, they sent around a checklist so people could choose exactly the components they desired. Tom said that they have been criticized for not doing that. There was a choice between giving the VPs larger pods or taller walls. The layout team did not want to give individual VPs the choice, since that would result in an uneven configuration. In hindsight, Tom thinks that more people would have opted for the higher walls because of the noise that interrupts concentration. One person in particular, he said, has really complained to him.

Changing the Business Model and the Built Work Environment – Changing the Culture?

Unlike support staff and managers and directors, VPs seemed more inclined to step back and look at the organization from a wider perspective, often critically, and frequently referencing the "culture" at Benton. While, as is obvious from the discussions above, they were acutely aware of the changing national and global business climate and

the seismic shifts that were almost sure to result at Benton, at the same time, VPs were sensitive to the conservative nature of Benton as an organization. According to VPs we talked to, there was an additional desired outcome of some of the organizational changes described above. One goal was to actually "change the culture" at Benton. Todd stated this very clearly regarding the new open environment, saying, "...we want to use this change [i.e. the physical one] to help make that cultural change." Kelly seemed to agree, saying, "We're making a change in the environment that signals our organizational change." It was also done "to create energy," she added. "Energy" was something that was apparently lacking in the previous environment.

In general, Tom explained, the distinct feel of Benton comes from several factors. It is the South and people are very polite and conservative. It is [part of what had been] a slow-changing industry that does not require rapid changes, and they tend to hire internally so things stay the same. Kelly acknowledged the considerable formality of the place, and said that it has actually become more formal since the new CEO took over. She says that previous CEOs (particularly the most recent one) were nice, but directionless. No one knew where the company was going. The new CEO has "clarified" things. She thinks that this is part of an overall formalization of the organization, but, she said, "it's much more." He has a very formal, top-down style in which he will make all the decisions. He has moved "his hierarchy" around him, physically, to make it clear that they report to him and not to their teams. Kelly says that ideally you would have a CEO who is half like the new CEO and half like the old one, but you just deal with what you have. "Go with the change. [The new CEO] is more

hierarchical. Be flexible and adjust." It should be noted here, that she easily argues for adjusting to a new social system, but she will not extend that to the new physical environment.

Kelly went on to say that there "is not a lot of value of history, longevity," at Benton, and that stress is high because "this is a company where the longer you stay, the greater the chances of getting let go." She says "very few people retire from here" and she is "looking at my pension" because she just assumes she will be gone long before mandatory retirement. She says that everyone, from lowest to highest levels at Benton is concerned about their futures and no one believes the layoffs are done. The "spin-off" has them concerned because moving from being part of a larger company, to being an independent one means that new jobs and organization will be needed: this is inevitable because there will be new functions. But people do not know where or if they will fit into the new organization. The senior people are also reviewing the organizations and positions in order to assess compensation and it is widely rumored that even people who remain may well have pay cuts. This will not be across the board, but it will be the result of job analysis. They are pushing extremely hard right now to improve all the numbers—sales, profitability, etc.—in order to prepare for the spin off and life as an independent company. It has to be absolutely clear that the business is a good one on it own, independent of any (for lack of a better word) subsidy from Benton that has made it look good. They will be competing for investment dollars on the stock market and those investors will want to know that there will not be a sudden dip in value or numbers when the spin-off occurs.

Effects of Distant Worlds Outside of Benton: The Future for VPs

In the face of the considerable amount of organizational change either happening, or imminent at Benton, we asked VPs to describe what they thought the future "look" of the organization, and their work will be. According to Kelly, the main new skill will be to understand the customer. In the next several years, she said, things will change. "Everyone has a ladder, and it's changed," she said. There are no longer clear, standardized pathways to higher levels, and what matters more now are the job and individuals' responsibilities and capability to do it. She said that all of these changes "will be very liberating." For her personally, the changes have opened up new frontiers and she thinks she is well able to seize them. She feels energized, but acknowledged that not everyone feels that way. The problem, she explained, is that this is a very conservative company with "no risk-taking" because "failure is not acceptable." In fact, she said that she does not even know whether she should remain at Benton. In general, she says that Benton would like to see higher order collaboration beyond that which occurs on the teams and with people you regularly meet. The result would be innovations in design, fabric, distribution, and marketing, for example.

Tom noted that "soon [the entire Benton apparel division] will be in one building," which will confirm and solidify the centralization of the business. It will not be a series of different bra, underwear, and socks companies [different brands]. There will be more matrix management, he said. They will have clearer protocols for making decisions. You will know who you must involve in a decision, who it is courteous or helpful to have involved, and who you do not need. By doing this there will be clearer

"expectations of the culture" that will help people. There will still be individual differences: one person might have a great need for control and want to know everything, while someone else might say, "do your thing," he said. But if there are clearer expectations, there would be expected ways of doing things, and people could individually adjust or negotiate from there, but there would be only one uniform set of expectations.

Renee, when asked about skills and abilities that will be needed in the future, emphatically said that she divides them into two categories, business and physical, and thinks that they are completely separate. The business side is that people will have to be very agile, able to change directions quickly, assimilate large amounts of data and interpret it, connect quickly with customers to partner with them so as to help develop business, and yet also be able to bring the lessons back [to Benton]. Because they will have a broader range of duties with customers, they will also have to have a broad range of business skills and not be so specialized. Physically, they will have to work in noise, she stated. They will need the ability to pick up and move to conference rooms because of that, and they will need to be comfortable with the technology that will enable them to do so. But as far as Renee is concerned, "The ability to work in noise should have zero to do with the decision to hire. The ability to work in a pod should have nothing to do with the decision to hire. It shouldn't matter. We should be able to hire the person with the best business skills."

The Work Environment Doesn't Matter--Except When it Does

Todd, when asked if there might be any future changes in the way they hire people based on the new open environment, said that the shift to pods will not really alter the basic skill set, although that itself is changing. It will require more technology savvy, he predicted. He speculated that younger people might be better at that, and they may even deal with the interruptions better because they have been brought up being bombarded by media. When asked about Benton's future and how the open floor plan might affect it, he said that the big challenge is to continue to convert four to five units into one company and he does not think "pod land" has anything to do with it. Kelly echoed Sharon, an account manager, and predicted that, "We [will] have to become more analytical, more data-driven." They will need to "better connect to other operating units," which she said will happen. However, she said pointedly that these challenges, and their capacity to achieve them, will happen independently of pods or floor-to-ceiling offices.

It should be noted that Todd and Kelly were among a few of the people who were more vocal in their dislike of the new environment. Todd said that he did not like the fact that he lost his office, cited a lack of privacy, too much noise, and, in fact, took over half of a small-group meeting fixture as an extension of his pod. Kelly had complained about the lack of space in her pod for her paperwork and her personal belongings, and the difficulty people were having communicating about the layoffs and reorganizations. As mentioned earlier, she declared that "offices don't matter: we're here to work."

Conclusion

When compared to support staff and managers and directors at Benton, VPs seemed to have stronger reactions to the changes to their built work environments. Because our interviews at Benton took place over a period of six months, we were able to track what appeared to be a distinct change in VPs' reactions to the open environment over that time. Responses were fairly positive during our first visit to Benton. By our last visit, however, reactions among many VPs, at least the ones who were still there, were quite strongly negative. Even Tom, who was among the small group of people who orchestrated the move, admitted to some of the shortcomings of the restructuring of the teams, and the open environment. And, like other VPs we talked to, Kelly's attitude about the open work environment changed over the six month period of our fieldwork at Benton, going from fairly positive, to decidedly negative.

There are several lessons to be learned from the experiences and insights of VPs in this chapter. First, the very specific conditions of work matter. If designers and organizational leaders fail to understand those conditions, then effective design or modification of material work environments becomes more difficult, as does the process of adapting to these new environments for end-users. Second, business conditions and organizations change, and the physical environment can be judged by end-users as consistent or inconsistent with different leadership regimes. It can be revealing, particularly during moments of change, to identify new constraints, potentials, and even trajectories the material environment might afford as organizational leaders, their politics, and their messages, change.

