Multi-party Information Systems Development: The Challenge of Cross-Boundary Collaboration

by

Natalia Levina

B.A., Computer Science
B.A., Mathematics
Boston University, 1994

M.A., Mathematics
Boston University, 1994

Submitted to the Sloan School of Management in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy in Management
at the
Massachusetts Institute of Technology

September 2001

©2001 Natalia Levina. All rights reserved.

The author hereby grants to MIT permission to reproduce and to distribute publicly paper and electronic copies of this thesis document in whole or in part.

Signature of Author................................................................. Sloan School of Management
August 27, 2001

Certified by .................. Wanda J. Orlikowski
Eaton-Peabody Professor of Information Technologies and Organization Studies
Thesis Supervisor

Accepted by ............... Birger Wernerfelt
Professor of Management Science
Chair, Ph.D. Program
Multi-party Information Systems Development:  
The Challenge of Cross-Boundary Collaboration

by

Natalia Levina

Submitted to the Sloan School of Management  
on August 27, 2001  
in Partial Fulfillment of the Requirements for the Degree of  
Doctor of Philosophy in Management

Abstract

Information System (IS) development has always involved multiple stakeholders, but the IS literature has traditionally focused on collaboration between two groups: technical developers and users. With changes in technology, growth in IS outsourcing, and the increased strategic role of IS applications, the number and diversity of stakeholders on IS projects has increased significantly. People from different disciplines—business strategists, technologists, graphic designers, marketers—spanning multiple organizations and hierarchical levels need to find ways of working together. In this thesis I draw on data from an ethnographic field study of a multi-party IS development project and an R&D group in an Internet consulting organization to understand how people collaborate across a variety of boundaries and how such collaboration shapes the IS product.

This thesis develops a theoretical framework for understanding the boundaries involved in IS development, and how they shape and are shaped by agents' practice. Multi-party collaboration can be understood through Bourdieu's practice theory lens as a struggle of agents situated in nested and intersecting industry, organization, profession, and project-based fields of practice. I analyze organizational discourse in these fields through a communicative genre lens, which focuses on socially recognized and habitually enacted types of communicative actions. The analysis shows how relational boundaries are represented, produced, reproduced, and transformed through the discourse in the various fields of practice. The enactment of communicative genres on an IS project shapes a collective reflection-in-action spiral, which involves iteratively reflecting on objects produced by others and either adding to or challenging past experiments in future actions. The relative input of different agents to the collective reflection-in-action spiral shapes the IS product—the object that results from the last experiment. Whose input is reflected on and preserved in future experimentation is at stake in the project field. Attaining such stakes shapes agents' relative positions in the field, that is, the boundary power dynamics. The framework contributes to both research and practice by increasing our understanding of current practices on collaborative multi-party IS development projects and by offering insights into the tradeoffs involved in such practices and opportunities for innovation and improvement.

Thesis Supervisor: Wanda J. Orlikowski  
Title: Eaton-Peabody Professor of Information Technologies and Organization Studies.
To my parents, Svetlana and Ilya.
Table of Contents

CHAPTER 1  INTRODUCTION .................................................................................. 13
  1.1  COLLABORATION OF MULTIPLE STAKEHOLDERS IN ISD .................. 15
  1.2  CROSS-BOUNDARY INNOVATION ......................................................... 17
  1.3  MECHANISMS FOR CROSSING BOUNDARIES ................................. 19
  1.4  RESEARCH QUESTIONS AND CHAPTER OUTLINE ......................... 21
  1.5  A WORD ON TERMINOLOGY ............................................................. 25

CHAPTER 2  UNDERSTANDING BOUNDARIES .................................................. 28
  2.1  PERSPECTIVES ON BOUNDARIES IN ORGANIZATIONS ................. 28
  2.2  BOURDIEU’S PRACTICE THEORY ...................................................... 32
  2.3  REVISITING MULTIPLE PERSPECTIVES ON BOUNDARIES ............. 49
  2.4  COMMUNICATIVE GENRE ENACTMENT AS A BOUNDARY-CROSSING PRACTICE ......................................................... 52

CHAPTER 3  EMPIRICAL APPROACH .................................................................. 60
  3.1  ON THE PRACTICE OF REFLEXIVE SOCIOLOGY .............................. 60
  3.2  RESEARCH SETTING ........................................................................... 64
  3.3  DATA COLLECTION AND ANALYSIS ................................................ 67
  3.4  LIMITATIONS OF THE APPROACH .................................................. 75

CHAPTER 4  BOUNDARIES AT ESERVE AND PUBCO ...................................... 79
  4.1  THE ESERVE FIELD ........................................................................... 81
  4.2  THE ESERVE R&D GROUP FIELD .................................................... 119
  4.3  THE PUBCO FIELD ........................................................................... 131
  4.4  PUBCO PROJECT AS AN EMERGENT CROSS-BOUNDARY FIELD ....... 135
  4.5  ANALYZING BOUNDARIES USING A COMMUNICATIVE GENRE LENS .......... 145

CHAPTER 5  GENRE CHANGE AND FIELD TRANSFORMATION ......................... 149
  5.1  STORY ONE: ESERVE-PUBCO PROJECT INITIATIVE SELECTION ........ 151
  5.2  STORY TWO: THE ESERVE R&D PROJECT INITIATIVE SELECTION .... 157
  5.3  ANALYSIS: DOXA, ORTHODOXY, AND HETERODOXY OF GENRES .... 164

CHAPTER 6  SHAPING THE IS PRODUCT .......................................................... 176
  6.1  REFRAMING THE QUESTION ............................................................. 176
  6.2  REFLECTION-IN-ACTION .................................................................... 177
  6.3  GENRES SHAPING COLLECTIVE REFLECTION-IN-ACTION ............... 181
  6.4  REFLECTION-IN-ACTION SPIRAL EFFECT ON FIELD POSITIONS ....... 206
  6.5  AGENTS ENACTING GENRES: TRADEOFFS AND STRATEGIES ........ 214
  6.6  TRACING THE CYCLE AND LOOKING FOR ANSWERS ..................... 218

CHAPTER 7  IMPLICATIONS AND CONTRIBUTIONS ......................................... 223
  7.1  LOOKING BACK AT ESERVE ............................................................. 223
  7.2  CONTRIBUTIONS TO IS RESEARCH .................................................. 237
  7.3  CONTRIBUTIONS TO ORGANIZATIONAL RESEARCH ....................... 239
  7.4  LIMITATIONS AND FUTURE DIRECTIONS ........................................ 243

APPENDIX A: ESERVE ORGANIZATIONAL CHART ......................................... 245
APPENDIX B: ESERVE CONSULTANTS INSTRUCTING IN NHTP ................. 246
APPENDIX C: ESERVE FIELD GENRE REPERTOIRE .................................. 247
APPENDIX D: R&D FIELD GENRE REPERTOIRE ....................................... 258
APPENDIX E: ESERVE-PUBCO FIELD GENRE REPERTOIRE ...................... 262
Acknowledgements

I remember the day when my brother, who happened to work at MIT when I was applying to graduate schools, told me about a lecture by Wanda Orlikowskii. The lecture was about the people’s aspect of Information Technology (IT) and my brother, despite being a die-hard technologist, was raving about it. Having not heard the lecture, I discarded it as, well, not interesting. Little did I know that five years later I would be writing a dissertation on this topic. It took an effort of many people to get me there and I am very grateful to them.

I have been fortunate to have an opportunity to get to know and work closely with my advisor, Wanda Orlikowskii. A lot of theory that framed my thinking initially came from Wanda. Wanda also shared with me her wisdom and experience on how to conduct in-depth empirical studies. Wanda’s rigorous approach to research and tireless dedication to colleagues and students without much regard for weekend plans have been a source of great inspiration for me. Meeting fellow IT researchers at MIT and elsewhere, I learned that there is a code-phrase used to identify certain understanding of how people build and use technology: “I took Wanda’s course,” sometimes, substituted with “I loved that 1992 Orlikowskii article.” The code-phrase is usually followed with “It changed my view on things in profound ways.” I am very grateful to Wanda for continuously changing my “view on things in profound ways” by exposing me to her work and by giving me amazingly insightful comments on my own research.

I am very grateful to my committee member Jeanne Ross, who gave my first ticket to the study of organizational aspects of IT. Jeanne helped me formulate my interests in the field and always reminded me to stay focused on the phenomenon. Jeanne’s unique gift to present deeply thought-out ideas so clearly and crisply to researchers and practitioners has always amazed me. Jeanne’s generous insights into managing it all, i.e., having a successful career, being a mother, a wife, and a loved colleague all at the same time helped me understand my own priorities without loosing my mind in the process. Jeanne along with Jack Rockart, at the Center for Information Systems Research, provided me with financial support, which made my work possible. I am also grateful to Peter Weill for continuing to support me both financially and with much needed advice as he became the new director of the Center.

Social networks worked wonders for me when I mentioned to Maureen Scully four years ago that I was interested in the boundary crossing phenomenon. She told me about Paul Carlile, the third member of my committee, whose influence on my thinking has shaped this dissertation in most fundamental ways. Paul introduced me to the work of Pierre Bourdieu, which laid the foundation for this dissertation. Paul’s thought-provoking comments have always pushed me to dig deeper and explore broader. It often took me
months to understand the depth of Paul's insights, but the "wow" part of "getting it" never seemed to fade. I thank all of my committee members for their endless flexibility, their insights, their patience in reading and correcting my long and far from polished drafts, but, most of all, for believing in my ability to do it.

Many MIT staff and faculty members helped me along the way. Without Stuart Madnick's help I would not be at MIT. Lotte Bailyn, JoAnne Yates, and John Van Maanen have been instrumental in shaping my thinking and supporting my work. Dean Isaac Colbert provided financial support needed to wrap up my work. Members of the staff at the Center for Information Systems Research, Chris Foglia, Deborah Small, Julie Coiro, and David Fitzgerald have always accommodated my last-minute requests and helped me celebrate my victories. Sharon Cayley shared her expertise on navigating through the PhD process and saved me from lots of big and small worries.

This work would not have materialized if not for the support of my fellow students at MIT. My officemate, Nils Fonstad, has contributed to this dissertation in more ways than I could enumerate, starting with throwing ideas on the whiteboard and concluding with helping me rehearse during late hours right before the defense. Julie Rennecker and I have gone together through the ups and downs of doing and writing up a qualitative study. I thank Julie for offering her shoulder in the process. Carsten Østerlund generously shared his knowledge of social theories on boundaries in organizational practice. Michael O'Leary was the first person that asked me to think about the power dynamics of the team that I was studying, which formed a whole stream of new theorizing. Jen Howard-Grenville helped me learn how to sort out the vast amount of data and write the thesis. Dina Mayzlin was tireless in pushing me to present my ideas with "excitement." Finally, Avi Bernstein and Mike Smith helped me believe that I can get a job and that there is a "real" life after thesis.

Many people outside of MIT contributed to this work. I want to thank the organizations that contributed their time, resources, and energy to let me observe their practices and interview their members without asking much in return. It was the generosity of my study participants in bearing with my intrusion in extremely close quarters and sharing their insights in endless interviews that made this work happen. While the theoretical lens I have chosen in my dissertation highlighted some of the problems that existed within these organizations, I would like to take this opportunity to set the record straight by acknowledging that these were truly amazing organizations with talented, caring, and dedicated people trying their best to produce high quality results with limited amounts of resources. I hope that this work will help them deal better with their everyday dilemmas.

Fellow doctoral students outside MIT also helped me along the way. Moses J.C. Lee, a colleague from New Zealand, stayed up nights to read through drafts of my chapters. Deborah Sole and Huseyin Tanriverdi offered valuable job market advice and shared frustrations on trying to finish up under the time pressure. Participants of the ICIS 2000 Doctoral Consortium in Brisbane, Australia, gave much needed suggestions on improving my work.
In my personal life, my friends Lena and Eugene not only helped me with laborious revisions of the drafts, but were also always there to listen to my dilemmas, offer creative solutions, and encourage me in every possible way. My friends Leo, Monica, Boaz, Orit, Svetlana, and Yuri extended an open offer of help of any kind. My brother, Eugene, introduced me to the IT field and helped me choose a topic with both practical and theoretical impacts. My husband Vadim was a source of tech support, editing expertise, crisp ideas, frequent celebrations, parental help, and, most importantly, an unquestionable belief that I will be successful in this endeavor. I got my emotional uplifting from my daughter Nellie, who was also my primary source of insights on the untapped possibilities of learning through reflection-in-action. I hope she forgives me for not tucking her in every night during the last couple of months. I am deeply grateful to my kindest grandmother, whose love for life and an ability to always make the best of it never seized to inspire me.

Finally, this thesis is truly a collaborative work produced together with two other people, whom I credit for everything I have accomplished in life: my mom who taught me to go after my dreams and my dad who taught me how to work diligently at that. Their everyday help with my daughter, my house chores, and large and small challenges in my life knew no bounds. This work is dedicated to them.
Chapter 1  Introduction

Five years ago I was walking from the subway station to my job at an IS consulting firm. A young woman caught up to me. “Hey, Julie,” I said. We talked about apartment hunting and weekend plans. It was nice not to have to walk alone. We were roughly the same age and with a similar Computer Science education. I really liked her. We rode the elevator together chatting away. When we walked in, she headed for her office and I went for my cubicle across from her open door. I started working on my data model when an older male co-worker approached me about an issue with his programming. Usually, I would give programmers the data model to code against and they would come by to ask me questions about the meaning of various data elements. “OK,” I said, “Let’s talk.” “Not in front of the client,” he said pointing at Julie. “Sure, let’s get a room,” I replied understandingly. “Do we need the data model?” I asked. “We better have it,” he said. We went into the team room, where my data model was hanging on the wall like a beautiful abstract painting. Pointing at the wall, he asked me to de-normalize my fully normalized model so that it would be easier for him to code. “What? Change my beautiful ‘baby’? Where did he go to school? They probably did not teach normalization those days. What a lack of professionalism!!” raced in my head. But he had a deadline in two days and there was no way he was going to figure out all the programming by then. After all, we were on the same team. ... I gave in.

Why did I immediately agree to exclude Julie, the client, from hearing our conversation? Why did I think that my data model that was put together from twelve pieces of printed paper with the help of the scotch tape was beautiful and should not be changed? Why did we always need the data model to talk? Why did this programmer decide to approach me with an “illegitimate” request? What would have happened had
we included Julie into our conversation? Would she have pushed the deadline to allow for proper coding? I must admit I did not ask myself any of these questions at the time.

Recalling this story now, I see how in our everyday interaction we continuously differentiate and associate ourselves with others based on our backgrounds and settings in which we are interacting. I liked talking to Julie on the street as a young woman with a similar background, but in work-related situations I was the consultant and she was the client. I did not go to lunch with the older man who approached me, but we were both consultants working towards a joint deadline that was unchangeable in our understanding. At the same time, he was a programmer and I had a proud position of a business analyst and database designer, which meant that he had to comply with my design decisions. Without explicitly thinking about it, I had a practical sense of these distinctions and of their salience in a given context. I also had a sense for the appropriateness or inappropriateness of communicative practices associated with these distinctions, such as not showing consultants' "dirty laundry" to the client.

In this thesis I draw on the ethnographic data I collected at an Internet consulting firm to bring to the surface some taken-for-granted dispositions that shape our collaboration at work. I address the question of how participants on multi-party IS development projects collaborate across social boundaries in designing and building an IS product. Specifically, I draw on concepts developed by practice theory-based researchers—sociologists who focus on what people do—to build a framework for how to identify boundaries involved in IS development. Focusing on communicative practices as a way of understanding collaboration, I then argue that every communicative action involves producing, reproducing, or transforming the power dynamics around a given boundary and the boundary itself, which is defined relationally. The reproduction or transformation of relational boundaries on IS development projects is shaped not only by the competencies that agents bring to the project, but also by the way in which agents engage in reflecting on each other's work and experimenting with new objects. Understanding collective reflection and experimentation with objects on an IS project provides insights into how communicative practices reproduce or transform the power dynamics around a given boundary leading to desirable or undesirable outcomes.
1.1 Collaboration of Multiple Stakeholders in ISD

The success of Information Systems Development (ISD) efforts has traditionally been associated with the effective combination of the business knowledge of users with the technical knowledge of IS professionals (Boland 1979; Markus 1983; Beath and Orlikowski 1994; Orlikowski and Gash 1994). These two groups were easily identifiable in practice because of the distinct roles assigned to them in the ISD process. A significant body of research stemming from the so called "Scandinavian school" of "user-centered" or "participatory" design has focused on the user-developer collaboration (overviewed in Bødker, et al. 1988). The two broad groups identified in IS tradition were designers (professional designers and lay designers who are users) and users. In the summary of this research tradition, its founders wrote:

We emphasize that it is important that designers of computer support for cooperative work do not just impose their own understanding or ideal of cooperative work onto other groups in other domains. ... Since the design of computer support is design of the conditions for the future work situations of the users, these conditions need to be designed with concern for the practice and cooperation of the involved groups. We argue that active participation of users in design is necessary to deal with this. (Bødker, et al. 1988).

Thus, collaboration across the user-developer boundary was associated with joint involvement of potential users in the process. Almost twenty years of research in this tradition explored the creation of shared artifacts that help represent the emergent IS artifact and the process of users and designers jointly reflecting on these artifacts (Bødker, et al. 1988: 384; Kyng 1995; Suchman 1995). The issues addressed included when and how to involve the users in the design process and how to customize various representations to users’ contexts (e.g., Tolvanen, et al. 1993; Bødker 1999; Rossi, et al. 2000).

Further more, drawing on the Computer Supported Cooperative Work (CSCW) perspective, as well as IS research in Scandinavian tradition also explored how distinctions among potential or current users shape the emergent IS product. Several user groups were differentiated, for example, managers vs. line workers (e.g., Bødker, et al. 1988; Goodman and Darr 1998), hospital administers vs. doctors vs. nurses (Bloomfield
and Coombs 1992; Bowker, et al. 1996) authors vs. readers vs. administrators (Guzdial, et al. 2000), and aircraft commanders vs. pilots (Linde 1988), etc.

However, the diversity of stakeholders on IS projects cannot be reduced to the significant but incomplete classification that is based on distinguishing users from developers and on distinguishing among several clusters of users. There are also different types of developers involved, often spanning multiple organizations. In the short story from my own experience, several distinctions were salient in the collaboration of just three developers: client vs. consultant, analyst vs. programmer, younger vs. older, and female vs. male. In addition, there were clear positional status distinctions that existed among developers in both Julie’s corporation and in my consulting firm. There is little work, however, on the implications that distinctions among developers (Agarwal, et al. 2000) among different organizations involved in ISD have on the results of collaboration. While there is an acknowledgement in the IS outsourcing literature, for example, that the ability to “share knowledge” and build relationships affects outsourcing outcomes (Kern 1997; Koh, et al. 1999), a large body of research on IS outsourcing does not focus on the actual practices of developers and managers working in an outsourced IS development or maintenance environment (see Levina and Ross 2001 for a review).

With the diversification of technical platforms, the recognition of the strategic impact of IS, a burst of consumer-facing applications, and a trend towards outsourcing, the number and diversity of stakeholders on IS projects has increased significantly. Problems of bringing together a diverse group of stakeholders are particularly acute in the web development arena because of the novelty of this area of activity, the pace of evolution of technical platforms, and the involvement of consumers as IS users. People from different walks of life—business strategists, technologists, graphic designers, marketers—now need to work together to invent new E-commerce applications. Some of them, like business strategists, have not participated in ISD before, while others, like artists, have not even worked in traditional business corporations before. In addition, consumer-facing applications are drawing in a new audience of users—an audience with much greater choice. Being outside the managerial control of corporations, these consumer-users cannot be ordered to use the system as corporate users were (Zuboff 1988). Instead consumer-users need to be enticed to use and transact with the system. No longer do
developers in these settings look at their jobs as “capturing requirements” and “automating processes.” The word “automate” is replaced by the words “design” and “innovate,” and with that is an acknowledgement of the need for new kinds of work practices. Research on such work practices can be found in the literature on knowledge management, cross-functional product development, and organizational learning. I will briefly consider each of these.

1.2 Cross-boundary Innovation

As ISD evolves from automating processes to innovating products, the research focus changes from improving techniques of IS analysis and design to understanding cross-boundary innovation. It is in the literature on the so-called “knowledge-based view of the firm” that we find innovation attributed to a firm’s capability to combine previously disparate sources of expertise (von Hippel 1988; Kogut and Zander 1992; Nonaka 1994; Grant 1996b). The innovative potential of combining diverse expertise comes from the assumption that there are obstacles involved in developing these capabilities, so that overcoming such obstacles can lead to valuable, rare, imperfectly immutable, and unsubstitutable resources (Kogut and Zander 1992; Grant and Baden-Fuller 1995). Knowledge-based view researchers typically make two critical assumptions about the nature of knowledge: they see knowledge as possessing a tacit component (Polanyi 1983) and they see individuals as having bounded rationality, hence, needing to specialize (Simon 1947). From these assumptions, most authors conclude that a firm's primary function is to integrate/coordinate individual knowledge (Kogut and Zander 1992; Nonaka 1994; Grant and Baden-Fuller 1995; Zander and Kogut 1995; Conner and Prahalad 1996; Grant 1996a; Kogut and Zander 1996; Spender 1996; Kusunoki, et al. 1998; Nahapiet and Ghoshal 1998). Many authors go further noting that not only do firms coordinate individual knowledge, but that they also create new knowledge that is social in nature (Kogut and Zander 1992; Nonaka 1994; Zander and Kogut 1995; Kogut and Zander 1996; Spender 1996; Kusunoki, et al. 1998; Nahapiet and Ghoshal 1998).