Third, the position of some end-users within the organizational hierarchy gives them the ability to act as producers of the environment. For example, the open environment actively communicated a flattened hierarchy, or "democracy," through the removal of some status markers. The new absence of these markers led to a certain amount of ambiguity. For some higher-level end-users, however, this simply meant that they needed to create new status markers, and they did so: through the material work environment. Finally, we saw that employees at Benton needed new skills in order to work in the new open environment. Identifying the new capabilities afforded by the open work environment is the first step in making visible, and understanding the learning-curve for end-users. We can then identify the skills needed by end-users to take advantage of these new capabilities, and the new types of work that is accomplished as employees learn these new skills.

CHAPTER SEVEN: BRINGING WORLDS TOGETHER

Looking Back: Lessons Learned at Benton Corporation

Preceding chapters of this thesis have explored the complex and deeply intertwined social and material landscape at Benton Corporation through the experiences, perceptions, and insights of three different groups of employees. The goal of this exploration is to understand the paradoxical interplay between employees and their work environments, one in which employees are at once casually dismissive of and sensitive to their material work environments. As has been demonstrated, specific characteristics of built work environments are important in understanding this interplay: indeed, employees described to us in detail how certain environmental characteristics affect them. However, we have also seen that larger forces heavily influence these employees and how they perceive, understand, and engage their work environments. In this chapter, I describe these forces, using them as organizing principles for further discussion of lessons that may be drawn from the experiences, perceptions, and interpretations of employees at Benton.

The Organization

While specific characteristics of built work environments and the ways they influence end-users are, for the most part, tangible and easy to see, certain characteristics of the organization and the ways they influence end-users are less tangible, and can be more difficult to identify. Despite this relative subtlety, the organization powerfully influences the way employees see, understand, and engage their built work environments. In fact, the organization and organizational issues actively shape and constrain how

employees respond to their material work environment, including how they should feel about it.

For instance, we heard from a number of employees that there were several organizational objectives behind the move to the open environment. One was to literally move employees from offices and cubicles out into the open, in order to stimulate more chance and planned encounters between people from different "silos," or lines of business, thereby increasing knowledge-sharing and more creative problem-solving. Another objective was to reduce traditional status markers to signal a flattened organizational hierarchy and a more "democratic" workplace, also in hopes of decreasing silos and increasing communication. These changes to the material work environment coincided with an organizational restructuring that broke up customer-aligned teams and reformed them along product line, despite the fact that other organizational elements, such as compensation structure, had not changed. Distinguishing between employee-reactions to the open work environment and their reactions to the restructuring was at times difficult: indeed, in many of our conversations, the two issues were conflated. When we asked end-users how their work had changed with the move to the new open environment, for example, some described their difficulties finding the people they needed to perform their work. The cause for this difficulty was attributed more to the reconfiguration of the work environment than to the restructuring of the teams.

Most employees spoke enthusiastically of the flattened hierarchy and "democracy" that the organization was signaling through the open environment, and seemed to appreciate new accessibility to their superiors, and to natural light and views.

Further conversations, however, revealed dissonance between the organization's message and the reality of Benton as a conservative company within a conservative industry and located in a conservative region of the United States; a company whose organizational hierarchy remained firmly entrenched despite the new aesthetic egalitarianism. Some end-users expressed discomfort with, and at times overt disapproval of the fact that VPs were now sitting next to them in identical workspaces. There was a common assumption that VPs and directors had special needs for private offices: employees explained to us that VPs and directors "probably" dealt with large amounts of sensitive and confidential information. While the organization sought to communicate a flattened hierarchy and new "democracy" through the open work environment, in the end, end-users' responses reflected their perceptions that the organizational hierarchy remained solidly entrenched, despite a new aesthetic egalitarianism.

While certainly some organizational objectives were achieved through manipulation of the material work environment, not all organizational work could be accomplished in this manner: indeed, as we learned in Chapter Four, support staff designed their own work systems without management knowledge or backing. In providing administrative assistance to managers, directors, and VPs at Benton, support staff performed important, but invisible work (Nardi 1999). In some respects, the work of support staff was literally invisible: their job titles and duties were not included on performance appraisal forms, and often employee hires, rehires, or transfers were made without accounting for any needed administrative support. As one admin told us, "They ignore the administrative...they just assume it will happen." As a result, support staff

designed their own informal networks and heavily relied upon their colleagues in those networks to solve problems, to keep track of office supplies and news, and to find and fill any gaps in administrative coverage.

Organizational Change

Although it clearly plays out through the organization, organizational change and its influence on how employees see and understand their material work environments is powerful enough to merit recognition as a distinct force, and warrants separate discussion here. As noted earlier, throughout our time at Benton employees were grappling with different forms and stages of organizational change. In addition to the tangible changes that were made to the material work environment, there were shifts in organizational leadership, a sizeable layoff, and a restructuring of the customer support department. The material work environment was viewed variously by end-users as tool, impediment, by-product, and as text to be read for clues of executive management's intentions as these different types of changes were implemented.

For example, the open work environment in some ways eased, and in other ways increased the volume and types of work for employees as they managed horizontal and vertical organizational change. The open work environment aids end-users such as support staff, as the increased visibility makes it easier to literally "keep track" of those they support, especially after people have been moved to entirely different areas of the floor. For all employees, the white board "doors" at the pod-entrances make it easier for people to quickly see where their colleagues and superiors are, and when they are expected back. At the same time, the absence of clear signals like closed office doors

increased the interpretive work load of support staff and other employees: they were forced to look for and interpret new cues such as body language and tone of voice, in determining the availability of their coworkers.

Some of the VPs we talked with spoke of "changing the culture" by changing the work environment at Benton. Certainly instigating sweeping culture change is a formidable and time consuming endeavor, and, it is likely that Benton has not one, but several cultures to "change." However, we did see evidence at Benton that changes to the material work environment changed some work practices, which in turn could affect organizational cultures. Several employees described to us instances when the new open environment facilitated spontaneous conversations, in which one would overhear a conversation they felt pertained to their work, or the increased visibility of the open environment allowed employees to quickly bring together colleagues who they felt needed to be involved in such conversations. We were told that the spontaneous, informal nature of these conversations was resulting in quicker, more effective problem-resolution and was already beginning to change the deeply ingrained, formal meeting- and appointment-driven communication habits of Benton employees.

As we saw at Benton, employees working in organizations undergoing change can feel anxious and uncertain, particularly when several different types of changes are occurring at once. During these periods, and especially when organizations are undergoing leadership changes, employees seek to alleviate their anxiety by "reading" material work environments as they would texts, evaluating how environments are consistent, or inconsistent with current leadership regimes, and looking to those

environments for clues as to management's intentions: Does the material environment impose new constraints on their activities? What new potentials might the new environment afford? What trajectories might these environments foreshadow? How might these constraints, potentials, and trajectories be communicating the organization's plans and goals?

We heard from employees that it was the previous CEO who drove the move to the open environment and who was interested in flattening the organizational hierarchy and fostering a sense of "democracy." However, the current CEO does not share this view, and has made it known that he does not approve of the open work environment with his disparaging remarks about "couches" in the workplace. In fact, employees told us that he recently moved his direct reports from the open third floor up to the fourth floor where they are now seated next to him. Some who remain on the third floor interpreted this move as a clear statement from the CEO to all employees that his direct reports' priorities lie with him, and that they report to him only. It is possible that he made this statement in an effort to rectify the previous CEO's mistakes, and to strengthen what he views as a potentially weakening organizational hierarchy. Perhaps not coincidentally, we also heard that formality, competition, and "aggression" are increasingly valued among the work groups in the customer support department.