At the same time, such integration does not have to take place completely inside the firm boundaries but instead can be based on inter-firm collaboration (Liebeskind, et al. 1996; Powell, et al. 1996; Dyer and Singh 1998; Powell 1998). This so-called "relational
view of the firm" (Dyer and Singh 1998) claims that in addition to internal resources, firms ought to look at inter-organizational networks as a source of sustainable competitive advantage. Inter-organizational relationships are especially crucial in high tech industries, where knowledge is rapidly changing and broadly distributed, placing the locus of innovation inside inter-organizational networks (Grant and Baden-Fuller 1995; Liebeskind, et al. 1996; Powell, et al. 1996; Powell 1998). Most of the literature on inter-firm collaboration focuses on bilateral or multi-party horizontal relationships such as joint development agreements or ventures (Liebeskind, et al. 1996; Mowery, et al. 1996; Powell, et al. 1996; Inkpen and Beamish 1997; Lam 1997; Inkpen and Dinur 1998; Kumar and Nti 1998; Larsson, et al. 1998; Powell 1998), with only few authors addressing customer-supplier partnerships (Grant and Baden-Fuller 1995; Weiss and Kurland 1997; Lincoln, et al. 1998; Levinia and Ross 2001).

Adopting this perspective on innovation, new approaches to ISD would have to identify how firms can build capabilities for crossing boundaries that result in specialized expertise, whether these capabilities are in-house or in partnership with others. Yet, the nature of these boundaries is poorly understood. Typically, in the empirical work distinction is drawn between functional boundaries (Dougherty 1992; Carlile 1997), organizational unit boundaries (von Hippel 1994; Szulanski 1995; 1996; Dixon 2000), organizational boundaries (Mowery, et al. 1996; Powell, et al. 1996; Lam 1997), and industry vs. academia boundaries (Liebeskind, et al. 1996). The boundary between the firm and its consumers (or product users) is translated into the boundary between product development and marketing folks (Dougherty 1992; Carlile 1997) or between manufacturer's engineers and "lead users" engineers (von Hippel 1988). The definition of boundaries in the studies within the strategic knowledge-based tradition is assumed to be boundaries that are institutionalized in current industry or organizational settings: functional, divisional, and inter-organizational. However, in modern ISD, formal functional boundaries such as the distinction between graphic designer and technologist are often muddy as a designer might be responsible for designing the IS navigation, while a technologist may be responsible for interviewing users.

Another stream of research where knowledge sharing has been considered in relation to boundaries has been the organizational learning literature which draws on the notion of
communities of practice (Lave and Wenger 1991). The boundaries identified in this literature are often based on occupational groups (Brown and Duguid 1991; Orr 1996; Brown and Duguid 1998; Wenger 1998; Beckky 1999; Liedtka 1999; Sitkin and Brown 1999; Brown and Duguid 2000) or on distinctions between old-timers and newcomers inside these groups (Lave and Wenger 1991). This research does not account for hierarchical, organizational unit, and inter-organizational boundaries. An attempt to bring inter-organizational boundaries under the communities of practice umbrella has recently been made by Brown and Duguid (2001), but the new approach still does not account for other types of boundaries.

The review of the literature on knowledge management, cross-functional product development, and organizational learning indicates that researchers have not explored the notion of boundaries nor looked at the implication of dealing with different kinds of boundaries simultaneously. In most studies, boundaries themselves have been taken for granted. In those studies that focused on practice and acknowledged the co-existence of multiple boundaries, the question of which boundaries were more salient was not addressed. Thus, to undertake an investigation of collaboration in multi-party IS settings it is first necessary to examine the question of identification of boundaries and the salience of different boundaries in the context of everyday practices.

1.3 Mechanisms for Crossing Boundaries

The knowledge-based perspective on innovation argues that firms must develop both coordination and cooperation mechanisms for crossing intra- and inter-organizational boundaries (Grant 1996b). An important paper by Kogut and Zander (1992), which extended earlier work by Nelson and Winter (1982), proposed several coordination mechanisms including the development of a unique language or code to allow group members to learn who knows what and coordinate their activities, and the engagement of boundary spanners to coordinate the transfer of knowledge across organizational units. At the same time, the paper argued that a vertical transfer of knowledge among different organizational functions relies on the use of higher-order organizing principles such as the sharing of accounting data and other formal and informal structures. Kogut and Zander's work has been criticized for their lack of clarity around the concept of "higher-
order organizing principles," which is fundamental to their discussion (Foss 1996b; a; Carlile 1997). Other knowledge-based theorists have been more specific in proposing organizational coordination mechanisms including rules and directives (Grant and Baden-Fuller 1995; Conner and Prahalad 1996; Grant 1996a; b), sequencing (Grant 1996b), routines (Nelson and Winter 1982; Grant and Baden-Fuller 1995; Grant 1996a; b; Hargadon and Sutton 1997), and group problem solving (Grant 1996b; Leonard and Sensiper 1998). These mechanisms have been identified without regard to the specific nature of boundaries that have to be crossed in the collaboration. Researchers who focus more specifically on crossing boundaries (see Levina 2000 for a review) have also emphasized the need for a shared language (Bradbury 1998; Bechky 1999; Lant 1999; Sitkin and Brown 1999) and the engagement of boundary spanners (see Friedman and Podolny 1992 for review of strategy research) or "translators" (as referred to in the organizational learning literature) (e.g., Yanow 1996: Ch5; Bradbury 1998; Yanow 2000), but have also paid special attention to the role of shared artifacts or "boundary objects" in enabling cross-boundary collaboration (Star 1989; Star and Griesemer 1989; Henderson 1991; Boland and Tenkasi 1995; Kyng 1995; Carlile 1997; Hargadon and Sutton 1997; Bodker 1998; Bradbury 1998; Leonard and Sensiper 1998; Ackerman and Halverson 1999; Bechky 1999; Kim and King 2000; Pawlowski, et al. 2000). In addition, shared stories have been described as especially potent mechanisms for sharing knowledge across various boundaries within organizational communities of practice (Brown and Duguid 1991; Lave and Wenger 1991; Boland and Tenkasi 1995; Orr 1996; Wenger 1998).

In analyzing these mechanisms, the emphasis has been primarily on the coordination part of collaboration and not on cooperation (aligning of interests). However some accounts have investigated the role of boundary objects for creating joint investments in practice (Carlile 1997), the role of boundary spanners in negotiating interests (Friedman and Podolny 1992), and the role of rules and directives in substituting managerial expertise for that of subordinates (Grant and Baden-Fuller 1995; Conner and Prahalad 1996; Grant 1996b). Researchers have also looked at organizations as social networks that facilitate cooperation by creating opportunities for interaction as well as institutionalizing trust, norms, obligations and expectations, and identification influence
(Nahapiet and Ghoshal 1998). Finally, some researchers have argued that organizations foster cooperation by fostering relationships based on "care" (von Krogh 1998) and moral and social identification (Kogut and Zander 1996) as opposed to economic self-interest.

While the literature on product development and innovation gives us some insights as to what kinds of coordination and cooperation mechanisms are used in cross-boundary collaboration, the existing analysis needs further examination. For one, it appears that research on coordination mechanisms is for the most part disjoint from the research on cooperation mechanisms despite evidence that these two aspects of collaboration are intricately linked in practice (Carlile 1997). At the same time, empirical research tends to focus on one mechanism at a time, and even when several mechanisms are discussed in a given study, they are typically discussed separately (e.g., Bradbury 1998; Bechky 1999). There are also issues to be addressed within the research traditions developing each concept. For example, the literature on boundary objects points to the need for creating concrete representations, but the nature of concreteness is not well defined (Henderson 1991; Carlile 1997; Bechky 1999). Similarly, twenty plus years of research on boundary spanning seems to arrive at the conclusion that boundary spanning is a painful activity with no clear positive implications (Katz and Tushman 1983; Star and Griesemer 1989; Nochur and Allen 1992; Singh 1993). Sharing stories has been described as a key learning mechanism in professional communities of practice (Brown and Duguid 1991; Orr 1996), but the role of shared stories in cross-boundary settings has not been investigated. While prior research has identified several pieces of the puzzle, putting the puzzle together requires a lens for understanding the context of practice to see how the different pieces fit together.

1.4 Research Questions and Chapter Outline

The innovation literature has demonstrated the strategic importance of effective collaboration among people with distinct functional and organizational competencies. The literature indicates that strategic advantage can be attained by overcoming obstacles involved in such collaboration. Modern day ISD practice with its shifted emphasis from "automation" to "innovation" can draw on the lessons learned from the innovation and CSCW research to understand and improve collaboration. However, there is still a
pressing need even in the innovation and CSCW literatures to develop frameworks for dealing with different kinds of diversity that are part of everyday practice in business organizations. Thus, the main aim of this thesis is to understand how people from diverse backgrounds collaborate in ISD settings. Such understanding will provide ways of addressing the question of how collaborative practices of diverse participants on IS projects shape IS outcomes.

Modern ISD practice involves dealing with different types of diversity including functional, organizational, user/developer, and professional differences. Thus, to understand collaboration in ISD it is necessary to develop a general concept for describing these differences that is not tied to one specific distinction. I propose to develop the concept of "boundary" to describe differences that exist among individuals based on their relations in a given context of practice. Because each individual has a unique trajectory in the social space characterized by a set of experiences that shape individual identity, the number of such boundaries is enormous (Bourdieu 1977; Ashforth, et al. 2000). We need to develop a way of understanding the relevance and salience of boundaries in a given context of practice. This is the first question in my study:

1. What is the nature and salience of social boundaries in organizations?

With such an understanding we can ask the next question that helps us understand collaboration in ISD practice:

2. How is collaboration across boundaries structured by the everyday communicative practices of individuals?

An understanding of practice would be inadequate if it did not account for change. The understanding of change is also critical for developing practical implications of the study so as to facilitate improvement and innovation. Thus, the next question is:

3. How do communicative practices evolve over time to reproduce or transform social dynamics across boundaries?

Addressing the first three questions gives us an understanding of how people collaborate across boundaries in ISD. With such an understanding, I can then ask:

4. How do cross-boundary collaborative practices shape IS outcomes?
The remainder of this thesis is organized as follows. In **Chapter Two**, I look at different perspectives on social diversity in organizations including socio-cultural, social identity, and community of practice traditions to clarify the nature of social boundaries in organizations. I then draw on a practice theory developed by French sociologists Pierre Bourdieu to define boundaries and understand how to analyze their salience in a particular context of practice (field). I then develop a theoretical connection between the practice theory notion of relational boundaries and their production and reproduction in collaborative practices through communicative genres, a notion which refers to socially recognized and habitually enacted types of communicative action (Orlikowski and Yates 1994).

**Chapter Three** explains and describes the empirical approach that was used in my study. I describe my choice of the research site, my role in the field, and the data collection process. I then focus on how the data were analyzed in light of the practice theory lens adopted in my study. The limitations of the methodology are also considered.

**Chapter Four** uses the theoretical notions developed in Chapter Two to address the first two questions empirically. Chapter Four brings the abstract theoretical notions into the concrete analysis of the everyday practices of the Internet consulting firm (Eserve) that I studied. In this chapter I delineate the fields of practice that were most salient to the study setting and their interrelation. This analysis uses the communicative genre lens to understand various relational distinctions and their salience in practice. I contrast the boundaries that emerged in my analysis of the R&D group field with the boundaries in the client project field to show how different approaches to practice in a smaller field (R&D group or client project) can contradict or reinforce the approach to practice of the larger field (Eserve). I also show how a field can disintegrate if it does not offer rewards for those who have more experience in it, as happened in the R&D group field. I also discuss how agents from two fields with very different approaches to practice (from Eserve and from one of its client’s) can find ways of working together by creating a joint field (the project field) that offers rewards based on gaining experience in that field.

Chapter Four focuses on the static picture of the fields and their boundaries, taking a snapshot of what is—in reality—a dynamic phenomenon. **Chapter Five**, in contrast, focuses on understanding the evolution and transformation of the fields as they unfold.
through the enactment of communicative genres. Indeed, my field data indicated that hardly any types of collaborative practices remained the same throughout the study. However, the degree and nature of changes varied significantly. In Chapter Five, I examine what kinds of transformations took place in the fields and what were the factors influencing the possibility of such transformations. For example, I demonstrate that some agents in the R&D group attempted to mobilize change in their field three times, but only succeeded during the time when Eserve started experiencing an economic crisis. On the other hand, agents on the client project were often successful in their attempts to mobilize change in their field as the threat of missing significant deadlines prompted them to enact new genres.

In Chapter Six, several concepts developed in earlier chapters come together in a theoretical framework that shows how collaborative practices shape IS outcomes. Drawing on the study data, I demonstrate that project participants' initial resources shape their relationships and influence which types of communicative genres are enacted on the project. The enactment of communicative genres involves participants producing and sharing objects with each other. If an object intended for reflection is ignored, participants’ relationship changes because the recipient of an object disregards the authority of the object producer. If the recipient reflects on the object, he or she can either challenge or add to (“execute”) the prior work in subsequent action. Which mode of action is practiced is shaped by the communicative genres that agents draw on, which are, in turn, shaped by the power relationship among agents on the project and in wider social settings. When repeated multiple times, the “execution” mode of practice results in outcomes that primarily reflect the competence of those who made critical decisions early on. The “challenge” mode requires more investment and risk but may result in a potentially beneficial integration of diverse competencies in the product. The enactment of genres on the project shapes participants’ relative positions inside and outside the project as well as the emergent IS product, which, in turn, shaped the genres that participants drew on, completing the cycle. I then consider individual tradeoffs involved in challenging the established order and attempting a field transformation.

In Chapter Seven, I draw on the theoretical framework developed in Chapter Six to analyze its implications for ISD and innovation practices. I discuss how different
boundary power dynamics can result in different work outcomes. Depending on the strategic intent of collaboration, agents with control over economic resources can facilitate the creation of more innovative or more efficient outcomes by making efforts to standardize certain communicative practices, by making certain project role assignments, as well as by engaging "bilingual" boundary spanners in key roles. I argue that agents in organizations can take an active role in shaping their communicative practices by reflecting on the tradeoffs involved in different approaches and negotiating individual competence representation in the outcome. I suggest that such an explicit compromise is a way of avoiding the constant goal ambiguity and role conflicts that frustrated my study participants. I conclude by articulating the contributions of my research to the ISD and organizational literatures and considering avenues for future research.

1.5 A Word on Terminology

I would like to take a moment to clarify the terminology used here. In studying how people practice together to innovate or to build IS, a variety of terms have been used to depict the interaction: "collaborate," "cooperate," "communicate," "learn," "share," “transform, transfer, or exchange knowledge”, (e.g., Proceedings of the Conference on Computer-Supported Cooperative Work, multiple years, Kyng 1991; Szulanski 1995; Grant 1996b; Szulanski 1996; Carlile 1997; Bechky 1999). Unfortunately, researchers typically do not clarify the terminology they are using to focus on a certain phenomenon, so it is hard to speak of an established tradition. The terminology that relies on somehow moving "knowledge" is problematic because of the challenge involved in defining "knowledge." In addition, some researchers have criticized the feasibility of moving “knowledge” in a preserved or transformed form (Nonaka 1994; Blackler 1995; Tsoukas 1996; Carlile 1997). Both the terms "learn" and "cooperate" often have a positive connotation in use and can mask the political nature of practice. Some studies on learning acknowledge the political nature of knowledge that is being learned or not learned (Argyris and Schönsen 1978; Lave and Wenger 1991; Carlile 1997), others see learning as a politically unproblematic process of knowledge acquisition (e.g., Huber 1991). In the study of boundaries, which separate agents, rather than, for example, communities of practice, which unite agents, the "learning" terminology seems problematic. The term
"cooperate" in the dictionary definition has a connotation of "willingness" (The American Heritage Dictionary of the English Language 2000) or "mutual benefit" (Merriam-Webster Inc. 1998). In CSCW research "cooperation" while no longer tied to the original "democratic" research lab ideal, is still used to refer to the establishment of "shared practice" and "shared understanding" (Bødker, et al. 1988). In such view the work of managers and workers engaged in practice in a factory is not cooperative, but the work of worker's collective in resisting managerial control is cooperative (Bødker, et al. 1988). In my study, hierarchical boundaries are of great importance and, in general, situations where agents "unwillingly" or "semi-willingly" have to work together is not unusual.

The phenomenon I am interested in is how differences are represented and transformed through the work practices in ISD. According to Merriam-Webster Collegiate dictionary, to "collaborate" means "to work jointly with others or together especially in an intellectual endeavor." To "labor together" is the etymological root of the word. Moreover, in recent CSCW research a new term "adversarial collaboration" has been introduced to oppose "cooperative collaboration" (Cohen, et al. 2000). This suggests that "collaboration" is broad enough to include both "mutual benefits" attained through "cooperation" and losses that can result from competition. This terminology appears best suited to describe my phenomenon of interest.

Finally, with regard to the notion of "communication," I adopt the broad view on communication that is typically adopted in the research on Organizational Communication (Frey, et al. 1999; Samovar and Porter 2000; Jablin and Putnam 2001) and see it as a critical element of collaboration. In this view, communication includes verbal and non-verbal interaction. It is viewed as a central organizing process. For example, Weick (1987: 97-98) writes that "interpersonal communication is the essence of organization because it creates structures that then affect what else gets said and done and by whom." Work practices involved in collaboration can be divided into those enacted alone (writing a document) and those enacted together with others (discussing a document). A broad view of communication would encompass both types of practices, but emphasize the latter. Thus, writing a document is a step in a "collaborative writing communicative practice," which might involve an individual writing a document and exchanging different versions of it with others via email. In the data collected for my
study, I focus on communicative practices to understand collaboration, which biases my analysis towards practices enacted collectively over practices enacted in solitude. I will further elaborate the theoretical lens I chose to understand collaboration and communication on projects in Chapter Two.
"... the main idea is that to exist within a social space, to occupy a point or to be an individual within a social space, is to differ, to be different."

Chapter 2 Understanding Boundaries

In order to understand collaborative practices in multi-party ISD environments, it is necessary to first clarify the nature of the heterogeneity, which creates challenges in workplace collaboration. In this chapter I first examine a variety of perspectives on diversity in organizations and then focus on a practice theory perspective developed by French sociologist Pierre Bourdieu. I draw on Bourdieu’s practice theory to develop the notion of relational boundaries and then revisit other perspectives on understanding diversity in organizations to show how this notion helps address their shortcomings. Finally, I introduce the concept of communicative genres (Orlikowski and Yates 1994) as a way of analyzing how boundaries are represented in discourse and produced, reproduced, and transformed by agents through discourse. Developing these notions then allows me to pursue the main research question of how people collaborate across boundaries in ISD environments.

2.1 Perspectives on Boundaries in Organizations

There have been three main approaches to understanding social differences in organizations: socio-cultural perspectives look at heterogeneity of organizational cultures, social identity or social distance researchers look at how individuals perceive the social and physical world through the notion of limit or boundary, and practice theory researchers consider how boundaries are formed around social groups sharing practices and interests. I will briefly review each perspective.

The differences among agents in organization have been traditionally understood using a socio-cultural view, that is, by analyzing multiple organizational cultures in
organizations. Such analysis is focused on uncovering shared interpretations derived from multiple interactions among people (Van Maanen and Barley 1985). Over the years, the literature on organizational culture has shifted focus from the cultural unity of an organization (Schein 1992) to cultural fragmentation (Martin 1992) and intermixing (Weisinger and Salipante 2000). Some researchers outright deny cultural unity, arguing that organizations consist of subcultures that are used as a differentiation mechanism (1984; Van Maanen and Barley 1985). Others argue that organizational culture is in a constant state of flux and ambiguity (Martin 1992). Still others argue that culture is complex and multi-faceted:

Members of an organization are unlikely to be restricted in their membership to one single culture or subculture because people may identify with their gender, ethnic background, parent and spouse roles, sports, club, city, the university from which they hold a degree, profession, department, division, work organization, geographical region, industry, national, or greater region such as Europe, America, and Asia. (Sackmann 1997: 2).

In this “complex culture” view, researchers focus on those definitions of sub-cultures that are salient to the circumstances (Sackmann 1997: 37). This view provides us with some insights into the boundaries between (sub)cultures. That is, “boundaries between people appear and disappear, as they are marked or ignored depending on the ideas, interests, and identities that are at stake and the setting in which the interaction takes place” (Ybema 1997: 164). Unlike the fragmentation view which emphasized the ambiguity of cultures (Martin 1992), the “complex culture” view (Hannerz 1992; Sackmann 1997; Weeks 1998) emphasizes the role of "culture as an organization of diversity" (Hannerz 1992: 14; Weeks 1998) and the dynamic nature of salient boundaries (Ybema 1997: 164). Arguing that "unity and disunity" exist jointly, "complex culture" researchers use empirical findings to show that neither "cultural harmony" nor "cultural conflict" can account for the "nexus" of cultures that organizations represent (Ybema 1997: 181). The “complex culture” view and other perspectives on diversity of cultures in organizations are useful, but still leave us with the question of how to identify, describe, and differentiate which socio-cultural boundaries become more salient in a given situation (Ybema 1997: 181).
Social identity theory (Simmel 1955; Tajfel 1978) along with social distance theory (Park 1950) have given rise to a definition of the notion of boundaries in the organizational literature. That is, boundaries have been defined as "physical, temporal, emotional, cognitive, and/or relational limits that define entities as separate from one another" (Ashforth, et al. 2000: 474). Boundaries are viewed as "mental fences" that help individuals simplify and order the environment (Ashforth, et al. 2000: 474). The research on social identity has focused on issues of individual identification with the group (in-group) as opposed to other groups (out-group) showing that this differentiation has a strong influence on how individuals perceive other individuals (Suzuki 1998). This research has also focused on how an individual integrates multiple identities and which identities are more salient in given circumstances (Ashforth, et al. 2000). The shortcoming of this tradition in relation to the question asked in my study is that it deals primarily with individuals perceiving the world around them and does not focus on the interaction of individuals in organizations. However, it does offer some useful insights into boundary-crossing phenomena, which I will examine in section 2.3 of this chapter.

Practice theorists have pointed to the ambiguity in the socio-cultural perspective when it comes to understanding practice (Bourdieu 1977; Giddens 1984; Lave 1988). They argue that the ambiguity associated with the multiplicity of cultures at the center of the socio-cultural debate stems from the futile attempt to unambiguously define "shared interpretations" or "shared assumptions" (Lave 1988; Lave and Wenger 1991). Lave, for example, demonstrates that the socio-cultural perspective does not account for the time-space situatedness of activity, focusing instead on social interactions "as in the air, out of context" and, as such, "unable to account for macro-social, politico-economic structures" (Lave 1988: 150). Empirical studies indicate that values, assumptions, and interpretations that organizational actors draw on change depending on the context of action and are full of inconsistencies and contradictions (Lave 1988; Martin 1992; Brown and Duguid 2001). To address difficulties raised by the socio-cultural perspective, practice theory researchers emphasize the context of everyday practices and challenge the practical possibility of uncovering rules (including "shared assumptions") that could be defined outside the context of practice (Giddens 1984; Lave 1988; Bourdieu 1998; Orlikowski 2000). They maintain that by focusing on the interaction of actors rather than on their
practices, the socio-cultural tradition lacks an ability to explain the practical logic that allows agents to competently draw on different values and assumptions in a given context (Lave 1988; Taylor 1993; Bourdieu 1998).

Practice theories have roots in the works of such sociologists as Bourdieu and Giddens among others, and represent a cluster of theories focused "on experiences in the lived-in world" (Lave 1988: 15). Drawing from the works of Marx and Engels, who in turn drew on the philosophy of G.W.F. Hegel, these theories typically rely on dialectical concepts rather than on abstract concepts defined by individual fixed properties. They consider things in their movements and changes, interrelations and interactions. All things contain contradictory sides or aspects, whose tension or conflict is the driving force of change, which eventually transforms and dissolves them. A distinctive feature of practice theories is that the "principles of dialectics" must be inferred from the events, from what people do and create in the process. Because of the focus on conflict and change, practice theories theorize extensively about such notions as power, interests, and social divisions as they are instantiated and evolve in the historical context of human activity. It is this theorizing of divisions in practice that has the potential of addressing the shortcomings of socio-cultural and social identity traditions.

In this study, I adopt a practice theory perspective because it has proven useful in both understanding ISD settings (Orlikowski 1992; Orlikowski 2000) and, more generally, the nature of collaborative practices in organizations (Lave 1988; Brown and Duguid 1991; Lave and Wenger 1991; Pentland 1992; Orlikowski and Yates 1994; Carlile 1997; Bechky 1999; Schultze 2000; Schultze and Boland 2000). Specifically, a practice theory perspective will help account for the context of practice and structures produced through practice, including various practical distinctions or boundaries, an understanding of which is missing in the socio-cultural perspective. At the same time, a practice theory perspective can add to the social identity-based notion of boundary, an understanding of boundaries that is tied to what people do, not just to what they perceive. Moreover, as a critical perspective, practice theory may provide insights into the conflicts and dilemmas that practitioners from diverse backgrounds have to deal with in everyday life, as illustrated in my personal example in the Introduction.
Practice theories have entered mainstream discussions in organizational literature on learning and collaboration through the work of Brown and Duguid (1991) who popularized the concept of “communities of practice” by drawing on the work of anthropologists such as Lave (1988), Wenger (Lave and Wenger 1991), and Orr (1996). While the concept has been useful in understanding collaborative practices among individuals with similar professional backgrounds or interested in acquiring similar competencies, it has not provided useful theoretical tools for understanding collaboration in heterogeneous settings (Carlile 1997; Contu and Willmott 2000). Since the focus of this study is on understanding collaborative practices when interests and competencies are often more distinct than similar, this study uses a practice theory lens that focuses on distinctions rather than similarities. Such a lens is developed in the works of French sociologist and anthropologist Pierre Bourdieu.

2.2 Bourdieu’s Practice Theory

The Focus on Distinction

The notion of distinction has been central to the general theory of practice developed by Bourdieu (Bourdieu 1977; 1984). Bourdieu develops a relational theory that defines social space by differences in objective positions and agents’ subjective dispositions:

... the main idea is that to exist within a social space, to occupy a point or to be an individual within a social space, is to differ, to be different. (Bourdieu 1998: 9).

In this section, I will first provide an introduction to Bourdieu's project and concepts of field, habitus, and capital and the relational thinking that Bourdieu advocates. I will discuss how Bourdieu addresses the question of which boundaries appear more salient through his concept of the fuzzy logic of practical sense. Then I will focus on Bourdieu's treatment of boundaries at multiple levels of analysis. Finally, I will summarize what it means to analyze boundaries using Bourdieu's theory of practice and give some examples of empirical work that uses Bourdieu's theory organization studies.

Bourdieu’s theory of practice is an attempt to move beyond a series of common sociological oppositions such as individual and society, action and structure, freedom and necessity. Bourdieu first starts with the dichotomous orientation between subjectivism
and objectivism (Bourdieu 1977: 1-22), but introduces practice as a missing link between the two sides of the debate. On one hand, objectivism separates from the immediate experience of actors ("does away with the agent") to grasp the "mechanical" structure upon which primary experience depends, but which individual actors cannot directly grasp (Bourdieu and Wacquant 1992: 121). On the other hand, subjectivism (specifically the phenomenology of Merleau-Ponty and the existentialism of Sartre, with its derivative rational choice theory) seeks to grasp the way the world appears to individuals who are situated within it and to "understand action as deliberate pursuit of conscious intention." (Bourdieu 1977: 73; 1992: 121). In Bourdieu's view, objectivism is more adequate than subjectivism, but neither is adequate by itself for understanding practice (Bourdieu and Wacquant 1992: 11). Bourdieu's theory of practice is an attempt to move beyond objectivism without becoming subjectivist. This is accomplished in two ways: 1) by developing a theory that is thoroughly relational, and 2) by carefully articulating a cycle in which objective historical conditions shape agents' subjective categories of perception, which generate improvised practices that produce, reproduce, and, sometimes, transform objective social order. Thus, the social world is understood as a set of relational boundaries and distinctions, which are produced twice "in things and in minds," (Bourdieu and Wacquant 1992: 127). A representation of Bourdieu's cycle is depicted in Figure 2.1.

**Thinking Relationally**

To elaborate, every concept in Bourdieu's theory is defined in relation to another concept. In this sense, Bourdieu's general theory of practice is like Einstein's general theory of relativity. This relational approach is applied not only to link the two main sides of the opposition (objective is defined in relation to subjective and vice versa), but also to link each concept within the objective and subjective realms. Thus, even such apparently basic concepts as "male" and "female, which have a physiological definition, are treated relationally within the realm of sociology. That is, female is only defined in relation to male and vice versa, and both, are defined only in relation to a given context of practice, specifically, in relation to a set of other distinctions that matter in that context (e.g., house vs. market).
No practice, object, or discourse is ever distinguished or vulgar, noble or common, in and of itself, as distinguished common sense would have it, but only in relation to other objects, practices, or discourses. (Bourdieu 1996, 1996: 181).

**Figure 2.1: Bourdieu's Cycle of Practice Production**

![Diagram of Bourdieu's Cycle of Practice Production]

**Figure Note:**
- Bourdieu does not provide a graphical representation of the relations among his concepts, but the cycle is drawn based on its description in "The Outline of Theory of Practice," (1977: 78-79) and in the "Invitation to Reflexive Sociology," (Bourdieu and Wacquant, 1992).
- The concepts of boundaries and distinctions are not separated in Bourdieu's theory, but are helpful to separate for the purpose of my thesis.

**Habitus, Distinctions, and the Fuzzy Logic of Practical Sense**

In bridging the objective vs. subjective divide, Bourdieu's work develops a notion of *habitus*, which is a way of theorizing about the subjective side of the dichotomy, but with room for understanding objective structures (Bourdieu 1977). The main purpose of the concept is to break with rational choice theory and to account for agency. The habitus is a set of *relational dispositions* "functioning on the practical level as categories of perception and assessment or as classificatory principles," which incline agents to act and react in certain ways (Bourdieu 1990a: 13). These dispositions are *acquired* through
continuous repetition (*inculcation*) of the same practice. They are *structured* in that they reflect the conditions in which they were acquired (the link to objective realm). They are *durable*, but not eternal, in that they are engrained in individual bodies partly on a pre-conscious level. Dispositions are *generative* and *transposable* in that agents are able to draw on them to improvisationally generate a multiplicity of practices and perceptions in settings other than those in which these dispositions were originally acquired. Through the notion of habitus, an individual body can be understood as the site of incorporated history, and, at the same time, as a set of generative principles that produce history through practice (Bourdieu 1977: 78-79). It is because agents’ dispositions are used to generate practices, but do not fully define agents’ actions at a particular unique conjunction in space and time, that agency is accounted for in the concept of habitus. Agents can opportunistically draw on different sets of dispositions acquired in different circumstances redefining the context in which they are acting and possibly triggering novel reactions on the part of other agents.

The concept of habitus is aimed at understanding the subjectivity of an agent in a particular context of practice and not that of an *organic individual* (Bourdieu 1977: 86). Organic individuals are different and irreducible to one another due to their unique social trajectory (their life experiences up until this point in time). Within the same social group or class, habitus across group members is quite similar (homologous) because agents in that group share similar histories and hence have undergone more similar conditioning than members of a different group or class, resulting in similar dispositions (Bourdieu 1977: 86; 1990c: 59). Thus, in a given field, individuals who have a similar social trajectory with respect to the context of practice (e.g., an economic market) can be said to share habitus.

Let me trace different characteristics of habitus through an example motivated by Bourdieu’s work in Algerian pre-capitalist society (Bourdieu 1977). Peasant males, growing up in Algerian villages, participated in village rituals and practices and were taught at various times certain conduct suitable for their class and gender, thereby acquiring a similar “feel for the game” (habitus). Females in that same society grew up in different conditions and acquired a different set of dispositions through repetitive experiences. Yet, females and males alike “had a feel for” (embodied without much
conscious deliberation) appropriate dress and posture in the different gender groups. At the same time, they had an ability to distinguish and use in practice such categories of perception as, for example, “wet” and “dry”— not only as they applied to grain or weather, but also as they applied to gender roles, where female was approximately associated with wetness (womb) and male with dryness, and through another analogy with the dampness of the house vs. the dryness of the market.

As the example illustrates, Bourdieu sees dispositions as a set of oppositions or distinctions (female vs. male; wet vs. dry, house vs. market). This aspect of Bourdieu’s theory is particularly useful for our understanding of boundaries and cross-boundary collaboration, as it accounts for how distinctions are perceived and reproduced by habitus in practice. In Bourdieu’s theory, the social world is perceived through distinctions that are defined in relation to other distinctions in a given setting. Thus, for example, in understanding a consulting industry, a consultant would be defined in relation to a client, and both are further distinguished through such dispositions as skill vs. money, mobile vs. stationary, expert vs. help seeker, or even young vs. old (in certain consulting industries). It is quite obvious that these distinctions are not absolute, and that, instead, practical logic operates through fuzzy analogies, which do not stand up to the test of the logician’s logic, i.e., the mathematical logic that is aimed at avoiding ambiguity. Hence, Bourdieu’s stance towards sociological research is to avoid asking of practice “more logic than it can give” (Bourdieu 1977: 109). The analogies exploit the fact that two “data” are never entirely alike in all respects, but are always alike in some respects (Bourdieu 1990c: 200-270). The agent’s actions are based on the “generative spontaneity” of habitus, which improvises by following a practical logic “of the fuzzy, or the more-or-less”:

Practice is logical up to a point where to be logical would cease to be practical (Bourdieu and Wacquant 1992: 22).

Bourdieu’s careful ethnographic work provides evidence for this principle of the “economy of logic:” using a set of distinctions from one setting (e.g., wetness of females associated with childbirth) to account for and generate practices in another setting (e.g., grain wetness used for farming). Of course, such fuzzy analogies vary with the setting
and agents can apply them opportunistically in action based on their interests in a given context of practice.

**Fields, Interests, and Boundaries.**

The practices produced by habitus are always produced in relation to a particular historical and situational setting. The notion that describes a setting, that is, the objective side in Bourdieu’s theory, is the *field of action* (also referred to as “market,” “field of practice,” “game,” or “universe of practice”). Unlike the habitus in which distinctions are subjective, relations in the field are objective, i.e., they result from certain historical and situational conditions (i.e., events that existed and exist outside a given interaction) and exit beyond agents’ immediate perception of them. Such conditions can only be understood relationally:

To think in terms of field is to think relationally. ... What exists in the social world are relations—not interactions between agents or intersubjective ties between individuals, but objective relations. (Bourdieu and Wacquant 1992: 97).

Bourdieu explains through examples and analogies what the concept of field entails. The main analogy used by Bourdieu throughout his work is the analogy between a field and a game. In a game there are *stakes*, and agents in a connected fashion compete to attain those stakes, which are for the most part the products of the competition between players. At the same time, agents have certain *competencies* and *capital* that enable or constrain their attainment of various stakes. Agents are *invested* (or preoccupied) in the game and while they are playing it they do not doubt that the game is worth investing in. Each game has its own rules and its own stakes (e.g., throwing a ball into a basket is meaningless in poker). The attainment of the stakes in a particular game becomes a competence and capital in the game, which enables attainment of further stakes (e.g., a higher scoring basketball player would get to play on a better team). At each moment, it is *the state of the relations between players* that defines the structure of the field. Players can play to increase or conserve their capital thereby *reproducing* the tacit rules of the game, or they can also play to *transform* the rules of the game. In addition, players can play in multiple fields. A competent basketball player can *convert* his basketball playing
capital for economic capital in Pepsi commercials, but for that he needs to enter into a different field—an economic market.

While this analysis seems to be quite akin to economic rational choice theory there are two critical differences: a) there are different fields and different species of capital with their own logic irreducible to that of the economic field (i.e., utilitarian interest), and b) agents' actions are not freely and deliberately calculated, instead they are heavily constrained by agents' habitus, which historically predisposes agents to act in certain ways and not in others as they pursue certain interests. A historically constructed interest is "a tacit recognition of the value of the stakes of the game and a practical mastery of its rules" (Bourdieu and Wacquant 1992: 117.) In a one-to-one correspondence, interests are presupposed and produced by the functioning of specific delimited fields (Bourdieu and Wacquant 1992: 115). As such they can only be known through historical analysis and empirical observation and not deduced from an a priori conception of "man" as is attempted in philosophical and economic theories (Bourdieu and Wacquant 1992: 117). In fact, interests are "historical arbitraries" rather than logical deductions and, like tulips in eighteenth century Holland, almost anything can be constituted as an interest. Thus, the stakes in a given field are valued only by the habitus that is produced by this field.

More generally, objective positions in the field are determined by the structure of the distribution of different types of capital, which refers to the set of objectified relationally-defined properties of agents that constitute relational power in that field (Bourdieu 1996, 1996: 264; Wacquant 1996). Objectification in the form of capital refers to naming a specific form of power relations among agents, i.e., representing these relations in socially recognizable symbols that exist beyond a given interaction. Relational power is understood through agents' ability to exercise such power to attain stakes that are valued in the field, and as such to dominate agents who cannot claim these stakes. When such power is objectified in the form of capital it can be exercised in a given field beyond the time and space of a given interaction or it can be converted to other forms of capital in other fields.

For example, capital in the academic field is objectified in the form of academic titles, prestige of academic institutions, degrees, standardized test scores, publications, etc.—various symbolic and material objects, which carry the logic of the field beyond a relation
of direct domination among individuals (Bourdieu 1996). Thus, academic credentials persevere in the academic field beyond the specific interaction between an instructor who gave a certain grade to a student and the student. In this sense, they constitute academic capital and are at stake in the academic field. Academic credentials are relational in that they are valued only if an agent who has more of them can dominate an agent who has less of them in a given field. If they cannot be used for differentiation of individuals in a field, they no longer constitute the capital of that field. For example, solving a quadratic equation may have been an academic credential in ancient society, but is not a differentiator in higher education today. Similarly, on a desert island, a PhD from MIT may not count for much in deciding who gets the last drink of water. Yet, in the academic field, a PhD from MIT is not an artifact of a single interaction, but rather a capital objectified in the title, which can be used to gain power in other interactions such as being invited to give conference presentations.

A modern society is an ensemble of relatively autonomous fields—economic, political, aesthetic, intellectual "life orders"—which cannot be collapsed under an overall societal logic. Each field prescribes its particular values and possesses its own regulative principles (Bourdieu and Wacquant 1992: 17, 97). A given field produces a unique capital, which is convertible from field to field. This constitutes a major property of a field: an ability to convert one form of capital (e.g., a PhD from MIT) into another (e.g., a lucrative job). Bourdieu argues that capital presents itself in three fundamental species: economic capital (material wealth in the form of money, stocks, etc.), cultural capital (information, know-how, etc.), and social capital (the sum of resources that accrue to agents based on a network of institutionalized relationships of mutual acquaintance and recognition) (Bourdieu and Wacquant 1992: 119). All species of capital are defined relationally and not substantively (absolutely). These main species of capital come together in the overall field of power, where the exchange rate between these species is negotiated (e.g., the equivalence of a PhD from MIT to a particular job). It is in this field that agents from different sub-fields (of the field of power) struggle to determine the "dominant principle of domination" (the conversion rate among major species of capital objectified, for example, in the hourly salary of a programmer) (Bourdieu 1996: 265).
In addition to these major species of capital, Bourdieu distinguishes a special type of capital—“symbolic capital,” which is capital associated with the power to produce representations of reality (Bourdieu and Wacquant 1992: 119). Any form of capital must first be converted into some symbolic representation to be used as a legitimate way of exerting power in the field. For example, diamonds cannot be used to exert influence unless they are socially recognized through symbolic means (for their value as a rare and precious stone) as a representation of a legitimate form of power (Bourdieu 1977: 195). Because my study focuses on the communicative practices through which agents share representations, symbolic capital is of a great importance and will be discussed further in section 2.4.

Beyond the main species of capital, there are many subspecies each defined by a unique field, that is, by the relative position of agents in that field.

The forces that are active in the field—and thus selected by the analyst as pertinent because they produce the most relevant differences—are those which define the specific capital. (Bourdieu and Wacquant 1992: 101)

As originally observed by Durkheim, the movement in modern society is towards increasing differentiation and autonomy of fields (Bourdieu 1996: 265, 433; Wacquant 1996: xi) as participants in the field struggle to establish monopoly over a particular sub-sector of the field (Bourdieu and Wacquant 1992: 100). For example, the artistic field has constituted itself by rejecting the law of material profit governing the economic field (Bourdieu and Wacquant 1992: 97-98). However, it is important to note that unlike Durkheim, Bourdieu emphasizes arbitrariness rather than functionalism of the various fields and forms of capital. Fields are created not for functional reasons, but because they allow agents increased monopoly over the type of capital that is at stake and which these agents have an ability to claim. Fields exist only as long as agents are interested in the stakes they offer. This differentiation of fields is particularly important for the study of boundaries in the workplace, as such boundaries are the result of the struggles for differentiation and autonomy of many “small scale” fields.

Bourdieu’s more recent work is primarily concerned with the similarity and difference among fields and, in this work, he focuses primarily on understanding economic, cultural, and symbolic forms of capital and pays less attention to the social capital. In his seminal work, “The Distinction,” (Bourdieu 1984) he outlines the main structure of the field of
power in which the conversion of cultural into economic capital occurs and vice versa. In this field, agents’ positions are defined by the relative composition and volume of economic and cultural capital. Moreover, economic producers possess power over the instruments of field reproduction (e.g., obtaining economies of scale due to capital investment), while cultural producers have power over instruments of field production (e.g., discovering nuclear energy). Bourdieu hypothesizes, with some evidence, that the structure of every field is homologous (similar) to the structure of the field of power: where one group of agent has relatively more power over the instruments of production, while another group has relatively more power over the instruments of reproduction, and within each group the volume of capital varies (“haves” vs. “have-nots”) (Bourdieu 1996). Thus, for example, in the university field, the holders of institutional power (administrators), i.e., those agents that have control over instruments of reproduction, are often disregarded intellectually, while the holders of a recognized cultural capital (academic producers) often have less power over institutions (Bourdieu 1996: 270).