As the new CEO's actions demonstrate, the status of some end-users within the organizational hierarchy allows them to act more as producers of the environment, rather than users. As discussed earlier, management sought to actively communicate a flattened organizational hierarchy, or "democracy," through the new open environment and the

removal of traditional workplace status markers such as enclosed offices. The absence of these markers, however, led to a certain amount of ambiguity for some employees, and increased the amount interpretive work they had to perform. Other higher-status end-users, however, simply created new status markers, usually through the material work environment. Some VPs, for example, commandeered the small-group meeting areas nearest their pods, using them as they would an enclosed office.

Finally, there are broad and pervasive assumptions about open work environments, what happens in them, and how employees should work in them. These assumptions rely on models which represent organizations and work environments as static and idealized. In many of these models, open work environments promise harmonious working relationships among employees and management through aesthetic appeal and "democratic" allotments of personal work space. Rarely do these models acknowledge the everyday, ongoing tensions and conflicts that occur in any organization, particularly one that is undergoing drastic change, such as a restructuring or a reduction in force. As described above, there were real benefits to the open environment as end-users managed some of the effects of organizational change. However, we also learned that there were certain drawbacks to the open environment, especially after the team restructuring. For example, in some cases, the open environment exacerbated anxiety and tension for employees who felt that the openness exposed proprietary sights and sounds to colleagues who they still viewed as competitors, heightening a sense of secrecy and competition throughout the department. At the same time, we were told that the work of sales persons has been gradually moving from being relationship-based, to being

more data-driven, which may increase the sense of competition among these employees. Idealized and static models of the open environment provide an incomplete picture, then: it is nearly impossible to fully understand end-users' perceptions and understandings of open work environments without considering the forces of organizational change and its effects.

Time

As suggested in the discussion above about organizational change, it is unwise, if not impossible to study organizations, their members, and material work environments without considering temporal aspects and implications. Organizations are not static, but dynamic, and because of that dynamism, organizations and their members have histories and experiences that influence decisions, perceptions, understandings, and judgments about the material work environment. End-users' past experiences and their points of comparison matter as they evaluate their material work environments: is their new work space more or less exposed? Are their peers and superiors more or less accessible? As we saw, support staff's evaluations of the open work environment were much more favorable than other employees' at Benton: because they had been working out in the middle of high-traffic areas, support staff found their new pods very appealing because they afforded a sense of privacy that had been lacking in their previous work areas. Managers, directors, and VPs, on the other hand, were coming from more spacious enclosed offices, and judged their pods to be lacking in space and privacy relative to their previous work areas.

In addition, looking at the organization, end-users, and the material environment over time can reveal lags between employees' understandings and language as they manage organizational change, including changes to the material work environment. The new open environment was actively facilitating new ideas, attitudes, behaviors, and practices, but many end-users were not yet able to recognize or articulate those new capabilities, or the ways ideas, attitudes, behaviors and practices had already begun to change. For example, managers and directors were quick to cite what they characterized as the costs of the new open environment, such as visibility, distractions, and interruptions, but did not recognize that there might have been costs associated with the inaccessibility of people and information in the previous environment. The use of ethnographic methods such as participant-observation and interviewing often reveals these lags in understanding and language by uncovering the sometimes subtle distinctions between what people say, and what they do. Often interviewees would be actively benefiting from the open work environment, such as when they were able to ask a colleague on the other side of their pod wall a quick question, and get a quick answer: when that new accessibility to their colleague and to information was pointed out to them as a benefit of the open environment, they either did not recognize it as such, or described it as an "interruption."

Work

As noted earlier in the review of literature, work is so commonplace an activity within organizations that precisely what it entails is often disregarded, its impact and importance often taken for granted and almost certainly underestimated, by organization

researchers, designers, upper management, facilities managers, and sometimes even by the very people who are performing it. And yet, if we are to understand how end-users engage with their material work environments, we must also identify and understand what they need to do in those environments. In addition, knowledge of the work practices of end-users can provide insight into other aspects of organizational life that are related to work, such as communication, access to and use of technology, information and knowledge sharing, and organizational structure, hierarchy, and politics. As we have seen, all of these organizational aspects have implications for how employees perceive, understand, and engage with their material environments

Understanding work practices and the very specific conditions of work is critical for people interested in designing or modifying existing work environments. If designers and organizational leaders fail to see and understand those conditions, then designing or modifying effective and appropriate material work environments becomes more difficult, the learning curve for end-users as they adapt to those environments becomes steeper, and work effectiveness and productivity suffer. For example, while the space efficiency and convenience of the Resolve pods were appreciated by end-users who worked with small stacks of paper and computer files, those who worked with "product," or clothing samples, or with large mock-ups of advertisements called "representation boards" found that the smaller size of the pods prevented them from keeping these props in their work areas, close at hand where they could work with them as needed. Instead, these employees stored clothing racks and representation boards outside of their pods, sometimes in the middle of walkways. As one end-user commented, "...this

[environment] is just not laid out for someone working with this stuff. It's laid out for people who work with files."

In addition to the more tangible implications of specific characteristics of the material work environment on work practices, more abstract characteristics of the built work environment also affect the performance of work. In fact, entirely new forms of work were generated at Benton as employees there acquired the new skills needed to work effectively in an open work environment, and to take full advantage of the new capabilities it afforded. For instance, while the open environment provided less visual and auditory privacy, it also afforded increased accessibility to colleagues and information: employees needed to learn how to modulate their voices so that they did not disturb their coworkers, how to interpret colleagues' body language in order to determine their availability, and how to protect sensitive information, all in order to avoid the pitfalls, and take effective advantage of this increased accessibility.

Through our conversations with end-users at Benton, we learned that these practices and behaviors were seldom recognized as new skills: more often than not, employees referred to them as impositions, some declaring them a waste of time (and therefore decidedly not "work"). However, this points to the importance of understanding larger assumptions about work, and how employees think it is or should be performed. Assumptions about privacy and confidentiality, for example, in tandem with the current organizational climate, policies, and politics, influence employees' judgments about how work is, or should be performed, and how the material work environment supports, or does not support this work. These judgments, combined with the lack of

"backstage" space, or visual privacy in employees' pods, also increase employees' workloads as the actual "performance" of work becomes more important, not only because of the gazes of their superiors, but of their peers as well. This increased awareness of the "performance" of work was heightened further after the layoffs occurred, when it became even more important to appear busy and productive at all times.

As discussed earlier, an important advantage of the open work environment at Benton is the increased visibility it facilitates. One potential capability of this new visibility is the opportunity for employees to better "see" their own work as it fits into the larger business, process or product. During conversations about potential advantages of the open environment, several of the VPs and directors at Benton seemed hopeful that the open environment would help them move away from "silos," but these hopes were pinned very generally on increased communication. One person, an HR manager, did say that she appreciated the increased visibility of the open environment because it allowed her to learn more about her own workgroup and its place in the larger business unit. However, it is important to emphasize that this person works in HR, a group whose "customers" are other Benton employees. Employees who are accountable only to external customers, such as sales persons who remain tied to these customers by compensation structures or by data systems, may not have this perspective about their work. As described earlier, work for most of these sales persons at Benton is based on the constant processing of data and small incremental changes, not larger projects. It is

unclear whether employees other than those in HR, retail planning, or communications would be able, or interested in seeing their own work as it may fit into this larger picture.

Given this discussion about the importance of work, and that it is the primary activity at Benton, the question must be asked: how important is it that employees "like," or feel good about their material work environments? In today's economic climate, as organizations are forced to look carefully at all expenses, and given that real estate and personnel are usually the largest costs, it makes good business sense to consider paring the work environment down to basic components. We talked with employees from across organizational levels, and with summer interns and VPs alike there were moments during conversations when, after describing a perceived disadvantage of their material work environment, they would shrug their shoulders, as if to say, "Well, it *is* work, after all." One VP declared, "Offices don't matter. We're here to work." In exploring the paradoxical interplay between employees and their material work environments, we must consider that one half of the statement describing that paradox says that the built work environment does not, in fact, matter. While much of this thesis describes the ways in which the built work environment does matter, we must also acknowledge the possibility that employees would continue to perform their jobs effectively under suboptimal working conditions, whether they "liked" it, or not.

Space and Place

Finally, the descriptions of Benton employees' experiences and perceptions in this thesis highlight distinctions between space and place. As discussed earlier in the literature review, when people attach meaning to space, or "inscribe" those spaces, and

when those spaces become embedded with experiences, "space" becomes "place" (Low and Lawrence-Zuniga 2003:13). And, as Rodman notes, "... places, like voices, are local and multiple. For each inhabitant, a place has a unique reality, one in which meaning is shared with other people and places," culturally and historically (Rodman 1992:208). Rodman further states that places are "culturally and socially constructed in practice" (Rodman 1992:207).

When we examine Benton employees' experiences and understandings through the lenses of larger forces, such as the organization, organizational change, time, and work, we see that their relationships and engagement with their material work environments are powerfully influenced by those forces, and can and do shift, depending on context and situation. Similarly, the material work environment at Benton can not be viewed simply as a monolithic and neutral space, but as multiple places, imbued with the experiences, expectations and judgments of the employees there. As Amos Rapoport suggests, then, there is indeed an active, dynamic, interrelationship between end-users and their material work environments (Rapoport 2005).

Looking Forward: Implications of the Lessons Learned at Benton

Revisiting Amos Rapoport

Before moving to a discussion about the implications of the lessons learned at Benton, in this section I briefly return to Amos Rapoport, whose work informs the conceptual framework of this thesis, to explore how these lessons might align with his ideas about humans and built environments. As noted earlier, Rapoport was one of the first to suggest that the attentions and efforts of architects and designers should focus less

on themselves and their own creative impulses, and more on the end-user and the science of human-environment interaction: he proposes that problem-solving should be the main work of design, rather than creative exploration. He conceptualizes the science of human-environment interaction as being structured around three main questions:

1. What bio-social, psychological, and cultural characteristics of human beings (as members of a species, as individuals, and as members of various groups) influence (and in design, *should* influence) which characteristics of built environments?
2. What effects do which aspects of which environments have on which groups of people, under what circumstances, (i.e., in which context) and when, why, and how?
3. Given this two-way interaction between people and environments, there must be mechanisms that link them. What are these mechanisms? [Rapoport 2005:10]

Rapoport proposes that the concept of culture underlies or informs these questions, particularly the specific mechanisms that link the interaction between people and their built environments. He carefully deconstructs the concept of culture, as well as that of the environment, describing both the concrete aspects of these concepts, as well as the more abstract aspects. Rapoport notes that architects and designers may be unaccustomed to recognizing or articulating the more abstract aspects of these concepts, such as latent meanings of activities or activity systems, or the organization of space, time, meaning, and communication as expressed through material environments. Rapoport identifies the concept of culture is a valuable tool for architects and designers as they learn to work with these aspects, and cultural considerations figure heavily throughout his work.

As he explores the larger issue of human-environment interaction, Rapoport focuses very specifically on the mechanisms driving that interaction, and on how specific characteristics of built environments, and end-users' responses to those characteristics, can be reflective of and informed by cultural values, ideals, images, and schemata, or lifestyles He uses domestic built forms, or housing in most of his examples: while he acknowledges that he does this mainly for ease and consistency of explanation (domestic built forms occur across all cultures, while other built forms can and do vary), he also admits that this particular form of built environment, more than others, is where the concept of culture may be most relevant. For other forms of built environments, such as hospitals, schools, or office buildings, Rapoport acknowledges that culture might have less impact. While it is likely that non-visual elements (such as privacy and status) within hospitals, schools, and office buildings might be informed by culture, it is also possible that in office environments, forces in addition to or other than culture may be more influential.

This thesis is not intended to be a critique of Rapoport's work. Rather, it uses his ideas about how culture informs specific characteristics of humans and their built environments, and the cultural underpinnings of specific mechanisms that drive the dynamic interaction between people and their built environments, as a departure point. The focus of this thesis is at once more specific, and broader than Rapoport's work: it focuses very specifically on one type of built environment and one type of end-user, and more broadly on the effects of larger forces, in addition to culture, that influence the mechanisms that drive the interaction between these end-users and their built

environments. In this thesis, I describe the complex interplay between employees and their built work environments as a paradox: employees at once casually dismiss and are keenly sensitive to their built work environments because the larger forces, or contexts, of the organization, organizational change, time, and work, all powerfully shape the ways they understand and engage with those environments.

Questions for Designers

Armed with a richer understanding of how employees at Benton experience, perceive, and engage with their built work environments, and with knowledge of where and how the lessons learned at Benton fit into the intellectual landscape, we can begin to explore how these lessons and insights may be helpful to architects, designers, and organizational leaders as they create or modify material work environments.

Work Matters

It would seem that one of the most important questions a designer could ask when creating a built work environment is: what will be happening in this environment? What kinds of activities will be taking place here? In other words, designers need to understand what work looks like within the particular organization they are working for, and whether the environment they are designing will support the work that is being performed there. But what does it actually mean to support work?

We saw that the work being performed at Benton consisted of the constant individual processing of data, with very incremental changes being made over longer periods of time. This type of work did not match popular models of and assumptions about open work environments, which tend to characterize the work taking place in those

environments as more team- and project-based, and dependent upon constant informal, planned and chance spontaneous communication leading to innovation. Most employees at Benton seemed to value analytical, "heads-down" work, and formal meetings, which they felt required quiet concentration and visual and auditory privacy, not opportunities for quick and spontaneous communication and knowledge-sharing, and high visibility. Knowledge of these differences in work practices does not mean the open environment will not work at Benton. In fact, "heads-down" work and collaboration might best be conceptualized as complementary activities instead of as opposite, or mutually exclusive activities: each has its place within work activity and the organization. In an open work environment at a company such as Benton, it may make more sense simply to create more spaces that facilitate quiet work, and reduce the number of public areas intended to stimulate collaboration.

Understanding the specifics of work practices is important, but not because designers should have to account (and design) for every single work task being performed. As Rapoport suggests, "under-designing," or "loose" design that provides flexibility and responsiveness makes more sense than "over-designing," or "tight" design which attempts to tailor the environment to every possible user and activity (Rapoport 2005). In other words, designers should understand the specifics of work practices in order to identify broader work styles and patterns, and design (loosely) for those, providing end-users with the ability to adapt their work environments to their own work tasks and unique needs.

Just as it is important for designers to understand the work of end-users, it is also important for them to understand the work of the organization. Designers might ask themselves how a particular environment will support, or not support the work or particular goals of the organization. At Benton, one of the organization's goals was to literally push people out of offices and cubicles and out into the open, in order to stimulate more chance and planned encounters between people working in different lines of business, thereby increasing knowledge-sharing and more creative problem-solving. Another objective was to reduce traditional status markers to signal a flattened organizational hierarchy and a more "democratic" workplace, also in hopes of decreasing silos and increasing communication. Unfortunately, although the open environment was successful in exposing people and information, when the reconfiguration of the office was combined with a restructuring of the teams in the customer support department, the result was a heightened sense of competition and increased protection of information, both visual and auditory.

In the same way they assess the needs of end-users, designers should also be able to assess the needs of the organization when designing material work environments. Just as they might interview and observe end-users, they might also conduct research on the organization itself, talking with a cross-section of organizational leaders to gain an understanding of their objectives and goals. Designers also need to understand the limits of accomplishing organizational work through the manipulation of the material work environment. For example, increasing visibility and opportunities for communication at Benton through the new open environment was possible, and actually was accomplished.