Analyzing Fields: Salience of Boundaries

In the relational approach to practice, a given field can be analyzed only in relation to another field. Such analysis demarcates a field’s boundaries. The boundaries of a field are very difficult to discern partly because they are always at stake in the field itself (Bourdieu and Wacquant 1992: 100, 109). Bourdieu insists that the question of limits of the field can only be answered empirically by examining where effects of the field are exercised and where they cease to be exercised: "what happens to an object that traverses this space cannot be explained solely by the intrinsic properties of the object in question" (Bourdieu and Wacquant 1992: 100). In trying to understand the field of higher education in France, Bourdieu discerns uniquely academic properties of objects that are characterized, for example, by students’ entrance exam grades. Similarly, field effects are felt when a transformation undergone by a college can be understood only by understanding how it changes the position of that college vis-à-vis other competitor-colleges in the field (Bourdieu 1996: 132). Bourdieu clarifies that it is the subscription to the same logic of practice and form of power that defines the field and not the collocation of similarly functioning entities (e.g., all colleges in Boston may not constitute a field).
One crucial empirical indicator of a field's boundary is the field's "admission fee" or "barrier of entry", which is a definite configuration of properties, which make agents legitimate participants in the field (Bourdieu 1990b: 143).

An analysis of a field entails a characterization of a field's structure, which is a system of field-specific differences giving rise within its own logic to a set of social differences in the field of power. Thus, academic credentials are shaped by and shape difference in salary, places of residence, tastes, etc. That is, they can be mapped to the other fields, but in a way specific to the academic field. For example, candidates who grew up in families with more economic capital and business roots (e.g., children of top executives) can get easier admission into historically prestigious business schools (e.g., Harvard Business School), but it is candidates with a richer cultural inheritance (e.g., children of intellectuals) who get easier admission into certain academically prestigious graduate departments (e.g., University of Chicago's Department of Mathematics). This analysis is of crucial importance to the understanding of boundaries. In other words, each field when analyzed in relation to the field of power can be understood by defining two most consequential dimensions (or sets of boundaries) shaping the field: 1) the boundaries specific to the given field separating those who have more of the unique capital produced by the given field from those who have less of it and 2) the boundaries that are based on the various forms of capital objectified in the field of power and its sub-fields (e.g., economic, academic, artistic, etc.) as they are valued (through certain conversation rate) in the given field (Bourdieu 1996: 152-161). The analysis should indicate which forms of capital from the field of power are most valuable in the given field based on their relation to the unique capital of this field. Thus any field is a sub-field of the field of power, but a field may also be a sub-field of a sub-field of the field of power. This relationship is defined by an analyst based on how agents in a given field convert capital produced by the field to the basic species of capital in the field of power: directly or by first converting it into capital in another field (parent field). Thus an analysis of the field represents an analysis of boundaries between the capital produced by the given field and capitals of the parent field. For example, Bourdieu analyzes the sub-field of elite institutions of higher education in France in relation to the field of all higher education institutions in France, which he, in turn, analyzes in relation to the field of power (Bourdieu 1996).
Bourdieu’s notion of the field and the tools that he develops for the analysis of fields address the question of *salience of boundaries* raised in this thesis. That is, through a systematic counterposing of agents' objective properties (those properties that are historically objectified and perceived as such by agents), it is possible to discern which differential properties (boundaries) are most consequential in a given field by analyzing the way in which they “order” the rest of the properties (capital of other fields) in relation to the capital produced by that field. This analysis is inseparable from the analysis of habitus, which indicates which structures are perceived as most salient by agents (Bourdieu and Wacquant 1992: 104-105). It is because these perceptions vary from agent to agent, that it is necessary to analyze the objective relations that tie the variations into an integrated understanding of the field. For example, in the study of the field of French institutions of higher education, Bourdieu and colleagues show that the two key boundaries (field structure) were: 1) the boundary among institutions that is based on the cumulative index of the academic prestige of institutions (main product of the field); and 2) the boundary based on the candidate’s properly academic credentials as opposed to their economic inheritance (Bourdieu 1996: 135-136). Other boundaries, such as student’s secondary school, place of residence, and academic discipline etc., exist in dependent relations to these two main boundaries in the analysis of the academic field (Bourdieu 1996).

It is necessary to add that no matter how much boundaries are based on merit or inheritance, Bourdieu’s analysis views the accumulation and use of capital to dominate across boundaries as *arbitrary* (Bourdieu 1977: 189). For example, there is an arbitrary or *magical*, yet institutionalized, “discontinuity” created between the last person who passes an entrance exam into a top university and “the first” among those who failed (Bourdieu 1996: 103). This notion of arbitrariness does not imply that different types of human knowledge have no functional purpose (e.g., developing an understanding of electricity to heat a building), but it does claim that there is no functional basis for accumulating power based on these distinctions. Bourdieu argues that it is in human nature to use a variety of physiological and functional distinctions to exert influence. Once what appears to be a source of power is uncovered for its arbitrariness, the power diminishes and, potentially, evaporates. The purpose of “reflexive sociology” is to expose the myths that conceal the
exercise of power and the perpetuation of domination based on arbitrary grounds (Bourdieu and Wacquant 1992: 49).

**Struggle and Change**

One of the key critiques of Bourdieu's work is that it appears at first glance to support an "iron cage" structuralism because, if the field defines subjective dispositions of habitus and practice is born out of these dispositions, then there is no room for the exercise of agency (Bourdieu and Wacquant 1992: 132). Responding to these critiques, Bourdieu argues that a field is never stationary, but is always a field of struggle aimed at preserving or transforming its external boundaries and the form of capital it generates (internal boundaries comprising its structure) because they are at stake in the field.

To understand how a field is preserved or transformed, it is necessary to shift the focus back to habitus and the fuzzy logic of practical sense. As shown in Figure 2.1, habitus and field function fully only in relation to one another: the field makes room for organized improvisation of agents, while the field only exists to the extent that players enter into it and believe in and actively pursue the stakes it offers. (Bourdieu and Wacquant 1992: 19). Agents’ habitus is composed not only of a set of “deposited” relations that mirror the field but also of the symbolic representations of these relations which can be manipulated in the improvised actions of agents. These representations may vary depending on agents’ position in the field and through such variance facilitate production of different practices. Thus agents can, within limits, transform the social world by transforming its representations (Bourdieu and Wacquant 1992: 14).

The room for agency lies in the so-called “confusion of spheres” or “polythesis” (Bourdieu 1977: 110). Basically, because there are many relatively autonomous spheres of play (fields) that all agents participate in, they learn the different logics of practice in each field. However, due to the fuzzy logic of practical sense, according to which agents rely on relatively few fuzzy analogies, agents tend to apply the logic from one field to conditions in other fields. This has two consequences: 1) dispositions never fully determine action in any particular field leaving room for “invention within limits,” and 2) dispositions borrowed from one field may actually be inconsistent (“out of sync”) with the logic of the other field potentially leading to field transformation (Bourdieu 1977: 95,
113; 1992: 130). In short, the room for agency lies in the discrepancy between the field and the habitus, which is durable, but not eternal.

World does not present itself as totally structured either, or as capable of imposing upon every perceiving subject the principle of its own construction. The social world may be uttered and constructed in different ways according to different principles of vision and division—for example, economic divisions and ethnic divisions. If it is true that, in advanced societies, economic and cultural factors have the greatest power of differentiation, the fact remains that the potency of economic and social differences is never so great that one cannot organize agents on the basis of other principles of division—ethnic, religious, or national ones, for instance. (Bourdieu 1990d: 132).

Because agents transverse multiple fields of practice throughout their lives they can acquire different types of habitus, which may supply agents with examples (representations) of alternative social orders to the one established in the given field. For example, an agent who is dominant in one field may through his or her objectified properties be dominated in another field. However, he or she may be able to better understand their dominated position and try to enact change based on their dispositions in the field in which they are dominant. Thus, a major force for change in the field is often an agent who has a “deviant trajectory,” or, in other words, has arrived at a position that is uncharacteristic of his or her background and, hence, habitus (Bourdieu 1996, 1996: 185,186). For example, Bourdieu himself, as an academic from a non-traditional background, who grew up in a small city in the Southern France and had little cultural inheritance (a son of a clergy person), enacted a significant transformation in the academic sociology field in France by challenging the established theories (phenomenology, structuralism, Marxism. etc.) through the introduction of his theory of practice (Bourdieu 1988; 1991; Bourdieu and Wacquant 1992). While Bourdieu’s attempt to introduce change into the field succeeded, Bourdieu argues, that an attempt to mobilize change in the field is always risky because its failure is equivalent to making a wrong investment and bearing the opportunity costs. For example, had Bourdieu’s theory of practice not gained popularity, he would have had to bear the opportunity costs involved in not further developing one of the established sociological traditions.

Social groups and classes are continually engaged in a struggle to impose the definition of the world that is most congruent with their particular interests (Bourdieu and
Wacquant 1992: 14, 26). The actions of agents to preserve or transform a field depend on their position in the field as well as their understanding of the field, which is associated with their position, but not fully determined by it. Thus agents pursue interests in the field knowingly or unknowingly preserving or transforming it. Moreover, agents may not only attempt to transform a given field, but also the conversion rate of their capital into another capital in the field of power. Strategies are often “double plays.” For example, a sociological debate (e.g., Bourdieu’s analysis of the field of politics) may shift not only the positions of academic sociologists, but also that of the politicians drawing on social theory in the field of politics.

Boundaries and Distinctions

As we have seen, Bourdieu develops an extensive treatment of notions of boundaries and distinctions in his work. Through the critical lens of the theory of practice, distinctions or boundaries are seen as the essence of social life. Bourdieu does not give a clear abstract definition of these notions because he takes a stance against rigid abstract definitions and towards empirical development of what he calls open concepts (Bourdieu and Wacquant 1992: 95). As a strike against positivism, Bourdieu argues that concepts have no definition, but are designed to be put to work empirically in a systematic fashion, acquiring their definition in the practice of researchers (Bourdieu and Wacquant 1992: 96). Despite some ambiguity, we can summarize some systemic observations that Bourdieu makes about the notions of boundaries and distinctions.

Like all aspects of Bourdieu’s theory, boundaries exist in two places: in the things (field) and in people (habitus). While Bourdieu himself does not take special care to separate the terminology he uses for subjective or objective oppositions and often refers to either as distinctions, differences, limits, oppositions, dichotomies, and finally boundaries, I will use the term “boundary” to describe differences in the field, while reserving the term “distinctions” to describe differences as they are understood (represented) by human agents through their habitus in a given field. In both cases, boundaries and distinctions are necessary relational. The closest Bourdieu comes to actually defining boundaries appears in his analysis of economic elites:

All members of the group do not possess all the properties that define the group as such and, like the boundary of a cloud or forest, ... the boundary
of a group like the economic establishment is an imaginary line (or surface) such that the density of individual bodies (droplets of condensed vapor, trees, or top executives) is above a certain value on one side, and below it on the other (Bourdieu 1996: 316).

Thus, relational boundaries represent objective limits, perceived and produced by corresponding subjective distinctions, that separate agents (individuals and institutions) into relational categories, which are, in turn, defined only in relation to the shared universe of practice (or field).

Summarizing Bourdieu’s discussion of the properties of boundaries or distinctions, we see, first, that boundaries are practical means of understanding reality. Second, it is by analyzing the field structure through the comparison of objectified properties of agents, that a researcher can sort out which boundaries are most salient to a given field. Third, the use of one type of distinction for deriving power and producing boundaries as opposed to another is arbitrary. Fourth, objective boundaries and their representations through subjective distinctions are contested and represent stakes in the agents’ struggle over power and domination in the field. Fifth, societal change and innovation is achieved though the creation of new distinctions and ultimate transformation of fields, which agents accomplished through the establishment of new fields.

Bourdieu’s work is not widely used in American organizational research. This is partly because Bourdieu only writes in French and the translations of his work are difficult to read, and partly because his focus is on societies as a whole and the translation to the organizational level of analysis is challenging. However, with more and better English translations and the recognition that Bourdieu’s work has received in Europe (Wacquant 1993), there has been a small, but growing, number of published organizational and IS studies that draw on his work (DiMaggio 1991; Oakes, et al. 1998; Kurunmäki 1999; Schultze and Boland 2000; Corsun and Costen 2001; Ramirez 2001; Carlile 2002). One of the early studies that used Bourdieu’s theory in organizational analysis was DiMaggio’s (1991) institutional analysis of the cultural good producers in the United States. More recent studies include, for example, Carlile (Carlile 1997; 2002)’s ethnographic study, which examined how knowledge-in-practice was shared by various functional groups involved in engineering product development. The functional boundaries considered by Carlile (Carlile 1997; 2002) were demarcated by the differences in objects and ends of
each group as it addressed a given product development problem. In treating social boundaries in organizations, Carlile offers an alternative to the socio-cultural perspective by focusing on the difference in practices rather than shared assumptions. At the same time, Carlile offers an alternative to the communities of practice perspective, which has been particularly useful in understanding the practices of a single functional group, but which has not considered boundary practices. An important contribution of Carlile’s work is that it is one of the first attempts to translate Bourdieu’s theory into the analysis of the everyday practices in organizations. However, Carlile’s focus on functional boundaries makes it difficult to generalize his approach to research concerned with many overlapping boundaries. The ability to define functional boundaries depends on having a shared well-defined problem or task and addressing it with different functional expertise. As my goal is to understand multiple boundaries and their interplay in practice, Carlile’s approach has limited application to my study since a shared well-defined problem may not exist. Moreover, a practice theory based examination of individual problem-solving behavior (Lave 1988) reveals that the problem itself is an artifact constructed by agents to address practical dilemmas associated with conflicting interests. Hence, the definition of the problem (e.g., whether the problem is which product to build or how to build it) might be contested and may become an important part of the boundary negotiation (Lave 1988).

In IS research, Bourdieu’s work appears most prominently in Schultze and Boland’s study of IS administrators involved in an outsourcing contract (2000). My study also used ethnographic techniques to elegantly show how the habitus of IS professionals’ reproduced the structure of the field in which they operated. The study focused on the time/space configuration of work in organizations, and used Bourdieu’s theory to illustrate how consultants’ habitus generated strategies (such as diligent writing practices), which resulted in the reproduction of certain field structures (Schultze and Boland 2000: 8). The study, however, did not explicitly focus on distinctions, which are key to Bourdieu’s theory. Re-interpreting the study in the language of distinction, we can see that the major boundary that was of concern was that between the consultants and clients, which through the system of clients’ dispositions (habitus) could be seen as the distinctions between commodity work and value-add work, while through consultants’
dispositions (habitus) could be seen as the distinctions between objective knowledge and subjective opinion.²

Other recent empirical studies in organizational research that draw on Bourdieu’s work focus on the symbolic power struggles in Canadian museums and cultural sites between the economic values of government administrators and the cultural values of local workers (Oakes, et al. 1998), the power struggles between medical professionals and administrators during privatization of the Finnish healthcare industry (Kurunmäki 1999), the lack of upward mobility among women and minorities in American corporations due to the dominant position of white males in the field of corporations and the interest in maintaining the status quo (Corsun and Costen 2001), and the historical study of change in French accounting practices (Ramirez 2001). These few studies are interesting and relevant to my investigation because they provide insights into how to apply Bourdieu’s lens to organizational research, and because they help to identify several different types of boundaries that interplay in the work practices of modern organizations.

2.3 Revisiting Multiple Perspectives on Boundaries

In this section, I would like to revisit the perspectives on social differences in organizations discussed at the beginning of the chapter—socio-cultural, social identity and social distance, and that form of practice theory that focuses on situated learning and communities of practice—to discuss how Bourdieu’s theory addresses the shortcomings of these perspectives or extends their notions to account for cross-boundary collaborative practices.

First, the main criticism of the socio-cultural perspective on heterogeneity expressed at the beginning of this chapter had to do with its lack of theory for understanding the salience of boundaries among sub-cultures in practice. I found in Bourdieu's theory means that help address this shortcoming: the concepts of interests defined by fields of practice and of the fuzzy logic of practical sense which guides how agents sort out of which interests to pursue. Bourdieu’s theory provides tools for understanding how different boundaries are sorted out by analyzing the structure of a given field with respect
to the field of power, which makes it possible to understand which boundaries become more salient in a given context of practice.

Looking back at the social identity and social distance perspectives, we see that much like Bourdieu’s approach, these traditions develop relational concepts: they explain the formation of social identity as an outcome of association with a social group, defined in terms of the differences among groups rather than the intrinsic characteristics of a group. In his discussion of social boundaries, Bourdieu explicitly refers to Georg Simmel, who is one of the originators of the social identity tradition (Bourdieu 1996: 103) and writes that:

Social identity is always ... social difference, distinction (positive or negative), it is indissociable from the differentiation of groups separated by magical boundaries. (Bourdieu 1996, 1996: 117)

However, the social psychological notion of boundaries and the research associated with it is primarily focused on mental structures, inclinations, and emotions. In Bourdieu’s language, this tradition has focused only on the habitus part of Figure 2.1. Bourdieu’s perspective adds to this notion of boundaries an understanding of how boundaries are grounded in practice, that is, in the historical events and their outcomes, which exist outside agents’ individual perceptions. This historically grounded understanding also adds to the social distance perspective a way of understanding the political nature of social boundaries. Experiments indicating that individuals tend to favor ingroup members based on the experimental researcher’s arbitrary division into ingroup/outgroup categories (see Abrams, et al. 1990 for review), is a powerful demonstration of Bourdieu’s thesis that the boundaries (such as distinctions between race, gender, profession, etc.) are sociologically arbitrary, yet when perceived as legitimate, they always serve as a basis for political differentiation (Bourdieu 1977: 195).

Bourdieu’s work also helps to address questions that researchers using other practice theory approaches for understanding learning and knowledge have left open: how to account for distinctions rather than similarities among agents involved in collaboration. Bourdieu’s notions of interests and power give directionality to the actors’ applications of practical logic in sorting out relevant boundaries and resolving practical dilemmas (Lave 1988). Prior research on understanding everyday practices (Lave 1988) proposed “practical dilemmas” as an alternative to “problem-solving” for the motivation of human
action. These dilemmas arise from agents’ conflicting “values” and “experience” in multiple overlapping fields (“settings”) and have to be resolved through a “gap-closing” process (Lave 1988: 142). While this analysis acknowledges that conflicts arise because of the contradictions in larger socio-political formations, its focus on individual agents as opposed to a field of multiple relationally dependent agents does not provide theoretical tools for sorting out what agents perceive to be a more beneficial resolution and why they act inopportune1y in some circumstances. It is the focus on fields’ structures and the fuzzy logic of practical sense, as guided by agents’ habitus, that can give us an understanding of the practical tradeoffs faced by agents in their resolution of dilemmas.

Finally, the communities of practice research tradition has been criticized for the lack of treatment of heterogeneity in and outside communities (Carlile 1997; Contu and Willmott 2000). At the heart of the issue is that this tradition, by focusing on how agents acquire similar interests and competencies, has not developed tools for understanding differences. Socialization, legitimate peripheral participation, and identity construction are ways of building unity (Lave 1988; Lave and Wenger 1991). On the other hand, Bourdieu’s explicit focus on differences creates tools for understanding the social mechanisms involved in creating, maintaining, and transforming distinctions and boundaries. Hence, Bourdieu’s theory of distinctions is a complimentary perspective to the communities of practice research allowing an examination of how agents are different with respect to a given phenomenon and not only how they are similar with respect to it.

The analytical tools developed by Bourdieu both draw on and extend the theoretical perspectives on social boundaries in the organizational studies field. In my subsequent analysis, I will rely primarily on Bourdieu's notion of relational boundaries and distinctions, but will also draw on research from other perspectives to help deal with the organizational level of analysis where Bourdieu's perspective has not been applied extensively.
2.4 Communicative Genre Enactment as a Boundary-Crossing Practice

The focus of the chapter so far has been on understanding the nature of social differences and their salience in practice. I now turn to developing an understanding of the actual practices that differentiate or unite agents—the boundary-crossing practices that are the main focus of my study. Because the social world in Bourdieu’s theory is perceived through the lens of distinctions and boundaries, every practice involves crossing boundaries of one type or the other. Bourdieu’s early work in Algeria was an in-depth exploration of practices perceived in such a way, which he referred to as “transgression of limits” (Bourdieu 1977; 1990c). In this section, I will first briefly summarize Bourdieu’s theorizing about different kinds of boundary-crossing practices, and then draw on the communicative genre lens to facilitate a better understanding of such practices in the context of modern organizations.