However, reinforcement of the restructuring of the teams through the open environment was less successful, simply because other organizational aspects, such as compensation, that maintained the previous structure were still in place. As was demonstrated at Benton, manipulation of the material environment can not replace the traditional work of the organization.

Agency and Design

Some people are more capable than others of controlling the built work environment. Architects and designers, of course, are regarded as professionals and experts, and they, along with organizational leaders, wield considerable control over the creation and modification of built work environments. At Benton, we saw some end-users exert control over the material environment: a few employees who occupied higher positions in the organizational hierarchy were able to modify their work environments to suit their needs, taking over public small-group meeting areas and using them as their own private offices. Other, lower-level employees were not able to do this.

In the design process, there are different needs, times, and places for control and various forms of expertise. While Rapoport rightly sought to shift the attention of architects and designers from their own creative impulses and activities to the problems and needs of end-users, he was not necessarily suggesting that end-users were experts in the design of their own material work environments. People may be experts on their own work, but they are not usually experts on work in general, or the future of work. Designers, on the other hand, are experts in translating end-users' work needs into physical tools, or characteristics of the work environment. If designers want to "loosely"

design material work environments, they need to be able to see the larger patterns and trajectories of work: in such cases, they may want to consult organizational members with historical knowledge of the organization, not just the intended end-users of the work environment.

As designers think about creating material work environments, they may want to consider the design process itself, and the proper role of end-users in it. Design, like the interaction between people and their built environments, should be a dynamic, multi-directional interaction: but end-users are experts in their own work and their own needs, they are not experts in design. If designers are interested in moving away from tailor-made, "tight-fit" design, and toward "loose" design, or creating environments with flexibility, responsiveness, adaptability, and numerous capabilities, it might be valuable to think in terms of designing *for* people instead of designing *by* people. This could mean giving a greater number of end-users a degree of control over certain characteristics of their material work environments, such as lighting, work surface area, or storage, rather than just a few.

Environmental Learning

Material work environments are complex systems of tools intended for use by end-users working in organizations. As designers create these tools, they might ask themselves: to what degree should the tools themselves be comprehensible without any instructions? To what extent will end-users need training to use them? To what degree will the organization have to "learn" to put these tools to best use? It may be rather naïve to assume that end-users would enter a new work environment and not need any

instruction at all. It also seems a bit naive to expect that end-users would happily embark on what might appear to be an arduous learning process in order to work in a new environment. Similarly, we may be too optimistic in expecting that organizations would be able to quickly and seamlessly implement dramatic environmental reconfigurations without having to make changes in other areas, such as internal structure, in order to take advantage of the opportunities presented by the reconfiguration.

Currently, there seems to be two schools of thought about whether or not end-users should have to learn how to use the tools available to them in their material work environments. The first says that end-users should not have to worry about anything except performing their work: they should not have to take valuable time to learn how to use the environment, or any other tools for that matter. If the tools appear to be too complex, and the learning curve too daunting, end-users may simply decide not to take the time. The second says that if designers are providing end-users with complex systems of tools, entirely flexible, and rich with a wide variety of new potentials and capabilities, end-users may have to be taught how to "see" and take advantage of those potentials and capabilities. Once they are capable of recognizing the opportunities provided by these systems of tools, they may decide that their time is well-spent learning how to use them.

As we have seen at Benton, the material work environment exists within and as part of a complex social and cultural system, and there is a dynamic interplay between the organization, employees, their work, and the material work environment. As with any complex system, changes to any one element have important implications for other parts

of the system. Understanding this, and as they are able to see themselves as part of this complex system, albeit temporarily, designers are better able to create material environments that are best suited for the organization and for employees.

REFERENCES CITED

Agar, Michael
1996 The Professional Stranger. New York: Academic Press.

Altman, Irving
1975 Environment and Social Behavior. Monterey: Brooks/Cole.

Ancona, Deborah, Paul Goodman, Barbara Lawrence, and Michael Tushman
2001 Time: A New Research Lens. Academy of Management Review, 26:645-663.

Anderson, James, and Sue Weidemann
1997 Developing and Utilizing Models of Resident Satisfaction. *In* Advances in Environment, Behavior, and Design, vol. 4: Toward the Integration of Theory, Methods,Research and Utilization. Gary Moore and Robert Marans, eds. Pp.287-314. New York: Plenum.

Antonelli, Paola., ed.
2001 Workspheres: Design and Contemporary Work Styles. New York: The Museum of Modern Art.

Appadurai, Arjun, ed.
1986 The Social Life of Things: Commodities in Cultural Perspective. Cambridge: Cambridge University Press.

Baba, Marietta
1986 Business and Industrial Anthropology, vol. 2: An Overview. National Association for the Practice of Anthropology. Washington, D.C.: American Anthropological Association.

Baba, Marietta
2006 Anthropology and Business. *In* Encyclopedia of Anthropology. H. James Birx, ed. Pp. 83 – 117. Thousand Oaks, CA. Sage Publications.

Barker, Roger
1968 Ecological Psychology. Stanford: Stanford University Press.

Barley, Stephen
1996 Technicians in the Workplace: Ethnographic Evidence for Bringing Work into Organization Studies. Administrative Science Quarterly, 41: 404-441.

Barley, Stephen, and Gideon Kunda
2004 Gurus, Hired Guns, and Warm Bodies: Itinerant Experts in a Knowledge Economy. Princeton: Princeton University Press.

Barley, Stephen, and Julian Orr, eds.
1997 Between Craft and Science: Technical Work in U.S. Settings. Ithaca, NY: ILR.

Bate, S. Paul
1997 Whatever Happened to Organizational Anthropology? A Review of the Field of Organizational Ethnography and Anthropological Studies. Human Relations, 50(9): 1147-1175.

Bateson, Gregory
1972 Steps to an Ecology of Mind. New York: Ballantine.

Batteau, Allen
2000 Negations and Ambiguities in the Cultures of Organizations. American Anthropologist 102(4):726-740.

Becker, Franklin
2004 Offices at Work: Uncommon Workspace Strategies that Add Value and Improve Performance. San Francisco: Jossey-Bass.

Becker, Franklin, and William Sims
2001 Offices that Work: Balancing Communication, Flexibility, and Cost. Ithaca, NY: Cornell University.

Becker, Franklin, and Fritz Steele
1995 Workplace by Design. San Francisco: Jossey-Bass.

Bernard, H. Russell
2002 Research Methods in Anthropology: Qualitative and Quantitative Methods in Anthropology. Walnut Creek, CA. Alta Mira.

Bitner, Mary Jo
1992 Servicescapes: The Impact of Physical Surroundings on Customers and Employees. Journal of Marketing, 56, 57-71.

Blomberg, Jeanette, Lucy Suchman and Randy Trigg
1996 Reflections on a Work-Oriented Design Project. Human-Computer Interaction 11(3): 237-265.

Blomberg, Jeanette, Mark Burrell, and Greg Guest
2003 An Ethnographic Approach to Design. *In* Human-Computer Interaction Handbook: Fundamental, Evolving Technologies and Emerging Applications. J. Jacko and A. Sears, eds. Pp. 965-984. New Jersey: Lawrence Erlbaum Associates, Inc.

Brennan, Aoife, Jasdeep Chugh ,and Theresa Kline
2002 Traditional Versus Open Office Design: A Longitudinal Field Study. Environment and Behavior, 34(3), 279-299.

Bridges, Janet
2003 Corporate Issues Campaigns: Six Theoretical Approaches. Communication Theory, 14, 51-77.

Canter, David
1997 The Facets of Place. *In* Advances in Environment, Behavior, and Design,vol. 4: Toward the Integration of Theory, Methods, Research and Utilization. Gary Moore and Robert Marans, eds. Pp.110-147. New York: Plenum.

Casey, Catherine
1995 Work, Self, and Society: After Industrialism. London: Routledge.

Cheney, George, Lars Christensen, Theodore Zorn, and Shiv Ganesh
2004 Organizational Communication in an Age of Globalization: Issues, Reflections, Practices. Propsect Heights, IL: Waveland Press.

Chreim, Samia
2002 Influencing Organizational Identification During Major Change: A Communication-Based Perspective. Human Relations, 55, 1117-1137.

Conrad, Charles
2003 Setting the Stage: Introduction to the Special Issue on "Corporate Meltdown." Management Communication Quarterly, 16, 165-186.

Coombs, W. Timothy, and Sherry Holladay
2002 Helping Crisis Managers Protect Reputational Assets: Initial Tests of the Situational Crisis Communication Theory. Management Communication Quarterly 35, 286-316.

Coutu, Diane
2000 Creating the Most Frightening Company on Earth: An Interview with Andy Law of St. Luke's. Harvard Business Review, September-October: 143-150.

Dale, Karen
2004 Building a Social Materiality: Spatial and Embodied Politics in Organizational Control. Organization, 12(5): 649-678.

Darrah, Charles
1996 Learning and Work: An Exploration in Industrial Ethnography. New York: Garland.

Darrah, Charles
2001 Techno-Missionaries Doing Good at the Center. Anthropology of Work Review, 22(1): 4-7.

Darrah, Charles, James Freeman and Jan English-Lueck
2007 Busier than Ever!: Why American Families Can't Slow Down. Stanford, CA: Stanford University Press.

Davis, Tim R.
1984 The Influence of the Physical Environment in Offices. The Academy of Management Review, 9, 271-283.

Deal, Terrence, and Allan Kennedy
1982 Corporate Cultures: The Rites and Rituals of Corporate Life. Reading, MA.: Addison-Wesley.

Deetz, Stanley
2002 Conceptual Foundations. *In* The New Handbook of Organizational Communication. Fredric Jablin and Linda Putnam, eds. Pp. 3-46. Thousand Oaks,CA: Sage.

Denis, Jean-Louis, Lisa Lamothe and Ann Langley
2001 The Dynamics of Collective Leadership and Strategic Change in Pluralistic Organizations. Academy of Management Journal, 44, 809-837.

Domahidy, Mary, and James Gilsinan
1992 The Back Stage is Not the Back Room: How Spatial Arrangements Affect the Administration of Public Affairs. Public Administration Review, 52, 588-593.

Doolin, Bill
2003 Narratives of Change: Discourse, Technology and Organization. Organization, 10, 751-770.

Dubinksas, Frank, ed.
1987 Making Time: Ethnographies of High-Technology Organizations. Philadelphia: Temple University Press.

Duffy, Francis
2000 Design and Facilities Management in a Time of Change. Facilities, 18, 371-375.

Duffy, Francis
2000 Preface. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Moore, K.D., ed. Pp. xxi-xxvii. Burlington, VT: Ashgate.

Duffy, Francis, and Kenneth Powell
1997 The New Office. London: Conran Octupus.

Duffy, Francis, Stephen Willis and Denice Jaunzens
1998 New Environments for Working. London: BRE.

Dutton, Jane, Susan Ashford, Regina O'Neill, and Katherine Lawrence
2001 Moves that Matter: Issue Selling and Organizational Change. Academy of Management Journal, 44, 716-736.

English-Lueck, Jan
2002 Cultures@SiliconValley. Stanford, CA: Stanford University Press.

Evans, Gary, and Dana Johnson
2004 Stress and Open-Office Noise. Journal of Applied Psychology, 85(5): 779-783.

Feldman, Martha, and Brian Pentland
2002 Reconceptualizing Organizational Routines as a Source of Flexibility and Change. Administrative Science Quarterly, 48, 94-118.

Fetterman, David M.
1998 Ethnography: Step by Step. Thousand Oaks, CA. Sage.

First Monday Peer Reviewed Journal on the Internet.
1996 Interview with Bonnie Nardi. Retrieved February 11, 2007 from http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/470/391.

Fitzpatrick, Geraldine, William M. Tolone and Simon M. Kaplan
1995 Work, Locales, and Distributed Social Worlds. Proceedings of the Fourth European Conference on Computer-Supported Cooperative Work, pp. 1-16. Kluwers Academic Publishers.

Foucault, Michel
1975 Discipline and Punish: The Birth of the Prison. New York: Vintage.

Fried, Yitzhak
1990 Workspace Characteristics, Behavioral Interferences, and Screening Ability as Joint Predictors of Employee Reactions: An Examination of the Intensification Approach. Journal of Organizational Behavior, 11, 267-280.

Gagliardi, Pasquale, ed.
1990 Symbols and Artifacts: Views of the Corporate Landscape. New York: Aldine de Gruyter.

Geertz. Clifford
1973 The Interpretation of Cultures. New York: Basic Books.

Gellner, David, and Eric Hirsch, eds.
2001 Inside Organizations: Anthropologists at Work. Oxford: Berg.

Gersick, Connie
1991 Revolutionary Change Theories: A Multilevel Exploration of the Punctuated Equilibrium Paradigm. Academy of Management Review, 16, 10-36.

Giddens, Anthony
1984 The Constitution of Society. Berkeley, CA: University of California Press.

Gifford, Robert, Donald Hine, and Jennifer Veitch
2000 Meta-Analysis for Environment-Behavior and Design Research, Illuminated with a Study of Lighting Level Effects on Office Task Performance. *In* Advances in Environment, Behavior, and Design, vol. 4: Toward the Integration of Theory, Methods, Research and Utilization. Gary Moore and Robert Marans, eds. Pp. 223-253. New York: Plenum Press.

Goodsell, Charles
2000 Mnemonic Meanings of the American capitol. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed. Pp. 47- 260. Burlington, VT: Ashgate.

Gregory, Kathleen
1983 Native-View Paradigms: Multiple Cultures and Culture Conflicts in Organizations. Administrative Science Quarterly, 28:359-376.

Greiner, Larry
1972 Evolution and Revolution as Organizations Grow. Harvard Business Review, 50, 37-46.

Groat, Linda
2000 The Architect as Artist or Scientist?: A Modest Proposal for the Architect-as-Cultivator. *In* Culture- Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed. Pp. 127-149. Burlington, VT: Ashgate.

Hall, Edward
1959 The Silent Language. New York: Anchor Books.

Hamada, Tomoko
1991 American Enterprise in Japan. New York: State University of New York Press.

Hamada, Tomoko
1995 Inventing Cultural Others in Organizations: A Case of Anthropological Reflexivity in a Multinational Firm. Journal of Applied Behavioral Science 31(2): 162-185.

Hamada, Tomoko
1998 Perspective on Organizational Culture. Anthropology of Work Review, 10(3), 5-7.

Hamada, Tomoko
2000 Anthropological Praxis: Theory of Business Organization. National Association for Practicing Anthropologists Bulletin 18:79-103.

Hamada, Tomoko, and Will Sibley, Eds.
1993 Anthropological Perspectives on Organizational Culture. New York: University Press of America.

Hatch, Mary Jo
1988 Physical Barriers, Task Characteristics, and Interaction Activity in Research and Development Firms. Administrative Science Quarterly, 32, 287- 299.

Haynes, Barry, and If Price
2004 Quantifying the Complex and Adaptive Workplace. Facilities, 22, 8-18.

Hearn, Greg, and Abraham Ninan
2003 Managing Change is Managing Meaning. Management Communication Quarterly, 16, 440-445.

Hedge, Alan
1982 The Open-Plan Office: A Systematic Investigation of Employee Reactions to Their Work Environment. Environment and Behavior 14(5): 519-542.