Embodiment and Objectification of Boundary-Crossing Practices and Symbolic Power

In Bourdieu’s theory, the boundary needs to be examined in conjunction with the set of practices that produce and reproduce the boundary by simultaneously uniting and dividing agents in practice. On one hand, agents “order the world” through a series of distinctions like male vs. female, house vs. market, wet vs. dry and, on the other hand, they use a set of “operators” for crossing these limits (e.g., marriage). These operators are necessary for the production and reproduction of society (Bourdieu 1990c: 212):

To bring order is to bring distinction, to divide the universe into opposing entities … But the necessities of practice demand the reunion of things which practical logic has sundered. (Bourdieu 1977: 124)

Through boundary-crossing practices, “contraries” are both united (e.g., marriage) and separated (e.g., divorce). Bourdieu argues that united “contraries” are “as opposed as ever,” but now in a different way, manifesting their mutual antagonism and complimentarity (Bourdieu 1977: 125; 1990c: 213). For example, through “marriage” these “contraries” confront one another and the world is “reversed”: outside marriage, male was associated with outside of the house (e.g., the assembly, market, and fields) and
female with the inside; now male and female are associated with different parts of the house (male with brighter parts of the house, where guests are welcomed and many day activities take place, and female with darker parts of the house, where domestic animals are kept and night activities take place), and they are together opposed to the outside. This is again an example of the fuzzy logic of practical sense that “adjusts” habitus to the setting by applying the same categories differently through “overall resemblances” (Bourdieu 1977: 89-91, 125). To understand the boundary, it is necessary to understand not just the system of oppositions governing the habitus, but also a system of operators (boundary-crossing practices) that unites and separates these oppositions in any practice.

Bourdieu spends a great deal of time understanding different forms of boundary production, reproduction, and transformation in practice. He distinguishes two major modes of boundary reproduction in practice: embodiment and objectification (Bourdieu 1977: 87-95) In primitive societies with no educational system, no judicial apparatus, and no State, relations across boundaries could only be set up and maintained through interpersonal or direct connections. Before the invention of literacy and education systems, cultural resources (agents’ knowledge of practices) were largely embodied. In such societies, various modes for re-enforcing divisions and boundaries largely relied on kinship, debt, gifts, etc. (Bourdieu 1977: 184). They were learned though practical repetition like a child “imitating not ‘models’ but other people’s actions (Bourdieu 1977: 87),” such as gestures, postures, facial expressions, styles of speech—parts of habitus that are outside discourse. In such cases, habitus was acquired through mechanical learning by trial and error. Such relations depended on frequent personal contact and tight communities, where through inculcation of practices that reinforced various modes of domination, boundaries were preserved. The power distribution around a given social boundary depended on individual memories (Bourdieu 1977: 187).

On the other hand, in modern societies and especially in institutionalized settings like organizations, a great part of boundary practice is objectified: “through the magic of the world of objects, which is the product of the application of the same schemes to the most diverse domains,” (Bourdieu 1977: 91) the structure of particular relations with a particular agent can be temporally and spatially transferred (Bourdieu 1977: 183-197). Objectified relations, which is what defines “capital” in Bourdieu’s theory, can outlast a
particular interaction and a particular interpersonal relation. Forms of objectification include institutions, markets, documents, titles, codes, official language, etc. Importantly, modes of practice that are embodied "are placed beyond the grasp of consciousness, and hence cannot be touched by voluntary, deliberate transformation, cannot even be made explicit" (Bourdieu 1977: 94). On the other hand, it is through objectified (i.e., named) and, thus, analyzable structures that agents can and do transform social order.

To put it simply, agents may find themselves torn between maintaining their tacit dominant position in a specific interaction through non-symbolic means and objectifying the relation through a representation (symbol) for the purpose of benefiting from it beyond a single interaction. However, this may come at the cost of allowing the dominated agent to reflect on his or her immediate position. Think about "boasting:" an abusive husband may dominate his wife tacitly without her knowing about the unfairness of the relationship. However, when he boasts to others about his domination in front of his wife, he both turns his interaction with his wife into capital in the larger field (of likeminded male friends) and opens the door for the transformation of his interaction with his wife, who starts learning that she is being dominated. Of course, the actual transformation of the direct relationship is neither immediate nor guaranteed, but the objectified social order may be understood and potentially manipulated by agents. This is an example of what Bourdieu refers to as “the dialectic between objectification and embodiment” (Bourdieu 1977: 87-95).

Most of the collaborative practices in organizational settings of “knowledge economy” firms are made explicit through some objects—through language and a variety of other artifacts. Furthermore, within different types of objectified boundary crossing practices, a great amount of social energy is spent on the actual production and reproduction of the symbolic order itself. Because agents’ habitus produces practices to a great degree on the basis of representations of reality, the control over such representations constitutes power—symbolic power. The struggles over such power unfold primarily over the control of discourse, that is, they unfold through the communicative practices of agents. Production, reproduction, and transformation of symbolic representations through communicative practices are especially prominent in organizations (Weick 1987).

In Bourdieu’s discussion of discourse, the focus has been primarily on language:
Official language, particularly the system of concepts by means of which the members of a given group provide themselves with a representation of their social relations (e.g., the lineage model of the vocabulary of honor), sanctions and imposes what it states, tacitly laying down the dividing line between the thinkable and the unthinkable, thereby contributing towards the maintenance of the symbolic order from which it draws its authority (Bourdieu 1977: 21).

In his later work, Bourdieu distinguishes linguistic habitus, field, and capital, as subspecie of symbolic capital (Bourdieu and Thompson 1991). Language does not function by itself, but linguistic competence is converted in various settings in which it has different values. Following speech-act theorists like Austin (1962), Bourdieu emphasizes the social conditions of communicative action: a speaker is effective when he or she is authorized to speak, is socially recognized as such by others, and is able to speak in a way that others will regard as acceptable in the circumstances. Furthermore, Bourdieu argues that the “power” derived from language use is ascribed to it by the field structure in which the language is used.

In organizations in which practices are highly institutionalized not only in the use of organizational language but also in titles, policies, procedures, methodologies, and various standard meetings, an exclusive focus on linguistic habitus is not sufficient. However, other tools for analyzing boundary-crossing practices developed by Bourdieu (e.g., Bourdieu 1977; 1996) focus on overall societal formations and are hard to apply to everyday practices in organizations. To understand collaborative practices in organizations more broadly, I draw on the notion of communicative genres—a way of analyzing communicative practices in organizations, which is based on structuration theory (Giddens 1984). Next, I will review some key concepts from communicative genre theory and indicate how I will use this lens with Bourdieu’s theory of practice.

**Communicative Genres**

In organizational research, the notion of communicative genre has been extensively developed in the works of Orlikowski and Yates (Yates and Orlikowski 1992; Orlikowski and Yates 1994; 1998), who in turn draw on the rhetorical research of Miller (1984) and Bazerman (1995). Orlikowski and Yates define “genres of organizational communication as socially recognized types of communicative actions—such as memos,
meetings, expense forms, training seminars—that are habitually enacted by members of a community to realize particular social purposes” (1994: 542). Orlikowski and Yates’ (1994) study of the use of electronic mail by a group of Artificial Intelligence researchers found that socially accepted forms of electronic communication in this group included memo, dialogue, proposal, and ballot genres. Each communication practice was characterized by socially recognized forms and/or purposes. For example, a dialogue genre was identified by its purpose (to respond to a previous message) and by specific features of the form (the embedded message and the subject line) (1994: 569). On the other hand, a ballot was constituted by a genre system (Bazerman 1995), which encompassed three interrelated types of messages: (1) the ballot questionnaire; (2) the ballot responses; (3) the ballot result, which was a message from the ballot initiator summarizing the results of the voting (Orlikowski and Yates 1994: 558). More generally, a genre system was defined as “a complex web of interrelated genres where each participant makes a recognizable act or move in some recognizable genres, which then may be followed by a certain range of appropriate generic responses by others” (Bazerman 1995). Orlikowski and Yates also propose the concept of a genre repertoire, which refers to the set of genres that are routinely enacted by members of a community (Orlikowski and Yates 1994: 542).

Orlikowski and Yates refer to communicative genres as socially enacted structures that “serve as institutionalized templates for social interaction” (1998). In relation to Bourdieu’s practice theory (referring to Figure 2.1), we can say that genres, as structures, exist in two places: in agents, who socially recognize their form and purpose and are able to generate practices based on such recognition, and in fields, in which they are objectified through titles, documents, and codes. Genre enactment is then a way of describing practice. While Bourdieu in his stance against “integrationist reduction,” warns us not to reduce “relations of power to relations of communication,” he, nonetheless, acknowledges that an examination of symbolic instruments, of which communicative genres are a part, is a key way of understanding how the social order is produced, reproduced and changed (Bourdieu and Thompson 1991: 167-170). He writes that language has the power “to produce existence by producing the collectively recognized and thus realized, representation of existence.” (Bourdieu and Thompson
1991: 42). In my study, I propose to understand collaborative practices both through the analysis of communicative genres and through the analysis of field’s position shaped by agent’s accumulation of economic and cultural capital. An analysis of genres can help us understand how practice is represented in the genre definition as well as preserved or transformed through agents’ enactment of genres in practice. At the same time, the analysis of objective field positions can help us understand what motivates agents to enact established or different genres, what capital needs to be mobilized in such enactment, and how such enactment shapes agents’ positions in the field.

By bringing the communicative genre lens into an analysis based on Bourdieu’s perspective on practice, I also need to change the focus of the communicative genre lens from that on unity to that on distinctions. Any communicative practice is necessarily a cross-boundary practice in that it both unites and separates the “contraries.” While prior studies focused on how the enactment of communicative genres produces unity in a community (Orlikowski and Yates 1994; 1998; Kryder 1999; Yates, et al. 1999), in my study, I will examine how such enactment produces distinctions. For example, I would view the enactment of the ballot genre system identified by Orlikowski and Yates (1994) in their study not only as a practice uniting the specific group Artificial Intelligence researchers (the field), but also as a practice differentiating them into a "leader," who sent questionnaire, and "followers," who responded to the questionnaire. Thus, communicative genre enactment will be viewed as a part of boundary-crossing practice both within and across a field’s boundaries.

To conclude, in this chapter I introduced Bourdieu’s lens to the analysis of collaborative practices in organizations in order to better understand the nature, salience, and production of boundaries among agents (groups and individuals) involved in collaboration. Because a great part of organizational practice is institutionalized through various symbolic representations, I needed a lens to analyze these representations and the way they shape practice. Genres of organizational communication provides such a lens. Even though this lens is based on a different practice theory (structuration theory), and has been used primarily to understand practices within a single community of practice, it is nevertheless useful for my purposes here. Through the lens of Bourdieu’s practice theory, communicative genres can be seen as symbolic structures, which are perceived by
habit, enacted in practice, and which leave a "historical trace" in the field through such enactment. There are other (non-symbolic) structures objectified in various forms of economic and cultural capital that are important to Bourdieu's theory of fields that are missed by the genre lens, for example, to understand the modes of practice production and transformation it is necessary to understand symbolic representations, and the communicative genre lens allows me develop such understanding.

In the next chapter, I discuss the methodology I used to conduct my ethnographic study and how I interpreted and developed the theoretical concepts of relational boundaries and communicative genres in the field setting.
Notes

1 Bourdieu often uses the term "illusio" to differentiate interests that he is trying to describe, i.e., interests that are a combination of the tacit recognition of the value of this specific field with its unique logic and an ability to follow such logic, from the economic interests (Bourdieu and Wacquant 1992: 117).

2 Schultze and Boland analyze their data in a slightly different way and do not explicitly state the habitus and key oppositions in the terms I use here, but the paper provides evidence for these types of oppositions.
There is no risk of overestimating difficulty and dangers when it comes to thinking of social world. The force of the preconstructed resides in the fact that, being inscribed both in things and in mind, it presents itself under the cloak of the self-evident which goes un-noticed because it is by definition taken for granted.


Chapter 3 Empirical Approach

Theorizing about collaboration calls for a close examination of the everyday practice of individuals involved in it (Bourdieu 1977). To learn how people collaborate in IS development settings, I undertook a field study of an Internet consulting firm (Eserve) and one of its clients (Pubco). I collected data over a nine month period from three different observational settings within this firm: 1) a training program for new employees; 2) the strategic planning and prototype development phases of a client project (Eserve-Pubco project); and 3) multiple projects in the Research and Development (R&D) group. On the project, I also collected data from the client firm. These multiple observational settings allowed me to compare practices of different groups to understand the existing fields, the formation of new fields, and the transformation of fields involved. I also conducted in-depth interviews with participants and supplemented my observational data with the archival analysis of employee records, industry reports, email lists, and other electronic communications. In this chapter, I will explain my data collection and analysis strategies and describe the study site.

3.1 On the Practice of Reflexive Sociology

In this section I will review empirical guidelines developed by Bourdieu for applying and extending his practice theory in empirical settings and how these guidelines shaped my empirical approach. The guidelines were developed because Bourdieu rejects the
divide between theory and methodology prominent in sociological traditions of Parsons and Merton (Bourdieu and Wacquant 1992: 224-225). He writes:

Indeed, the most "empirical" technical choices cannot be disentangled from the most "theoretical" choices in the construction of the object (ibid. : 226).

Thus, researchers developing a given theoretical tradition (e.g., Bourdieu’s practice theory) should also develop empirical guidelines for practicing sociology in this tradition. I will outline five such guidelines that I identified based on the published notes from the workshop that Bourdieu conducted on “The Practice of Reflexive Sociology” (Bourdieu and Wacquant 1992: 218-260), and indicate how I used them in my study. Following the call made by Klein and Meyers’ (1999) for qualitative researchers to outline the criteria that should be used to judge their work, I suggest that the guidelines below should be used as such criteria.

First, in choosing the object of study, reflexive sociology guides researchers to engage in self-reflection about the choice of the object of study (Bourdieu and Wacquant 1992: 234-238). The choice of the phenomenon is already pre-constructed by what society or the field of sociology considers as a legitimate problem. To avoid studying pre-constructed objects, it is necessary to understand the roots of constructing the legitimate phenomenon. For me, constructing an object of study was a journey that took several years. Part of that journey is represented in my justification of my research questions in the Introduction Chapter. For example, I first worked on an established (pre-constructed) problem of “knowledge integration and transfer,” which was attributed to the difficulty of bridging pre-constructed functional and organizational boundaries (Kogut and Zander 1992; Grant and Baden-Fuller 1995). It was only later, through the exposure to practice theory and by discovering conflicts of interest and dilemmas experienced by practitioners during my early data collection, that I began to focus on “collaborative practice,” on understanding the nature and salience of boundaries, and on the tradeoffs involved in their crossing.

As the second guideline, Bourdieu argues that a sociological researcher “must try, in every case, to mobilize all the techniques that are relevant and practically usable, given the definition of the object and the practical conditions of data collection” (Bourdieu and Wacquant 1992: 227). In other words, he rejects the supremacy of either qualitative or
quantitative methods, arguing that different methods have to be used and their results triangulated to get a better understanding of the problem a researcher sets out to understand (Bourdieu and Wacquant 1992: 225-227). Because my study focused on the everyday collaborative practices and the construction and transformation of representations of the social order through communicative genres, I felt it was necessary to privilege an intensive qualitative analysis over larger scale quantitative analysis. I focused on studying one IS organization and its business clients using primarily ethnographic data collection techniques (Van Maanen 1979; Agar 1980; Schwartzman 1993; Van Maanen 1995). To understand the objective positions of agents in various fields identified in the study as well as to understand larger forces (constraints) that influenced the local phenomenon, I supplemented my observational data with archival data from web pages, industry analyst reports, popular press accounts, and financial statements about the IT and the Internet consulting industry. In addition, I analyzed data from the human resources database to get a sense for agents’ properties that were objectified and rewarded with titles at Eserve.

The third empirical guideline of reflexive sociology requires that researchers think relationally and avoid objectifying individual properties. Because data are attached to individuals and institutionalized groups it is hard to uncover relational constructs. This is done by systematically comparing properties of agents (individuals and institutions) to uncover differences. To achieve this, data describing individuals or groups must be first inductively described. Categories developed on the basis of such descriptions should be recorded and then similarity across units of analysis eliminated to arrive at relationships. Having multiple observational settings within and across the organization that I studied facilitated such an analysis. In trying to understand various fields in the study, I had to constantly compare various properties of individuals and groups to uncover their relative positions. I followed examples of conducting such analysis in Bourdieu’s and his colleagues’ empirical works (Bourdieu 1977; 1984; 1990c; 1996).

The fourth major empirical guideline in reflexive sociology is to practice “radical doubt.” There are symbolic forces in the fields that make agents “misrecognize” the social order for what it is and the researcher is also influenced by such forces: “The preconstructed is everywhere.” (Bourdieu and Wacquant 1992: 235.) I found it helpful to
draw on the principle of dialogic reasoning (Klein and Myers 1999) in practicing "radical doubt." According to this principle, data were subjected to a variety of possible interpretations, then further tested through subsequent data collection and analysis. For example, the initial data collection and analysis began with the boundary object concept (Star 1989) and socio-cultural lens (Schein 1992) for understanding the boundaries between professional and organizational cultures. However, initial coding and analysis of the data soon revealed that alternative explanations and lenses were necessary. This led me to use the complex cultures view, social distance research, Bourdieu’s practice theory, and the communicative genre lens.

Finally, the fifth guideline is to aim an empirical investigation at building a model of a very concrete empirical case. A good model consists of linking the data in such a way that such linking can be "tested" through further data collection and challenged in a way akin to the grounded theory approach described by Glaser and Strauss (1967). The challenge is to build such a model systematically so that it can uncover some invariants that are characteristic of the phenomenon beyond the particular case. In my development of a systematic model, I followed the various inductive coding techniques (Glaser and Strauss 1967; Corbin and Strauss 1990), all of which are built on a systematic comparison of data. Bourdieu elaborates the generalizability of empirically grounded models based on applying analogical reasoning to a particular situation with the purpose of uncovering relational "invariants":

This mode of thinking fully accomplishes itself logically in and through the comparative method that allows you to think relationally a particular case constituted as a "particular instance of the possible" by resting on the structural homologies [similarities] that exist between different fields (e.g., between the field of academic power and the field of religious power via the homology between the relations professor/intellectual, bishop/theologian) or between different states of the same field (the religious field in the Middle Ages and today for instance) (Bourdieu and Wacquant 1992: 234).

I applied these guidelines to the setting of an Internet consulting firm and its clients. I will now discuss how I chose the site and describe it briefly, then further elaborate on my data collection and analysis.
3.2 Research Setting

Why Web Development Consultancy?

The goal of my study was to understand how collaboration practices unfolded and shaped outcomes in ISD settings. Today, much ISD is outsourced to outside consultants and collaboration across organizational boundaries is notably difficult according to both practitioners' and researchers' accounts (Kern 1997; Lacity and Willcocks 1998; Koh, et al. 1999). Understanding what can improve such collaboration for financial and other benefits is of interests to practitioners. At the same time, my own preliminary qualitative interviews of twelve IS managers\(^2\) indicated that the organizational boundaries were perceived to be the most significant barriers to collaboration on ISD projects. Thus, understanding the dilemma, interests, and practices involved in such collaboration was of great interest to my study.

Given the difficulty involved in gaining access to a field site for collecting data using ethnographic methods (Van Maanen and Kolb 1985; Barley 1990), I did not restrict my choice to a particular type of IS consultancy. However, soon after my search got underway, I realized through introductory encounters that Internet consulting firms would be particularly interesting sites for my study for a number of reasons:

1. These firms almost uniformly proclaimed in their official slogans, recruiting brochures, and financial reports that they were deriving their strength from the ability to manage and integrate the knowledge of diverse team members.

2. Web development was a new endeavor and many of these firms claimed they were inventing new web development approaches. Since part of my goal was to understand what happens to ISD when the focus shifts from automation to innovation, these firms would be appropriate places to try and understand this shift.

3. These firms were growing at exponential rates in the fall of 1999. This meant that they had to incorporate members with different backgrounds at a rapid pace, thereby providing ample opportunities for me to observe how the differences between newcomers and old-timers was bridged.
In addition, there was great deal of energy around these companies in the fall of 1999. Most of them were either just post-IPO or a bit pre-IPO and the people working for them were sharing financial rewards enjoyed by their companies. At the same time, the excitement of undertaking a new task, of learning new skills, and of influencing people’s (web users’) lives was felt throughout. It appeared to me that people charged with such energy and attitude were likely to try novel and unique approaches to work that would be useful to document and understand.

**Gaining Access to Eserve**

By working through my social network of colleagues and acquaintances, I first approached Eserve in the fall of 1999. At the time of the study, Eserve was a young, rapidly-growing full-service Internet consulting firm. It was during my first visit to a local office that I learned how well suited Eserve was for my study. Details of my “first encounter” are described in Chapter Four, but in, one word, Eserve was “cool.” The message flashing at visitors in Eserve’s lobby described Eservers as “fast” and “fearless.” Eserve was extremely successful both financially and with clients, receiving over 90% client satisfaction rating in a third party survey. According to the CEO, the only limitation to Eserve’s growth was hiring and integrating new talent into the company. Most importantly for my research question, Eserve used a multi-disciplinary approach to Internet consulting, integrating strategic consulting, creative design, and technology services. Moreover, Eserve claimed that its ability to integrate the three professional groups was its key competitive advantage because a) this resulted in innovative solutions, and b) the culture of integration and sharing at Eserve attracted bright young talent tired of the culture of competition and bureaucracy of Big Five consultancies. As a result of such an approach, Eserve was known for its culture of “no hierarchy” and of having a great social climate (working among friends). Also, Eserve had a “no walls” “open space” environment where multi-disciplinary teams were literally “rubbing shoulders” on projects. Clearly, the open space was great for my ethnographic observations. I was also given some references to press publications where Eserve top managers expressed their ideas on the benefits and techniques for building sharing and learning organizations. Finally, I was told about a special training program during which new hires at Eserve
learned about Eserve culture and practices. I knew from John Van Maanen’s study of the police that training programs (like the police academy) were invaluable in understanding organizational culture (Van Maanen 1975). My aim was to use these wonderful observational settings to understand how Eservers institutionalized certain approaches to practice and how they actually practiced together.