Heracleous, Loizos, and Michael Barrett
2001 Organizational Change as Discourse: Communicative Actions and Deep Structures in the Context of Information Technology Implementation. Academy of Management Journal, 44, 755-778.

Herman Miller, Inc.
2005 Another New One: DesignLink. Retrieved May 3, 2005 from http://www.hermanmiller.com/CDA/SSA/DesignLink/0,1680,a10-c81-df00.html).

Hirsch, Eric, and Michael O'Hanlon, eds.
1994 The Anthropology of Landscape: Perspectives on Place and Space. Oxford: Clarendon Press.

Jablin, Fredric, and Linda Putnam, eds.
2002 The New Handbook of Organizational Communicaton: Advances in Theory, Research and Methods. Thousand Oaks, CA: Sage.

Janz, Wesley
2000 Studious Questions, Studio Responses. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed. Pp. 151-172. Burlington, VT: Ashgate.

Jones, Elizabeth, Bernadette Watson, John Gardner, and Cindy Gallois
2003 Organizational Communication: Challenges for the New Century. Journal of Communication, 722-750.

Jordan, Ann
2003 Business Anthropology. Long Grove, IL. Waveland Press.

Kent, Susan
2000 The Cultural Revolution in Architecture. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed. Pp. 261-277. Burlington, VT: Ashgate.

King, Anthony
2000 Thinking with Bourdieu Against Bourdieu: A "Practical" Critique of the Habitus. Sociological Theory, 18(3), 417-433.

Kuhn, Timothy, and Karen Lee Ashcraft
2004 Corporate Scandal and the Theory of the Firm: Formulating the Contributions of Organizational Communication Studies. Management Communication Quarterly, 17, 20-57.

Kunda, Gideon
1992 Engineering Culture: Control and Commitment in a High Tech Corporation. Philadelphia. Temple University Press.

Kupritz, Virgnia
2000 Privacy Management at Work: A Conceptual Model. Journal of Architectural Planning and Research, 17(1), 47-63.

Kupritz, Virgnia
2004 Accomodating Privacy to Facilitate New Ways of Working. Journal of Architectural Planning and Research, 20(2), 122-135.

Lang, Jon
2000 The "New" Functionalism in Architectural Theory. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed.. Pp. 77-99. Burlington, VT: Ashgate.

Lawrence, Denise, and Setha Low
1990 The Built Environment and Spatial Form. Annual Review of Anthropology, 19, 453-505.

LeCompte, Margaret, and Jean Schensul
1999 Designing and Conducting Ethnographic Research. Walnut Creek, CA. AltaMira.

Lave, Jean, and Etienne Wenger
1991 Situated Learning: Legitimate Peripheral Participation. Cambridge: Cambridge University Press.

Lewis, Laurie
1998 Disseminating Information and Soliciting Input During Planned Organizational Change: Implementers' Targets, Sources, and Channels for Communicating. Management Communication Quarterly, 13, 43-75.

Lewis, Laurie, Stephanie Hamel, and Brian Richardson
2001 Communicating Change to Non-Profit Stakeholders: Models and Predictors of Implementers' Approaches. Management Communication Quarterly, 15, 5-41.

Lewis, Laurie, Brian Richardson, and Stephanie Hamel
2002 When the "Stakes" are Communicative: The Lamb's and the Lion's Share During Non-profit Planned Change. Human Communication Research, 29, 400-430.

Lewin, Kurt
1951 Field Theory in Social Science. New York: Harper & Row.

Low, Setha
1999 Culture, Politics and the Plaza: An Ethnographic Approach to the Study of Urban Public Spaces in Latin America. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed. Pp. 233-246. Burlington, VT: Ashgate.

Low, Setha, and Daphne Lawrence-Zuniga, eds.
2003 The Anthropology of Space and Place: Locating Culture. Malden, MA. Blackwell Publishing.

May, Steven
2003 Case Study: Challenging Change. Management Communication Quarterly, 16, 419-433.

Miller, Daniel
1987 Material Culture and Mass Consumption. Oxford: Blackwell.

Miller, Daniel, ed.
2005 Materiality. Durham, NC: Duke University Press.

Milligan, Melinda
2004 Loss of Site: Organizational Site Moves as Organizational Deaths. The International Journal of Sociology and Social Policy, 23, 115-152.

Millward, Lynne, S. Alexander Haslam, and Tom Postmes
2006 Putting Employees in Their Place: The Impact of Hot Desking on Organizational and Team Identification. Organization Science, 18(4), 547-559.

Moore, Gary
1996 Toward Environment-Behavior Theories of the Middle Range. *In* Advances in Environment, Behavior, and Design, vol. 4: Toward the Integration of Theory, Methods, Research and Utilization. Gary Moore and Robert Marans, eds. Pp.1- 40. New York: Plenum.

Moore, Gary, and Robert Marans, eds.
1997 Advances in Environment, Behavior, and Design, vol. 4: Toward the Integration of Theory, Methods, Research and Utilization. New York: Plenum.

Morgan, Glenn, and Andrew Sturdy
2000 Beyond Organizational Change: Structure, Discourse, and Power in U.K. Financial Services. London: Macmillan.

Nardi, Bonnie
1995 Context and Consciousness: Activity Theory and Human-Computer Interaction. Cambridge, Mass., MIT Press.

Nardi, Bonnie, and Yrjo Engestrom
1998 A Web on the Wind: The Structure of Invisible Work. Introduction to Special Issue of Computer Supported Cooperative Work, 8: 1-8.

Nardi, Bonnie, and Vicki O'Day
1999 Information Ecologies: Using Technology with Heart. Cambridge, Mass., MIT Press.

Nasar, Jack
1996 New Developments in Aesthetics for Urban Design. *In* Advances in Environment, Behavior, and Design, vol. 4: Toward the Integration of Theory, Methods, Research and Utilization. Gary Moore and Robert Marans, eds. Pp.149-193 New York: Plenum.

Nguyen, Huy Q.
2000 Time, Temporal Capability, and Planned Change. Academy of Management Review, 26, 601-623.

Nichol, Brian, and Lou Raye Nichol
2002 The Psychodynamics of an Organizational Change Initiative. Management Communication Quarterly, 16, 446-452.

Oldham, Greg, and Daniel Brass
1979 Employee Reactions to an Open-Plan Office: A Naturally Occurring Quasi-Experiment. Administrative Science Quarterly, 24, 267-284.

Oldham, Greg, and Nancy Rotchford
1983 Relationships Between Office Characteristics and Employee Reactions: A Study of the Physical Environment. Administrative Science Quarterly, 28, 542-556.

Oliver, Paul, ed.
1969 Shelter and Society. London: Barrie & Rockliff.

Olson, John
2001 Research About Office Workplace Activities Important to US Businesses: And How to Support Them. Journal of Facilities Management, 1, 31-47.

Orr, Julian
1996 Talking about Machines. Ithaca, NY: ILR.

Pacanowsky, Michael, and Nick O'Donnell-Trujillo
1982 Communication and Organizational Cultures. The Western Journal of Speech Communication, 46, 115-130.

Pelto, Pertti J., and Gretel H. Pelto
1978 Anthropological Research: The Structure of Inquiry. Cambridge. Cambridge University Press.

Pierce, Tamyra, and Deborah Dougherty
2002 The Construction, Enactment, and Maintainence of Power-as-Domination Through an Acquisition: The Case of TWA and Ozark Airlines. Management Communication Quarterly, 16, 129-164.

Peters, Tom, and Robert Waterman
1982 In Search of Excellence. New York: Harper and Row.

Pettigrew, Andrew
1979 On Studying Organizational Cultures. Administrative Science Quarterly, Vol. 24 570-581.

Prussin, Labelle
1969 Architecture in Northern Ghana: A Study of Forms and Functions. Berkeley, CA: University of California Press.

Rapoport, Amos
1969 House Form and Culture. Englewood Cliffs, NJ: Prentice-Hall.

Rapoport, Amos
2001 On the Importance of Theory. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed. Pp. 27-36. Burlington, VT: Ashgate.

Rapoport, Amos
2005 Culture, Architecture, and Design. Chicago: Locke Science Publishing.

Rodman, Margaret
2002 Empowering Place: Multilocality and Multivocality. *In* The Anthropology of Space and Place: Locating Culture. Setha Low and Denise Lawrence-Zuniga, eds. Pp.204-223.

Roethlisberger, Fritz, and William Dickson
1939 Management and the Worker. Cambridge: Harvard University Press.

Sachs, Patricia
1995 Transforming Work: Collaboration, Learning and Design. Communications of the ACM, 38(9): 36-44.

Schoggen, Phil
1989 Behavior Settings: A Revision and Extension of Roger G. Barker's Ecological Psychology. Stanford, CA: Stanford University Press.

Schwarz, Howard
2003 Mobile Workplacing: Office Design, Space and Technology. *In* New Technologies at Work: People, Screens, and Social Virtuality. Christina Garsten and Helena Wulff, eds. Pp. 91-117. Oxford: Berg.

Schwartzmann, Helen
1992 Ethnography in Organizations. Newbury Park: Sage.

Squires, Susan, and Brian Byrne, eds.
2003 Creating Breakthrough Ideas: Using Ethnographic Research in the Product Development Industry. Westport, CT: Greenwood Publishing.

Star, Susan, and Geoffrey Bowker
1995 Work and Infrastructure. Communications of the ACM, 38(9): 41.

Stephenson, Karen
2004 Space: A Dialectic Frontier. Reveal, Winter 2004: 20-21.

Sundstrom, Eric, Robert Burt, and Douglas Kamp
1979 Privacy at Work: Architectural Correlates to Job Satisfaction and Job Performance. Academy of Management Journal 23(1): 101-117.

Sundstrom, Eric, Jerri Town, David Brown, Andrew Forman, and Craig McGee
1982 Physical Enclosure, Type of Job and Privacy in the Office. Environment and Behavior 14(5):543-559.

Sutton, Robert, and Anat Rafaeli
1987 Characteristics of Work Stations as Potential Occupational Stressors. The Academy of Management Journal, 30, 260-276.

Taylor, James, Andrew Flanagin, George Cheney, and David Seibold
2001 Organizational Communication Research: Key Moments, Central Concerns, and Future Challenges. Communication Yearbook, 24, 99-137.

Timmerman, C. Erik
2003 Media Selection During the Implementation of Planned Organizational Change: A Predictive Framework Based on Implementation Approach and Phase. Management Communication Quarterly, 16, 301-340.

Van de Ven, Andrew, and Marshall Scott Poole
1995 Explaining Development and Change in Organizations. Academy of Management Review, 20, 510-540.

van der Voordt, Theo J. M.
2002 Productivity and Employee Satisfaction in Flexible Workplaces. Journal of Corporate Real Estate, 6, 133-148.

Van Maanen, John
1988 Tales of the Field: On Writing Ethnography. Chicago. University of Chicago Press.

Van Maanen, John
2001 Afterword: Natives 'R' Us: Some Notes on the Ethnography of Organizations. *In* Inside Organizations: Anthropologists at Work. David Gellner and Eric Hirsch, eds. Pp.233 -261. Oxford: Berg.

Vinck, Dominique, ed.
2002 Everyday Engineering: An Ethnography of Design and Innovation. Cambridge, MA: MIT Press.

Vischer, Jacqueline
2005 Space Meets Status: Designing Work Performance. London: Routledge.

Wasson, Christina
2000 Ethnography in the Field of Design. Human Organization, 59(4): 377-388.

Wasson, Christina
2003 Collaborative Work: Integrating the Roles of Ethnographers and Designers. *In* Creating Breakthrough Ideas: The Collaboration of Anthropologists and Designers in the Product Development Industry. Susan Squires and Bryan Byrne, eds. Pp. 71-90. Westport: Bergin and Garvey.

Wasson, Christina
2007 Making History at the Frontier: Women Creating Careers as Practicing Anthropologists. National Association of Practicing Anthropologists Bulletin 26(1): 1-19.

Watzlawick, Paul, John Weakland, and Richard Fisch
1974 Change: Principles of Problem Formation and Problem Resolution. New York: Norton.

Weick, Karl, and Robert Quinn
1999 Organizational Change and Development. Annual Review of Psychology, 50, 361-386.

Weisman, Gerald
1996 Environments for Older Persons with Cognitive Impairments: Toward an Integration of Research and Practice. *In* Advances in Environment, Behavior, and Design, vol. 4: Toward the Integration of Theory, Methods, Research and Utilization. Gary Moore and Robert Marans, eds. Pp.315-346. New York: Plenum.

Wenger, Etienne
1997 Communities of Practice: Learning, Meaning, and Identity. Cambridge: Cambridge University Press.

Wilk, Richard
2001 Toward an Archeology of Needs. *In* Anthropological Perspectives on Technology. Michael Schiffer, ed. Pp. 107-122. Albuquerque: University of New Mexico Press.

Zalesny, Mary, and Richard Farace
1987 Traditional Versus Open Offices: A Comparison of Sociotechnical, Social Relations, and Symbolic Meaning Perspectives. The Academy of Management Journal, 30, 240-259.

Zeisel, John
2005 Inquiry by Design: Environment/Behavior/Neuroscience in Architecture, Interiors, Landscape, and Planning. New York: Norton.

Zimring, Craig, and Dita Peatross
2000 Cultural Aspects of Workplace Organization and Space. *In* Culture-Meaning-Architecture: Critical Reflections on the Work of Amos Rapoport. Keith Diaz Moore, ed. Pp. 195-221. Burlington, VT: Ashgate.

Zorn, Theodore, Deborah Page, and George Cheney
2000 Nuts About Change: Multiple Perspectives on Change-Oriented Communication in a Public Sector Organization. Management Communication Quarterly, 13, 515-566.

APPENDIX A: INITIAL INTERVIEW QUESTIONS AND PROBES

1. If I was to watch you working over a week, what activities would I see you doing?

2. What are the tasks, functions, responsibilities, roles, etc. that characterize your work?

3. What are the daily routines of individuals and teams?

4. What are the projects people are working on? Who is working on each project and how do they do so? Where do they do it?

5. What should we, the ethnographers, be looking at in order to create a workspace that supports effective work?

6. How do individuals pass their days? Where do they say they go? Why do they go where they go? What are they looking for in sites to work? What makes a site attractive or repulsive or "blah"?

7. What triggers a move from one place or artifact to another?

8. How do you communicate your preferences regarding where and how you work? How do you learn about others' preferences? How do these play out in decisions about how the group works?

9. How (where, when, why) do people say they interact around work? What are the types of interactions from their perspectives?

10. What are the different types of interaction preferences and their consequences for effectiveness?

11. How do you socialize new people so they will fit in?

12. How has the new built environment affected how work is done?

13. How has the new built environment created new ways of doing things or new things to think about?

14. What do people think are the physical obstacles that prevent them from (individually and collectively) from working more effectively? What would they like to be able to do that they cannot do now?

15. How do different stakeholders define effectiveness, productivity, etc. at work? How do they think they are being effective or ineffective? What do they think would make them more effective and what evidence do they cite?

16. What innovations (or other valued outcomes) have people been involved in and what is the natural history of successes? What enabled them?

17. Imagine an optimistic scenario five years from now in which your physical workspace best supports the work of you and your coworkers. What are its characteristics?

18. Imagine a pessimistic scenario five years from now in which your physical workspace poorly supports the work of you and your coworkers. What are its characteristics?