In the spirit of their learning and self-reflection, Eservers (employees of Eserve) expressed interest in my study proposal. Eservers wanted to learn from my observations and data analysis, which would be reported to them upon the completion of the thesis. The problem was gaining access to clients. Unlike many intra-organizational boundaries, the boundary between clients and consultants is often openly recognized as political (Lacity, et al. 1995; Kern 1997). This is where my attempts to gain access to other research sites often stopped short. In fact, in-depth studies of both sides of an outsourcing contract are rare precisely because of such difficulties (Levina and Ross 2001). After multiple follow-ups, my contact at Eserve suggested that I consider studying the R&D group and then to see if I could find a client project subsequently. When I met the people at the R&D group, primarily designers or technologists focused on design, I realized how insightful it would be to try to understand the relationship between designers, technologists, and strategists in this new type of ISD practice. In addition, I was interested in the potential opportunity to compare the more open-ended work of the R&D group without external client responsibilities with the more focused work on the project oriented towards an external client. I was very lucky because less than two months in the field and right after I finished participating in the training program, I was allowed to join a client project.

**Looking at Pubco**

The project to which I gained access was being done for a client from a publishing industry interested in redesigning its site for educational customers. It turned out that Pubco, an old publishing company, was also interested in the learning and self-reflection that my involvement on the project offered through the reports that I would produce upon the completion of the thesis work. When gaining access to the project, I intended to spend as much time at Pubco as I did at Eserve. Because of my commitment to anonymity and
confidentiality, Pubco people were as open to giving me access to observing their practices as were Eservers. However, I only used my access to conduct in-depth interviews with Pubco participants, to attend project-related meetings, and to collect various corporate documents. I did not spend time in on-site observations of individual Pubco employees. The reason for this was that as an individual limited to one location in time and space I had a choice of either spending more time observing Eserve project team members establishing and crossing the various disciplinary and other boundaries, or trying to get a deeper understanding of Pubco’s boundaries. I also felt that because of the contested nature of the client-consultant boundary, I would jeopardize my relationship with Eservers if I were to spend more time on the client's site. I decided not to take that risk. I also believe that my in-depth (sometimes three hour long) interviews with Pubco and extensive popular press publications on the workings of the publishing industry (Korda 1999; Epstein 2001), provided me with a sufficient understanding of Pubco’s practices for me to address my research questions.

3.3 Data Collection and Analysis

Data collection and analysis were intertwined through cycles of deductive high level concept application, data collection, and inductive data analysis. It is only for descriptive clarity that I will separate my discussion of the data collection from that of data analysis and concept development.

Data Collection.

The interpretive part of my data collection consisted of on-site observations of the everyday life of participants. Ethnographic techniques (Van Maanen 1979; Agar 1980; Schwartzman 1993; Van Maanen 1995) were used to collect the data. I visited the site four days a week staying six hours a day on average from December 1999 until the end of August 2000. My role in the company was mostly that of a non-participant observer. On occasion, I chose to participate in some training activities to better understand what was being taught and to build a relationship with study participants as one of the "team members." I was asked twice to participate in the R&D group activities—once to take
pictures of employees for an experimental project and the second time to help prepare for a big media event. These activities did not significantly interfere with my observations of the communication practices in the organization as they were performed largely individually and were not a direct contribution to the work product that I was studying. Avoiding participation was extremely hard for me precisely because Eserve was promoting a mindset of openness, sharing, hard work, collective responsibility, and dedication to the company. This approach to work was close to my moral stance and made it difficult for me not to participate. It was especially problematic because unlike the studies of police work (Van Maanen 1975) or medical field (Barley 1986) where a researcher may have little expertise in the profession, I had substantial expertise in IS development, some knowledge of current trends in web-based strategy, and, most importantly in this case, some knowledge of the educational market—the target audience of the Eserve-Pubco site. However, my advisors and other faculty wisely forewarned me not participate in mainstream tasks on the site precisely because such participation meant taking an interest in the stakes that the field had to offer and positioning myself in the middle of the struggles that I was trying to understand. Such positioning would not only threaten my impartiality as perceived by the study participants, but it would also make me acquire a habitus in the field that I was studying, thus blinding me to the systemic variations of the habitus of others. There are upsides of participant observations that have to do with an understanding of the practical dilemmas faced by practitioners (Bourdieu and Wacquant 1992: 253). I felt that my past IT consulting background gave me an appreciation for these dilemmas.

During my nine or so months in the field, I divided my time between following the R&D group, the Eserve-Pubco project, and Eserve-wide events such as the training program, brown bag lunches targeted at building professional ("discipline") communities, project managers meetings, and Knowledge Management group discussions. The choice of the observational setting was always a struggle. Following Barley's approach (Barley 1990), I first tried to get an understanding for each setting by spending several weeks at a time in one place. Then I spent alternative weeks in the R&D group and the Eserve-Pubco project followed by another chunk of time in the R&D group. While this approach interrupted my flow of observations in a given setting, it allowed me to question more of
my taken-for-granted assumptions, which surfaced in comparing the differences in settings. For example, following the R&D group, which had a large number of “tenured” Eservers, allowed me to understand that the project team members were not following some of the practices that were institutionalized in other Eserve settings (other projects and the R&D group). Table 3.1 summarizes how I allocated my time in the field. In addition, it depended on the day’s events how I varied the window of time I spent in the field. Eservers worked late nights and on several days I stayed until 10pm in meetings with them.

Table 3.1 Time Spent in Observational Settings

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Field Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 1999—mid January 2000</td>
<td>R&amp;D Group</td>
</tr>
<tr>
<td>Mid January—end January 2000</td>
<td>Training Program</td>
</tr>
<tr>
<td>February—mid March 2000</td>
<td>Daily: Eserve-Pubco Project—Plan Phase; Once a week: R&amp;D Group Meetings</td>
</tr>
<tr>
<td>Mid March—mid June 2000</td>
<td>Alternating weeks: Eserve-Pubco Project—Prototype Phase; R&amp;D Group; Various Company Events</td>
</tr>
<tr>
<td>mid June—August 2000</td>
<td>Daily: R&amp;D Group; Occasionally: Eserve-Pubco meetings</td>
</tr>
<tr>
<td>September 2000</td>
<td>Interviewing</td>
</tr>
<tr>
<td>Spring 2001</td>
<td>One follow-up data collection visit</td>
</tr>
</tbody>
</table>

With respect to the amount of time I spent in the field, I originally planned the study for approximately nine months because that was the length of time of a typical Eserve project. I entered the project in February 2000 and the project was scheduled to be completed in September 2000, that is, in eight and a half months. However, the second (prototype development) phase of the project was finished in mid June and the next phase (the execution of the site) did not start until mid September. Due to practical considerations, I did not follow the project until its conclusion with the site launch in the spring of 2001. I also felt that I had collected enough data at the end of the Prototype Phase in July 2000 to formulate an answer to my research questions. I used the remainder of my time in the field to follow events at the R&D group, which had begun to disintegrate and provided very interesting data on the stability of a field. At the same time, I followed major events on the Eserve-Pubco project by checking in with participants and examining for information on the Eserve intranet.
Attending the training class and the meetings was my primary way of learning about collaborative practices in the field. While meetings are an integral part of any modern day organization (Schwartzman 1989; 1993), at Eserve the biggest part of an employee’s workday was spent in meetings—ad-hoc, pre-scheduled, with clients, without clients, with other teams, internal, etc. Conference rooms took up approximately a half of Eserver’s office space, and they were almost always booked during business hours. In addition, Eservers met at Pubco, where conference rooms were also hard to find, and they met extensively in their local workspace (the 30x25 feet space where all project participants sat together). On some days, I chose not to attend some group meetings, but to follow (shadow) individual study participants as they were going through their daily activities working together with others and alone. Although, I was trying to be a “fly on the wall,” people would typically be eager to explain their work processes and concerns, which was tremendously helpful to my research. I also took part in some “socializing” with Eservers and Pubco employees: parties, lunches, going to bars, etc. These events were extremely valuable opportunities for learning about Eserver’s dispositions and backgrounds. I had an opportunity to type my notes while in the field because everybody at Eserve carried a laptop computer and typed, checked email, or browsed the Internet regularly, so I did not appear too different. From my observations, I would typically have 20-25 pages of typewritten field notes a day. On several occasions I also made handwritten notes. In addition to these observations, I also noted what was going on in the work setting: who was in, what people were working on, and their casual conversations. Figure 3.1 shows the spatial configuration of the Eserve-Pubco project space in the Eserve office and my location in the field to highlight my physical proximity to participants and the open space at Eserve.

Beyond observations, a substantial part of my time was spent in scheduled and ad-hoc interviews. In the R&D group and on the Eserve-Pubco project I conducted two rounds of formal interviews: in the R&D group early in January 2000 to understand the group and individual members’ history and to learn about expectations, and in July-September 2000 to learn about participants’ interpretation of the experiences that I observed; in the Eserve-Pubco project interviewing clients and consultants at the end of the first phase of
the project in February-March 2000, then at the end of the second phase in June-August 2000.

![Figure 3.1: Eserve-Pubco Project Space at Eserve](image)

While I had an interview guide, interviews were open-ended and lasted from 45 minutes to three hours. Four interviews were conducted on the phone. Out of 60 formal interviews, 51 interviews were tape recorded and transcribed. Table 3.2 indicates the number of interviews by group.

**Table 3.2. Interviewee Type and Number of Interviews**

<table>
<thead>
<tr>
<th>Interviewee Type</th>
<th>Number of Interviews First Round</th>
<th>Number of Interviews Second Round</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eserve</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D group</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Eserve-Pubco project</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td><strong>Pubco</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eserve-Pubco project</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>27</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>
Adopting Bourdieu’s lens required that I focus on understanding agents’ positions in their field as well as the production and use of objects. Observations and interviews were part of developing such understanding, but another major part was the collection of material (recorded) objects. Because prior research indicated the importance of shared artifacts in collaborative settings (Star 1989; Henderson 1991; Carlile 1997; Bechky 1999), I was diligent in making special notes on when recorded artifacts such as various computer-based documents, images, schedules, and so on were created and shared among participants. I also bought a digital camera to take pictures of the whiteboards, blackboards, flipcharts, collages, posters, wall hangings, and so on. I collected many paper-based documents, especially documents of non-standard size (large pasted charts and flip chart notes). Most letter-size paper documents were available to me in electronic format. It was enormously helpful for my research that Eserve had a state-of-the-art intranet system for sharing project-based and company-based documents, employee records, company announcements, project staffing, and scheduling information. Having access to this system allowed me to collect data on what Eservers objectified through their practice. Finally, another significant data collection tool was my inclusion on both R&D group and Eserve-Pubco project mailing lists. Analyzing messages on a mailing list has been a valuable tool for researchers of organizational communication (e.g., Sproull and Kiesler 1986; Finholt and Sproull 1989; Orlikowski and Yates 1994; Yates, et al. 1999). Both mailing lists were very active and provided important data on the events that I missed due to multiple observational settings, the time I took for filling in notes, and family constraints.

**Data Analysis and Concept Development**

The understanding of the phenomenon was achieved through a focus on the mode of practice production and change and not just on the produced results. In that I followed Pettigrew’s logic that argues it is through longitudinal observations and understanding of change that one can develop an understanding of the problem at hand (1990). Before coding data and developing a systematic model, I also followed Pettigrew’s method (1990) of writing multiple iterations of the field stories with increased level of theoretical abstraction. I first wrote an analytical chronology and then multiple versions of analytical
notes and data interpretations, which I shared with my advisors and colleagues to challenge my taken-for-granted assumptions. Then I coded data in multiple ways: first, using a boundary object lens (Star 1989), then using a boundary spanning lens (Friedman and Podolny 1992), and finally using a genre lens (Orlikowski and Yates 1994). It was this third coding, which became the basis for developing the rest of the framework.

To study a field means to study: 1) its relation vis-à-vis other fields; 2) the relational position of agents or institutions in the field; and 3) the subjective dispositions of the habitus (Bourdieu and Wacquant 1992: 104-105). In fact, the analysis of habitus precedes the analysis of fields because it is through some understanding of individual perspectives on the field that researchers can start grasping the relevant properties of the fields (Bourdieu 1996: xvi). Because habitus is analyzed through distinctions expressed to a great extent through communication (symbolic distinctions), I first focused on communicative genre analysis following examples in Orlikowski and Yates (1994), Yates et. al. (1999), and Orlikowski and Yates (1998). To understand the development and enactment of communicative genres, I relied on my notes to code communication episodes according to: who/m, what, why, when, where, and how questions. I recorded my coding in analytical tables, timelines, and various graphical data displays (Miles and Huberman 1984). Example of several such tables are provided in Appendices B-F.

Because communicative genres are “socially recognized” and “habitually enacted” structures, my genre analysis revealed not just the habitus conception of practice (social recognition), but also the properties objectified in practice through genre enactment (e.g., enacting the project staffing genre enactment agents' organizational positions). This understanding of distinctions among agents (Eserve and Pubco employees, project teams, or organizations themselves) was then recorded in tables of properties of the kind reported in Chapter Four and Appendices B-F.

To get an understanding of the relational boundaries of the fields, I focused specifically on those genres that instituted and guarded “barriers of entry” such as the “hiring genre system” or “training programs.” These genres indicated the necessary qualifications for entering the field and practicing in it. Chapter Four elaborates on considerations of such an analysis.
My analysis of the relational positions of agents in the field was guided by the following question: “Where does the difference come from?” (Bourdieu and Wacquant 1992: 108). While the answer comes from applying various comparative data analysis techniques, the evaluation of the quality of the answer should be guided by an intuition that is based on qualitative understanding of the phenomenon. I developed my intuition by examining the practical conflicts and dilemmas faced by study participants. When observing or analyzing communication episodes, I noted the conflicts and misunderstandings that occurred. I then explored the practices that contributed to such conflict and traced them back to individual or organizational work practices and specific aspects of objectified social identity (education, titles, etc.). Then my goal was to conduct a comparative analysis:

To say that the structure of the field ... is defined by the structure of the distribution of the specific forms of capital that are active in it means that when my knowledge of forms of capital is sound I can differentiate everything that there is to differentiate. ... One cannot be satisfied with an explanatory model incapable of differentiating people—or, better, positions—who ordinary intuition in the specific universe tells us are different. In such a case one should search for what variables have been omitted which permit us to differentiate. (Bourdieu and Wacquant 1992: 108).

In search for these differentiating properties, I used Bourdieu’s suggestion to create a “table of pertinent properties of a set of agents” with agents in rows and properties in columns, and then to eliminate those columns that are structurally equivalent thereby leaving only those properties that are analytically relevant (Bourdieu and Wacquant 1992: 230). For example, to understand the structure of the Eserve field I recorded in a spreadsheet subjective (expressed by agents themselves and by their peers) properties of 40 agents who were directly or indirectly involved in the study. These 40 agents were not a random sample from several hundred employees, but those study participants and top and branch-level managers who played a key role in the field. The most important reason why I did not go beyond my study participants and top management, was that I could learn about work practices and develop a better "intuition" for judging distinctions among agents for those agents who were part of the study or were prominent in the company (e.g., top management). While the employee database had some biographical data on all Eserve employees, I wanted to include more comprehensive data important in agents'
dispositions, which I analyzed through qualitative means. For example, the number of years of experience in the business consulting industry was missing from the employee files of many employees, but I had this data for my study participants and top managers. For Pubco, I used the data collected in the field and the data in public sources (e.g., Fortune magazine charts) to distinguish relevant properties. Tables 3.3 and 3.4 summarize which “objectified” properties were used for my data analysis. These properties were derived based on the qualitative analysis of distinctions represented in genres described in Chapter Four. Following Bourdieu’s theory reviewed in Chapter Two and examples of analyzing fields (Bourdieu 1996), a two-dimensional field structure (one dimension unique to the field in question and another dimension describing the relation with the field of power) was deduced through data reduction that was based on these properties. This was done primarily through numerous trials and errors of positioning agents in the field using various analytical and numerical techniques to graphically represent their relative positions until I could account for most of the significant conflicts and distinctions recorded in qualitative data.

3.4 Limitations of the Approach

I have mentioned various methodological tradeoffs I had to make throughout this chapter, such as not spending more time at Pubco. More generally, a key methodological limitation of my study was the limited data on the institutional context of the consulting industry and Internet consulting specifically as well as my somewhat limited data on the Eserv organization at large. Such data could provide a more accurate picture of the fields and of the sources of communicative genres from other fields that agents drew on in structuring their communicative practices. In addition, I decided to spend more time on the Eserv-Pubco project than on understanding the “design field” or “strategy field” within Eserv or even the “knowledge management” practice group at Eserv. Due to limited resources, the methodological choices I made were primarily guided by reaching “theoretical saturation” (Glaser and Strauss 1967) in understanding collaboration on projects and only secondarily in understanding the external forces shaping such collaboration. Future studies can build on the understanding of a project-focused case developed here by examining a broader picture.
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Web Space Background</strong></td>
<td>Number of years of experience in the developing (or managing the development of) web sites. Levels: “WebExtensive” (involved before 01/1998), “WebExperienced” (involved before 08/1999), “WebNew” (involved after 08/1999).</td>
</tr>
<tr>
<td><strong>Association with OldCo</strong></td>
<td>Association with CEO’s prior workplace distinguished as “OldCo”/”non-OldCo”</td>
</tr>
<tr>
<td><strong>Business/Consulting Exp</strong></td>
<td>Number of years in the business consulting industry, sales, or top management functions. This property represents the number of years the person has been interacting with the client. For example, technical consultants often do not interact with clients until they become more senior. On the other hand, sales people from non-consulting organizations interact with the client. Different Levels: “10Mgt,” “5-10Mgt,” “3-5Mgt,” “1-3Mgt,” “ZeroMgt”</td>
</tr>
<tr>
<td><strong>Family or School Restrictions</strong></td>
<td>This property indicates whether the person’s mobility (going on a long term remote assignment) and schedule (staying long hours) was restricted by having kids and a spouse that also worked or by being enrolled in a night school program. (“Restricted”/”Unrestricted”)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>“Male”/”Female”</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Age range “under30,” “30-35,” “35-40,” “over40”</td>
</tr>
<tr>
<td><strong>Technical or Science</strong></td>
<td>Undergraduate or Graduate Education in Engineering or Sciences (“TechSci”/”non-TechSci”)</td>
</tr>
<tr>
<td><strong>Social Science and Humanities</strong></td>
<td>Undergraduate or Graduate Education in Social Sciences or Humanities (“SocialHuman”/”non-SocialHuman”)</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>Undergraduate or Graduate Education in Arts or Design (“Design”/”non-Design”). Often included graphics design, architecture, and music degrees.</td>
</tr>
<tr>
<td><strong>MBA</strong></td>
<td>Having an MBA or equivalent Masters of Management Degree (“MBA”/”non-MBA”)</td>
</tr>
<tr>
<td><strong>Top School</strong></td>
<td>Person attended one of top US defined by the US News and World report school ranking using top 25 undergraduate, graduate, or professional schools or top 25 international schools following <a href="http://www.library.uiuc.edu/edx/rankint.htm">http://www.library.uiuc.edu/edx/rankint.htm</a>. (“TopSchool”/”non-TopSchool”)</td>
</tr>
<tr>
<td><strong>Masters</strong></td>
<td>Having a Masters degree (“Masters”/”non-Masters”)</td>
</tr>
<tr>
<td><strong>Outside Professional Community</strong></td>
<td>Recognition in the outside professional community. This includes being an invited speaker at conferences, being asked for interviews by the press, having published many papers, receiving professional awards, etc. (“WellKnown”/”Unknown”)</td>
</tr>
</tbody>
</table>

**Distinctions produced by the Eserve Field**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eserve Experience as of 4/2000</strong></td>
<td>Number of years/months at Eserve divided into “EserveOld-Timer” (joined within the first year of founding), “EserveExperienced” (joined before 07/1999), “EserveInexperienced” (joined since 08/1999) — distinctions used at Eserve.</td>
</tr>
<tr>
<td><strong>Eserve Org Status as of 4/2000</strong></td>
<td>The official position at Eserve distinguishing “EserveExec” (CEO, COO, CHR, VP Bus Dev), “EserveTop” (other VPs, Regional Leaders, Office Managers), “EserveStatusMid” (Office Discipline Leaders, Client Account Managers, Project Managers), “EserveStatusLead” (sub-team Lead), and “EserveStatusLow” (Regular Consultant) — based on the Org. Chart in Appendix A.</td>
</tr>
<tr>
<td><strong>Eserve Discipline</strong></td>
<td>The official Primary Discipline distinguishing Enterprise (“EserveEnter”), Strategy (EserveStrat”), Technology (“EserveTech”), and Design (“EserveDes”).</td>
</tr>
<tr>
<td><strong>Consulting Industry Groups</strong></td>
<td>Distinguishes two main groups in the industry “Consultants” vs. “Clients”</td>
</tr>
</tbody>
</table>
Table 3.4 The Properties Used for Field Analysis of Other Fields

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Distinctions Objectified in the R&amp;D Group Field</strong></td>
<td></td>
</tr>
<tr>
<td>Group Experience</td>
<td>Being involved in the Design Lab (&quot;DesignLabMember&quot;) or starting in fall 2000 (&quot;New-in-Group&quot;)</td>
</tr>
<tr>
<td>ECS affiliation</td>
<td>Educational or research affiliation with Elite Coastal School (&quot;ECS&quot;/&quot;non-ECS&quot;)</td>
</tr>
<tr>
<td>Location</td>
<td>Location with the majority of the group (&quot;DesignLabLocation&quot;) or remotely (&quot;Remote&quot;)</td>
</tr>
<tr>
<td>Relation to the Eserve consulting practice</td>
<td>Prior or current involvement as a field consultant at Eserve (&quot;Consultant&quot;/&quot;non-Consultant&quot;)</td>
</tr>
<tr>
<td><strong>Distinctions Objectified in the Field of Power Relevant to Pubco</strong></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>&quot;Male&quot;/&quot;Female&quot;</td>
</tr>
<tr>
<td>Age</td>
<td>Age range &quot;20-35,&quot; &quot;35-50,&quot; &quot;over50&quot;</td>
</tr>
<tr>
<td>Technical or Science</td>
<td>Undergraduate or Graduate Education in Engineering or Sciences (&quot;TechSci&quot;/&quot;non-TechSci&quot;)</td>
</tr>
<tr>
<td>Humanities</td>
<td>Undergraduate or Graduate Education in Humanities (&quot;Humanities&quot;/&quot;non-Humanities&quot;)</td>
</tr>
<tr>
<td>Design</td>
<td>Undergraduate or Graduate Education in Arts or Design (&quot;Design&quot;/&quot;non-Design&quot;). Does not include Humanities subject such as English or Art History.</td>
</tr>
<tr>
<td>MBA</td>
<td>Having an MBA or equivalent Masters of Management Degree (&quot;MBA&quot;/&quot;non-MBA&quot;)</td>
</tr>
<tr>
<td>Top School</td>
<td>Person attended one of top US defined by the US News and World report school ranking using top 25 undergraduate, graduate, or professional schools or top 25 international schools following <a href="http://www.library.uiuc.edu/edx/rankint.htm">http://www.library.uiuc.edu/edx/rankint.htm</a>. (&quot;TopSchool&quot;/&quot;non-TopSchool&quot;)</td>
</tr>
<tr>
<td>Masters</td>
<td>Having a Masters Degree (&quot;Masters&quot;/&quot;non-Masters&quot;)</td>
</tr>
<tr>
<td><strong>Distinctions Produced by the Pubco or the Publishing Field</strong></td>
<td></td>
</tr>
<tr>
<td>Publishing Experience</td>
<td>Number of years in the Publishing industry (&quot;OldTimer-Publishing&quot; who started over ten years ago and &quot;NewcomerPublishing&quot; who started less than ten years ago).</td>
</tr>
<tr>
<td>Pubco Org Status</td>
<td>The official position at Pubco distinguishing &quot;PubcoExec&quot; (official list of executives), &quot;PubcoAPStatusTop&quot; (Direct Reports of Pubco AP head), &quot;PubcoStatusMid&quot; (2nd tier of AP management), and &quot;PubcoStatusLow&quot; (Regular employees)</td>
</tr>
<tr>
<td>AP Publishing Industry Groups</td>
<td>Distinguishes &quot;Authors,&quot; &quot;Students,&quot; and &quot;Professors.&quot;</td>
</tr>
<tr>
<td><strong>Distinctions Objectified in the Eserve-Pubco Field (unique)</strong></td>
<td></td>
</tr>
<tr>
<td>Project Experience</td>
<td>The time of joining the project (&quot;BusDev&quot;, &quot;PlanPhase&quot;, &quot;PrototypePhase&quot;, or &quot;midPrototypePhase&quot;).</td>
</tr>
</tbody>
</table>

Table Note: Chapter Four also relies on other distinctions in Figure 4.5, which are described in Tables 4.5 and 4.6.
Notes

1 Names of organizations, groups, and projects are disguised.
2 I conducted a set of exploratory interviews trying to understand the issues involved in managing collaboration on IS projects. Phone interviews took place between November 1997 and February 1998 and involved a dozen of IS project managers from different firms.
"Left and right like day and night—
That’s what makes the world go round.
In and out, thin and stout—
That’s what makes the world go round.
For every up, there is a down,
For every square, there is a round,
For every high, there is a low,
For every to, there is a fro—
That’s what makes the world go round."


Chapter 4  Boundaries at Eserve and Pubco

For the study of collaboration across boundaries inside Eserve and between Eserve and Pubco, the critical question was what were the fields within which the collaboration practices were situated. In this chapter, I will present the key fields and sub-fields that emerged from the data, the positions that agents occupied within these fields, and the boundaries (internal structures) that became prominent in each field. I will then illustrate how different boundaries became salient at different times in agents’ practices and why. The chapter’s main contribution is in showing how to understand the nature and salience of various distinctions and boundaries inside organizations and between two collaborating partners in a consulting relationship as well as how these boundaries are used to define what is at stake for participants in a collaborative setting. This is accomplished by understanding how various boundaries were produced and reproduced through agents’ enactment of communicative genres, which represented distinctions objectified in a given field and inherited from other fields. This chapter focuses on understanding field production and reproduction through communicative practices, but not field transformation, which is the topic of Chapter Five. Because I wanted to understand a static moment in a dynamic phenomenon, I had to choose a time point at which to take a “snap-shot” of the fields. I decided to focus on the mid-point of my study.
(April 2000) because by that time I have observed the fields evolving for some time and gained a better understanding of them. Also, there were significant changes in the composition of the R&D group starting in June 2000 and the Eserve-Pubco project Prototype Phase was completed.

A modern business organization can be seen as both a place for struggle of multiple fields and a field in its own right. A business organization is a field in Bourdieu’s sense if it has a unique combination of properties that constitute capital valued in it and, hence, a specific logic of practice. This capital then may be converted into the capital valued in its industry, in the economic market in general, or in other spheres of life. Modern business organizations develop well-demarcated external field boundaries made visible through the barriers to membership in the organization. The hiring process is "the institutional barrier to entry," (Bourdieu and Wacquant 1992: 100) into such fields. To consider an organization as a field it is necessary to be convinced of the existence of field effects—the specific influence that agents in the field exert on one another due to their relative positions (Bourdieu 1996: 132). This influence is institutionalized in most modern organizations through the employment relationship itself where agents in positions of higher authority influence agents in positions of lower authority through the organizational power (a form of capital) that they would not have if not for their participation in the organization (Conner and Prahalad 1996). These field effects are achieved through the symbolic power that organizations exert over their members by giving them titles, awards, positional authority, window views, etc., as well as establishing rules, policies, rituals, methods, etc. In this thesis, I undertook the analysis of two organizational fields—Eserve and Pubco—using a communicative genre lens to understand how the symbolic power of organizations was used to objectify certain boundaries inside these fields and with the outside social space. In the course of the analysis, I found that two settings within Eserve, the R&D group and the Eserve-Pubco project, were also fields in their own right and had to be analyzed as such. Next I will describe each field separately.
4.1 The Eserve Field

At the time of my study in late 1999 and early 2000, Eserve was a professional services firm engaged in the “end-to-end” production of Business to Consumer (B2C) web sites for clients. Eserve was founded in the early 90s as a consulting company that integrated technical and consulting expertise. In the early years of the web (1994-1997), Eserve founders and early employees came from the systems integration industry. The valued competence at that time was the ability to build performing web sites and to sell this expertise to clients. In the early years of Eserve, junior employees were bright technologists often right out of college or from other Internet-based startups.

Soon, however, the E-commerce rush hit the systems integration industry and Eserve recognized that clients were willing to pay for the integration of technical and strategic expertise. Consequently, Eserve started offering strategic consulting as part of its web site development service. Yet, the "strategic" component of Eserve offerings was never fully separated from the project management, sales, and client management components. Following the practices of the management consulting industry, most Eservers in management positions who were involved in selling the idea of web sites to clients, who managed client relationships, and oversaw the work were classified into the "strategy" discipline.

Once the development of a brand identity began playing a larger role in the B2C arena and content providers such as “Yahoo!” became prominent players, Eserve started hiring graphic artists and designers to build sites which not only performed well technically, but which also attracted consumers through their graphical design, information presentation, and brand messaging. In the short era of content domination of the web (1997-1998), the emphasis shifted from having a web site to having a good-looking and easy-to-use web site. Eserve’s employee database indicated that the first several graphical designers and brand specialists were hired around the summer of 1997 (more than a year after the strategists entered the scene). The integration of design expertise into the service offering quickly spread among Eserve competitors. In addition, graphic design and advertising agencies also started to enter Eserve’s niche market. These agencies maintained that a graphical design component was the most important aspect of a web site and that a client could partner with systems integrators to implement the site’s back end. Incorporating
designers into the Eserve’s service offering was a way of competing with new “interactive agencies.” Soon, however, many agencies grew to include technological and strategic expertise and started competing head on with Eserve. By the beginning of 2000 most web-consulting firms, which constituted Eserve’s immediate competition, offered expertise in all three disciplines. The new “internet professional service industry” (field) was the product of three industries (fields): 1) information systems integration; 2) management consulting, and 3) graphic design and advertising agencies. Some of the newer Eserve competitors claimed their superiority over Eserve (their distinction) arguing that they were the first to integrate a truly strategic or truly artistic approach into their technical service offering.

In early 2000, Eserve was still enjoying what the CEO called a "riding wave" of demand for Internet consulting services and turning down clients because it could not cope with demand. However, Eserve leadership started worrying about remaining competitive within the niche B2C web-consulting market space. There were three types of competencies (distinctions) that Eserve was competing on: 1) individual competencies in each discipline—"top notch talent," 2) the ability to work with clients—"consulting craft,” and 3) the ability to integrate the three disciplines together in the system delivery practice—"truly integrated approach.” According to Eserve's management, it was Eserve's unique organizational culture that was responsible for generating these three competencies, with the biggest emphasis placed on the third competency. According to the CEO:

To build digital businesses, to get ideas, and to get them launched in the marketplace you need to put three kinds of people [technologists, strategists, designers] together in a 12x12 workspace. Culture is the key—collaboration, sharing, mutual respect. Real innovation is at the intersection of disciplines. This is easy to start, but hard to scale.

What "Eservers" referred to as "Eserve culture" was a system of shared symbolic representations (norms, value statements, slogans, rituals, etc.) that shaped agents’ production of a certain type of capital valued at Eserve. This capital differentiated Eserve from other institutions in the social space. It also differentiated Eservers based on the amount of that capital that they could claim (their “fit with Eserve”). In order to understand what this capital was and how it was produced, I analyzed the communicative
practices (symbolic means), through which agents produced and reproduced distinctions and boundaries in the Eserv field according to the amount of their "Eserv" capital and the relative amounts of other (economic, professional, pop culture, etc.) forms of capitals they possessed. I start with the analysis of genres and genre systems that were institutionalized at Eserv. These socially recognized and habitually enacted types of communicative practices objectified agents' relational properties valued by agents in the Eserv field. Various forms of capital produced through Eserv practice or inherited from other fields are valued only if they are symbolically represented in practice as valuable. Thus, the analysis of communicative genres as representations of discourse provides insights into the different forms of capital that were symbolically recognized as valuable. I will combine the analysis of genres as socially recognized forms of discourse with the analysis of the results of genre enactment in practice, which shows how various forms of Eserv-valued capital were objectified in the company records through titles, awards, performance evaluations, and other distinctions.

Reproduction of Distinctions through Symbolic Means: Eserv Genre Repertoire

The key distinctions at Eserv were produced and reproduced through the enactment of a significant variety of communicative genres constituting Eserv's field genre repertoire. What was valued at Eserv was first made visible through the enactment of the recruitment genre system, which filtered out those who would fit with Eserv and those who would not, thereby demarcating the boundary of the Eserv field as a whole as well as indicating to the potential hire what were valued Eserv distinctions. New hires were then enrolled into the New Hire Training Program (NHTP), which itself constituted a genre system with the goal of teaching newcomers what it means to be an "Eserv." Because the goal of the program was specifically to show new hires how to do things the Eserv way, practices introduced during NHTP covered most of the distinct genres in the Eserv repertoire. Participating in NHTP included learning about people at Eserv through the enactment of the introduction genre and partying genre, learning about Eserv valued distinctions through the inspirational speech genre enactment, about team work at Eserv through the teaming exercise genre system and post-mortem review genre,
about career development through the introduction to the mentoring, staffing, evaluation, and promotion genre systems, about what it meant to be a good consultant through enacting consulting craft genres, and learning how to execute projects the Eserve-way through the introduction and enactment of parts of the Eserve service delivery model genre system. As part of the Eserve service delivery model genre system, new hires were introduced to genres that were part of the discipline genre repertoires—technology, strategy, and design. In addition to these genres, NHTP introduced new hires to the administrative details of Eserve life institutionalized in such genre systems as business development, work pricing, expense reporting, and benefits administration. While some of these genres had their own “flavor” at Eserve, many of them such as expense reporting, benefits administration, status meetings, brown bag interest groups, training sessions, etc. were so institutionalized in the industry that their influence on reproducing boundaries specific to Eserve was minimal. Finally, other important institutionalized practices that were not introduced during NHTP but were regularly enacted at Eserve were the town hall meeting genre and the leadership committee meeting genre systems.

Each institutionalized genre through its forms and purposes objectified certain distinctions valued in the Eserve field. These distinctions were of two types: those that were specific to the Eserve field such as “committed to Eserve” vs. “indifferent” and those distinctions that were used in the field of power and were relevant to differentiating among Eservers or between Eserve and the outside world such as “innovative” vs. “conventional.” Through the social recognition and enactment of genres the former set of distinctions was related to the latter set objectifying the conversation rate between Eserve capital and other forms of capital in the field of power.

Appendix C summarizes the key genres I found to be institutionalized at Eserve. Through the enactment of these genres, distinctions of the Eserve field and inside the Eserve field were produced and reproduced. Here I will provide a description of ten of these genres and genre systems as they were enacted at Eserve (italicized genre names in the text refer to the Appendix C). For the most part, in the “snapshot” of the Eserve field described in this chapter, there was social recognition as well as agreement on the purposes of Eserve genres among Eservers. Thus, I do not differentiate socially recognized purposes of different Eserve agents involved in genre enactment. It is the
actual analysis of the distinctions represented in genres and not necessarily recognized as such by agents that will show how genre enactment served the interests of different parties differently.

**Recruitment Genre System**

Newcomers to Eserve started developing their intuition for what was valued at Eserve during the recruitment process. When the CEO described the goal of the recruitment process at Eserve, he emphasized that it was about finding people who would "thrive" in Eserve's culture. Despite a tight high-tech labor market, Eserve was very selective in choosing candidates and the recruitment process was known as "brutal torture" among Eservers. The "recruitment process" referred to a communicative genre system situated in the field of power (or its business organizations sub-field) on the boundary between Eserve and other firms. The recruitment genre system was identified among Eservers by its purpose of filling a position and among job candidates by its purpose of learning about Eserve and finding a job. In addition, many current employees were expected to participate in recruitment as a way of "building the company." One of the genres in this system was the online job application genre. The animated Eserve website executed in modern bright and dark colors led potential applicants to an online application screen, where individuals interested in an Eserve job could read job postings and fill out an application. The online job application for any job category emphasized four criteria:

1. experience in the individual areas of expertise (number of years in the profession, technical skills, awards, etc.)
2. experience in the web space
3. the ability to organize work and lead projects
4. the possibility of fitting with Eserve values.

The fourth item was usually expressed in such words as:

Taking pride in the team and working hard to build an environment filled with trust, learning and sharing is essential!

Every "consulting" position asked applicants for their background in "leadership," "project management," "mentorship," and "communication." In addition there were such open-ended questions as which job characteristics the applicant considers to be the most
important, including monetary rewards, learning on the job, getting feedback from colleagues, nature of tasks, and qualification of colleagues. It was also necessary to indicate willingness to travel.

However, there were also differences among questions asked based on an applicant's "discipline." Most notably, designers were asked about their professional affiliations and recognition as well as asked for samples of their work (portfolio). Technologists, in contrast, were asked about their familiarity with different software packages and languages including specialized terms such as "Blue Martini." Strategists were asked to define the future of the digital economy. One employee, who received an interview based on his online application, said he first browsed the Eserve site to learn about the company and then spent several days carefully crafting "witty" answers to the open-ended questions on "people skills" and the ability to do innovative work.

Other genres in the recruitment genre system included employee referral, campus recruitment, and interviewing genre system. Those employees who regularly took part in these activities were seen as especially dedicated to the company and their contributions counted at review time. Obtaining a good new employee for Eserve was a distinction mentioned in the town-hall meeting genre enactment. Through participating in the collective enactment of these genres, current employees also demonstrated to others their understanding of the “Eserve values.” Part of this was evident in their referral of potential candidates who "would fit." Another large part was represented in the collective reflection on candidates in the interview wrap-up discussions, which usually included several interviewers.

During the enactment of the interviewing genre system, job candidates were first taken on an office tour. The new-age office design made Eserve look a bit like a high-tech version of Starbucks. Here is an excerpt from my notes after my first visit to Eserve:

All the people that I have seen except for one or two were young (late 20s and early 30s). They wore casual dress. Several wore nametags. I heard applause coming from one of the conference room. I later learned that nametags and applause were associated with a class that was going on in the large conference room. All new hires go through three-week "education, enculturation, and training program" where they learn about the way the company does business and get to meet other employees and management.
The lobby looked modern with glass walls and see-through conference rooms—new furniture everywhere. There were two visitor armchairs that combined a bright orange color with soft fabric and a comfy design. Instead of the usual Fortune and Business Week magazines, the coffee table featured a single copy of the "Business 2.0" magazine that covered mostly start-ups in bio-tech, financial services and IT, and featured articles on IPOs and a Venture Capital conference. One of the main decorations of the office was a glass wall that featured employee photos—they were cool pictures of young people holding funny objects or making faces, all taken on a Polaroid camera. Pictures had names under them, but no rank. One picture of a person who looked over 40, stood out.

When the person I was meeting came to greet me, he said that the conference room we were going to meet in was taken, and that's why he was late. He offered to give me an office tour. We went around the floor. The floor was not big and was split into a central section, which featured service closets and utilities, several conference rooms, and a kitchen. Outer parts of the floor were occupied by cubicles with low walls (about three feet high), so that everybody was visible to everybody else. Everyone had a laptop on their desk, and no desktop, which made the place look even cooler. There were a few more conference rooms of different sizes spread out across the office. I was shown the "Design Lab" section of the office, which was especially modern with fashionable light fixtures and weird objects on walls. Besides the laptops it featured colored i-Macs and a few other PCs. My guide said that that's where the initial brainstorming and designs get to be developed. Then followed a kitchen where a dining table set next to a pool table. On the walls were attractive screen shots of various sites that Eserve had designed for its clients.

I wondered where the management offices were. My guide explained that there were no private offices and no administrative assistants. Everybody got a desk of the same size, except for the CEO, who got a slightly bigger desk. All the conference rooms were glass and were occupied at the time. The lack of privacy bothered me ... (Field Notes 10/5/1999).

One of the objects that also greeted visitors was a poster proclaiming the Eserve values. The ten or so values could be summarized as "Meritocracy," "Teamwork," and "Innovation." These were the values that interviewees got grilled on during three long rounds of interviews. In an interview that I observed, a candidate finishing his MBA at a top-ranked school\(^2\) was applying for a strategist position. He was asked to describe how he resolved a difficult team situation during his MBA experience (teamwork), his experience with the web space (innovation), and what he would do under a tough deadline with a customer when he knew very little about a given subject matter (merit).
His answers emphasized his ability to lead others and "think on his feet." In a hypothetical scenario where he had little knowledge about a client's industry he pointed to a dozen of sources of information that he would try to consult, but did not include asking clients for their advice and opinion. The emphasis on consultant's responsibility to learn and know everything was well received. He was probed especially on what he saw as his key skills and the answer, "learning, adaptability, and collaboration," was praised by the interviewer. The Eserver who interviewed him added, though, that he missed mentioning one skill, which was the ability to give others open feedback without regard to their rank—a unique skill necessary at Eserve. The applicant also emphasized that he had technical background saw his role "as a bridge between business and technical folk."

This was important as Eserve was looking for "Renaissance people"—individuals with backgrounds in multiple disciplines. In the interview wrap-up for this candidate, four interviewers, three strategists and a technologist, were very satisfied: he was "very bright" and "knew the web space." He was given an offer, which he accepted.

The recruitment genre system objectified some key distinctions that set Eservers apart from others. It is important to note that the distinctions represented in genres are always relative and subject to the fuzzy logic of "more or less;" however, to understand how genres represent distinctions and reproduce boundaries, I will rely on the language of absolute dichotomies (following Bourdieu's method). Thus, through the enactment of the recruitment genre system Eservers differentiated themselves by being "open." This does not mean that every Eserver was open, nor that every non-Eserver was "reserved"—these are relative oppositions. However, in the application of practical logic, such distinctions differentiated Eservers from non-Eservers. In addition, the "negative" side of the dichotomy was often non-discussable at Eserve. Not giving an explicit symbolic representation to the dominated group contributed to the symbolic power of the Eserve field and of its dominant members (recall an example from Chapter Two of an abusive husband who can continue dominating his wife by not naming his behavior). Continuing with the example, if somebody were to be called "reserved" in an interview, they would take serious offence at that label. It was easier instead to give a lower rating under "Eserve values" to the candidate—a more subtle representation of the same thing. For the purpose of analyzing distinctions, I had to provide missing labels for the negative side of
most of the dichotomy based on my interpretation of the nature of the distinction. Tables 4.1 and 4.2 at the end of this section indicate through the use of parenthesis which labels were based on my interpretation.

Analyzing the recruitment genre system, I found that relative distinctions produced through its enactment were that Eservers were more "innovative," "young," "modern," "unrestricted in schedule and travel," "open," "sharing," "egalitarian," "team players," "eager to learn," "committed to Eserve," "leaders," "articulate," "thinking on their feet," "sharp," "flexible," "working well under pressure," "Renaissance people," and "web experienced." On the other hand, non-Eservers were more "conventional," "old," "traditional," "restricted by family and school commitments," "reserved," "selfish," "authoritarian," "individualistic," "reluctant to learn," "indifferent," "followers," "inarticulate," "slow in analysis," "mediocre," "rigid," "not coping well with pressure," "narrowly focused in one area," and "new to the web space." Through the visual appearance of artifacts (space design, company web site, clothing worn by employees), Eservers were distinguished as "well designed" vs. "utilitarian" and "high-tech" vs. "low-tech." In addition, the enactment of the recruitment genre system started to objectify some of the differences among discipline groups. Strategists were expected to understand the web space more than others, technologists were expected to know specialized technical terminology that was "obscure professional language" to others, and designers were expected to be "well known outside" in professional communities and ready to share the outcomes of their work. The analysis of field positions in the Eserve field will demonstrate that these distinctions were multiple representations for just a few fundamental boundaries.

The symbolic barriers that were produced and reproduced through the enactment of the recruitment genre system were insurmountable for people who had not gone through it. Once, when Eserve was in a particular need for top strategists, one Eserver told another that he knew an outstanding, industry-known strategist who was interested in joining Eserve.

I told him that I would put him in touch with the recruiting people. We could probably bring him in right away, but I want him to go through the typical hiring process.
The most telling cases of the barriers created by the recruitment process were the occasional sub-contractors hired by Eserve. These people had not gone through the interviewing process and were always treated as outsiders. They were typically left out of team meetings, were given information on "a need to know" basis, were not allowed into NHTP, were excluded from social gatherings, and were often blamed for problems on projects. In general they were seen as "indifferent" to Eserve. One sub-contractor, who was given high positional authority, was quickly rejected by Eservers as a person who "just did not get our culture."

**The New Hire Training Program (NHTP) Genre System**

The *NHTP* genre system was an "education, training, and enculturation" program, which had the overall purpose of "facilitating a successful launch of your Eserve career," in other words, familiarizing new hires with the rules of the Eserve field. The NHTP was mandatory for all of those who survived the "brutality" of the recruitment process and accepted the job. The form for this genre was a three-week-long "boot camp," where new employees (typically about 30 people) lived in the same building and studied together at Eserve headquarters. The classes started early at eight am and went until about seven pm in the evening.

In the spirit of an "open" and "flat" organization, most of the top level VPs gave lectures in the NHTP and the CEO always gave a lecture and organized a party for the new employees at his home. In addition to learning about each other's backgrounds, new hires got to meet prominent Eservers from different organizational levels, learning what kinds of things were rewarded at Eserve through titles and recognition (teaching in NHTP was prestigious). Classes were taught primarily by senior consultants, local or regional leaders in the relevant disciplines, and R&D group members. Most of the teachers were either "old-timers," that is, they joined Eserve during the first few years after founding, or were, at least, "Eserve-experienced"—had at least nine months of Eserve experience. All top managers and most of the other class facilitators gave short or long *inspirational speeches*, eloquently conveying the feelings of "commitment to Eserve" and "love for this place." They drew on their personal stories of how they helped to build this "great place."
A large part of the program time was spent in helping consultants gain competence in enacting *consulting craft genres* including *presentation, facilitation* and *problem-solving* genres. This was achieved through trainees taking classes on these skills as well as by observing experienced Eservers, especially strategists, practicing these skills with great competence.

Lectures on the Eserve service delivery model, “consulting craft,” and “teaming” were intermixed with "project time," which was dedicated to completing a single shared project. The project was organized as a typical, albeit internal and short, Eserve project with three sub-teams (strategy, design, and technology) and multiple deliverables according to the service delivery model. Students were judged primarily on how well they followed the Eserve service delivery model and the Eserve way of working together. Because most of the day was filled with classes, project work had to be done during late hours and on weekends.

There was lots of "socializing" throughout. It was a "working hard and partying hard" experience. Many employees were away from their home towns and families and were also asked to work at least one of the two weekends. Part of the idea behind such an intense "socialization" experience was that personal social networks were promoted at Eserve as a way of getting things done. The NHTP was helping new employees get to know at least 30 other people in the company relatively well. In addition, new hires got to know the teachers in the class and other Eservers who were encouraged to go to parties, bars, or sports games with new hires and to spend lunch times with them. *Partying* distinguished those Eservers who were “physically fit,” “fashionably dressed,” “knew modern music,” and were “unrestricted in schedule and travel” apart from others.

Most of the teaching materials including presentations, forms, exercises, guides, etc. were made accessible to NHTP students and the rest of the Eserve organization through an intranet-based document sharing system called "Eshare." Eservers could refer to things that they learned in NHTP by accessing the system whenever they liked. NHTP taught Eservers how to access the system and store documents in it. The work-in-progress documents and deliverables from the NHTP project were also stored in the Eshare system. Any employee at Eserve could access anybody else’s work in Eshare.
The NHTP genre system through its form and purpose introduced new hires to critical distinctions at Eserve. Eservers were expected to work "long hours" as well as be "committed to Eserve" projects, "outgoing," "team players," and "good consultants" ("sharp" in problem solving, "articulate" in presentations, and "leaders" in facilitation). By meeting a wide range of Eservers, new hires got to learn what were the distinctions that resulted in recognition and status at Eserve. I will next discuss some Eserve communicative genres that were introduced at NHTP, whether descriptively or in action.

**Teaming Exercise Genre System**

The *teaming exercise* genre system was comprised of *introduction, expectations solicitation, and norm-setting* genres. The purpose of the *teaming exercise* was to help employees figure out "how we should work as a team" by becoming more familiar with each other and establishing norms of working together. Eservers would often say, "Teaming exercise is what makes Eserve unique."

The *introduction* genre was the first step in the teaming genre system accomplishing this purpose. The standard introduction genre at Eserve included the name of the person, his or her discipline (technology, strategy, design), and his or her local office. In *introductions* for the employees in "Enterprise" functions, which included top management and administrative support (Human Resources, Benefits, Finance, Public Relations), discipline identification was replaced with the functional role. In addition, most introductions included either an interesting fact about the person or, in the spirit of getting to know each other, an interesting fact about a person sitting next to you, or an interesting fact that nobody at the table yet knew about you. For example, one strategist (a 30-year-old) in the NHTP class introduced herself this way:

**Who:** Jane Smith, Strategist, Chicago Office.
**Education:** BA in History from University of Maryland, College Park.
MBA from Northwestern University.
**Primary role:** Functional Analyst.
**Previous work:** Strategy Consultant, Andersen Consulting—four years.
**An Interesting Fact:** I have lived in Chicago, Melbourne, Manhattan Beach, Amsterdam, and Tokyo.

Here is an introduction of a 26-year-old male technologist in the same class:

**Who:** Rajeev Sethi, Technologist, San Francisco Office.
**Education:** BS in Electronics Engineering from Indian Institute of Technology.
Primary role: Technologist.
An Interesting Fact: I am a proficient photographer and have shot portfolios for prospective models as well as photos for prize winning ad design contests (for management grads in college).

Finally, a profile of a 40-year-old male Design Lead was:

Education: BA and MA in Graphic Design, Rhode Island School of Design
Primary role: Design Lead
Previous work: Last five years in a design consultancy. Before—graphic design for products and retail chains. Helped design “nowfamous.com” web-site.
An Interesting Fact: Have lived in a dozen cities across US and abroad.

In my NHTP class, all but four consultants (two of them just out of college), had some previous consulting background with strategists having consulting background in management and systems integration consulting. Multiple introductions throughout a person's life at Eserve put pressure on people to appear "interesting" through a number of interesting facts that they could to tell about themselves. It was typical for designers in their introduction to refer to their prior work and awards, and if possible to show examples of their work—the best introduction for an artist.

NHTP instructors enacted the introduction genre as well. Meeting people from different hierarchical levels at Eserve through the enactment of the introduction genre was a critical way of learning what different types of capital were valued at Eserve. Officially "Eserve" had "no hierarchy," which was translated in the "Principles" document as "people are judged not just by their managers and staff but by their peers as well," and "there are no tasks beneath an individual." In practice, however, there were titles indicating seniority, and the "egalitarian" ideal was always qualified with explanations. Part of the official explanation for the disconnect between "no hierarchy," and "official titles," was that, while there was no hierarchy there was responsibility and accountability which were conveyed through titles, and to stay competitive on the job market Eserve needed to offer titles to senior employees. Another justification was that to get the work done on projects, projects had to be hierarchically organized with each person responsible for the delivery of a given piece of work or the whole project (project manager). As one old-timer put it:
We do not have a hierarchical environment, but projects are hierarchical.

Appendix A shows the hierarchical levels at Eserve at the time that I went through the NHTP. No such chart was given to Eservers although sometimes part of it was explained in NHTP classes. Boldfaced nodes in Appendix A highlight the four VPs who were seen to be the people running the company along with the CEO.

Through the introduction genre, NHTP students learned the backgrounds of top management. All but two of the ten VPs and the CEO spoke in the class. Their backgrounds were quite similar except for the fact that they differed according to their Eserve experience as “old-timers” vs. “newcomers.” Below is an aggregated profile of top management partly revealed in the oral introduction and partly in the introduction to the outside world on the company web site:

**Who:** CEO or VP. Two out of eleven were women, but one of them was hired recently. Average age was 39.5 years. All were Caucasian and spoke English as their first language.

**Education:** Four had undergraduate degrees in Technology or Sciences, and the rest had majors in Social Sciences and Humanities. Eight out of eleven had Masters degrees, of which four were MBAs or equivalent management degrees. Seven out of eleven people graduated from top-ranked schools. None had an education in Design.

**Primary role:** Managing the company and defining strategic direction.

**Previous work:** Depending on the age, all had seven or more years of experience in management positions in the management and technology consulting industry. Five out of eleven VPs had worked for the same firm as the CEO (“OldCo”) before he left to found Eserve. Newcomer VPs did not have extensive “web space” background.

**An Interesting Fact:** Most VPs did not answer this question directly. Instead, old-timers told stories about building the company, the IPO process, etc. Newcomers often emphasized their ties to the professional community at large, for example, telling about their involvement in upcoming industry conferences or about personally knowing Internet pioneers.

**Eserve Experience:** Four were old-timers who were either founders of the company or who had started within the first year, three others joined within the first two years of founding, and four joined within the past year. Old-timers were all male.
Appendix B summarizes the profiles of consultants who lead classes on the Eserve approach to project delivery. In addition to the information conveyed, most presenters in the class were distinguished by eloquence and wit of their introductions.

What was orally articulated in the introduction was to a great extent recorded in the employee profile in the Eserve Employee Database (EED), which was fully accessible to all Eservers via the web interface. In addition to the primary discipline expressed in the oral introduction, the EED included a person's secondary disciplines. The secondary discipline was encouraged as way of showing that Eservers were "Renaissance people" skilled in many domains. There were several specific multi-disciplinary roles including Functional Analyst (tech and strategy), Creative Developer (design and tech), Information Architect (creative and tech), and some others. Although Project Managers and Account Managers could come from any discipline, in practice, most of them were associated with the strategy discipline. During the NHTP, Eservers were also promised opportunities to switch disciplines, with a typical direction being from technology to strategy. The employee record served as an input into the person's project assignment ("staffing") and, often, served as the first introduction among future colleagues. Several people, and especially designers, changed their picture in the EED to an animation with a funny or interesting set up. Others added messages like, "interested in working on anything that has not been done before."

For current Eservers, it was important to include their work history at Eserve in their oral introduction. The date of hire, employee number, and the sequential number of the NHTP class taken indicated how long a person had been with Eserve and were prominently featured in the EED. Throughout my time at Eserve, I often heard people introduce themselves by either the NHTP number that they participated in or, if they were "real" old-timers (with employee numbers under 100), by their employee number. Several introductions mentioned famous Eserve projects that had earned Eserve a special recognition with the marketplace or had launched a new office.

In summary, along with the visible personal characteristics of age, gender, and ethnicity, the introduction genre emphasized many other distinctions that mattered at Eserve including distinctions among consulting disciplines, consultants and enterprise employees, "old-timers" and "newcomers", high and low positions in the Eserve
hierarchy, geographical locations, people with different educational backgrounds, people with different years of experience in the consulting industry, "web experienced" and "new to the web space," people with "interesting" vs. "unremarkable" backgrounds, people who were "well-known outside" Eserve and those who were "unknown outside," and people who were "articulate" and "inarticulate." Importantly through the top management introduction at NHTP, Eservers learned that men with technical and business education founded the company, and that senior women joined later.

Expectations-Solicitation Genre
As part of the teaming exercise, the facilitator encouraged team members to say what they expected to achieve from working at Eserve, from the NHTP program, from a project, or even a single lecture in the expectations-solicitation genre. In the NHTP, aside from various "learning objectives" and "having fun" types of expectations, newcomers were asked to share their expectations of the work life at Eserve. Framed as motives for joining Eserve, these expectations were critical in understanding the symbolic significance of this genre in reproducing boundaries. Here are some examples from the NHTP program as they were recorded on paper for sharing with other classmates:

**Why joined Eserve (strategist):** I joined Eserve because I am excited about an opportunity to do marketing for the companies that are developing and transitioning business onto the web. The culture of the company, the emphasis on people, and the opportunity to learn and grow.

**Why joined Eserve (technologist):** Wanted to have more responsibility and to make a tangible difference created by applying internet technology. Eserve has clear cost savings for the clients for web solutions implemented. I would rather be working to create value than just be a coding resource. Technology cannot be practiced in a vacuum.

**Why joined Eserve (technologist):** ... In short Eserve is my dream job

**Why joined Eserve (design lead):** I joined Eserve to be able to work with strategists and technologists to build complete products and businesses. I grew frustrated being limited to the design aspect, especially when working on web projects, which seem to require tight integration between the three disciplines. Eserve seems to be a leader in getting these folks to work together.

Several mentioned that they joined Eserve because it was a company of their dreams based on Eserve’s "unique culture" of the cross-disciplinary approach, service delivery
with no hierarchy, and the opportunity to apply their individual skills to the web space. Nobody mentioned joining Eserve for compensation or promotion reasons.

On the project, each participant had to state their expectations from the team and for the project. Expectations for the team were to be "open," "sharing," and "fast moving." As one old-timer put it:

I do have an expectation for the team on asking a lot of question. I have a hypothesis. What makes someone successful here is opposite of the outside world. When you ask a question and say that you do not know that makes you accelerate so much more.

Expectations for the project were to have fun, to learn, and to deliver high quality (innovative, beautiful, well-designed, scalable, strategically important) work (web sites) and "exceed client's expectations."

In practice, the expectations-solicitation genre became a demonstration of individual compliance with Eserve values. For example, if a person really did not want to be on the project (which happened several times) and wanted to switch from it as soon as possible, this person would not dare say this during the expectations-solicitation genre enactment. Similarly, a good number of people that I talked to privately joined Eserve because of a significant salary increase, while others joined just to check the place out before making the next career move. However, the only "socially acceptable" variations in the expectations-solicitation genre were those that did not conflict with Eserve values such as expectations about the characteristics of the outcome, which varied among people from different disciplines (e.g., to build a beautiful site or a scalable site).

Norms-Setting Exercise Genre

Most of the time in the teaming exercise was spent in sharing working preferences and setting team norms. It was defined in NHTP as “a small group session in which teams establish norms for themselves.” Conducted as part of a facilitated meeting, it combined individuals speaking about preferences and team dialogue. The norm-setting exercise genre had the socially recognized purpose of learning about individual working styles and agreeing on which rules the team would follow. The norm-setting exercise genre was part of the "egalitarian" ideal at Eserve with the aim of respecting differences and finding common solutions. It was not the "manager" who set up the structure of the project and told others what to expect, but rather team members together came up with the structure
for their work. The norm-setting genre usually had two parts: 1) expression of individual working styles and preferences, and 2) discussion of group norms for working together.

The genre would start by sharing individual working styles, in later incarnations, translated into "The Herrmann Brain Dominance Instrument" (HBDI) profiles, which were similar to the popular Myers-Briggs test. The NHTP program introduced the HBDI profile test not long before the time of my study to help Eservers get to know each other better. All newer Eservers took the test, but some of the old-timers did not. The categorization and the theory behind the test as well as the "skills" that were associated with a given style were explained in NHTP. The test distinguished four categories that were categorized by a set of "thinking style" descriptors and associated skills. Briefly, HBDI descriptors distinguished people as "logical thinker" ("analytical skills"), "structural thinker" ("organizational skills"), "expressive thinker" ("interpersonal skills"), and "conceptual thinker" ("visual skills"). Each person was profiled according to the amount and relative weight of a given thinking style. The purpose of sharing the profiles was to learn how to better work and communicate with each other (different types were associated with different communication preferences). Along with the profiles, students learned a list of negative stereotypes associated with being a certain "type." Any profile silently emphasized what a given person "was not." So a "logical" and "conceptual" thinker with some skills to get organized under pressure was silently indicating that he was not "expressive." In addition, the theory behind the test indicated associations among typical thinking styles and different professional and gender groups, which were easily translatable into categories used at Eserve. For example, women were more "expressive" thinkers than men. Technologists were typically "logical" and sometimes "structural" thinkers. Strategists were "conceptual," "logical," and "structural" thinkers, while artists were very "conceptual." Eserve leaders typically possessed all the skill and especially the "interpersonal" skills associated with being "passionate" and "sensitive."

During the HBDI profile sharing genre enactment as part of the norm-setting exercise genre enactment there were often struggles around avoiding stereotypes. People would state their profile and immediately add a defensive statement to protect against stereotyping. One said, "Despite being a designer, I am very organized." Another said, "I am a technologist, but well balanced in all four categories." People from all discipline
groups emphasized their "expressive" ("interpersonal") characteristics in the personality profile, which were highly valued at Eserve. These interpersonal styles were especially characteristic of leadership (Account Manager and, especially, Project Manager). Eserve was a "people's" company and it was critical for the leaders to possess such qualities.

The personality profiles were followed by communication preferences. Differences in the communication preferences according to the group were also apparent: strategists and designers preferred oral interpersonal communication; technologists often promoted the use of technology for communication and emphasized their desire to be included in the decision making process. All three groups expressed preferences for "show and tell" communication style (i.e., to use visuals and explain). Next part of the norm-setting session, was to share "what's odd about me" or "my quirks." The aim was to accommodate variations in people's schedules and to make explicit any strange habits such as "chewing gum" or "being grouchy when hungry."

Another part of the enactment of the norm-setting exercise genre involved the establishment of rules that the team would follow. On projects such norms discussions took hours and included questions such as 1) what are "the core hours" when meetings can be set up; 2) what are restrictions on people's schedules due to travel; 3) how are team-members to be accessed (pagers, cell phones, email); 4) when will team meetings be held; 5) how will team members share documentation (shared file server, email, etc.); 6) what are the rules for communicating in email (e.g., headers like "FYI"); and 7) what are the rules for interrupting others ("use email, if you see me wearing headphones"). In addition, issues around how the service delivery model would be applied during the project were also discussed.

The norm-setting genre especially emphasized the differences in work schedules of individuals. Debates centered on people with families who wanted to return to their home cities on weekends or people attending night school. The discussion of schedules often meant that distinctions associated with the "commitment to the team" were revealed through people's willingness or not willingness to be flexible for the sake of the team.

The norm-setting exercise genre emphasized differences among individuals on the basis of individual willingness to openly share personal information, reproducing the distinction between Eserve and the rest of the world (including clients). During NHTP,
the instructor explained how the *norm-setting exercise* should be conducted with the clients to facilitate openness in the relationship. She also explained how in the projects in which she had participated, "norm-setting" was a completely new experience for clients and they had issues letting down their guard and sharing openly. In practice, even the "pretend clients" for the NHTP project, who were Eservers themselves, were not invited into the *norm-setting exercise session*.

In summary, the *norm-setting exercise* reiterated and deepened the distinctions among professional groups on the basis of their practices (expressed through personality profiles and communication styles). Sharing schedule preferences emphasized the distinctions based on restrictions posed by family life or evening schools. Willingness to make personal sacrifices to conform to team's schedule and communication norms demonstrated the individual's ability to be a "team player." Finally, having discussions about Eserve service delivery model and how it would structure the projects set apart Eserve "old-timers" from the "newcomers."

**The Post-mortem Review Genre**
The *post-mortem review* genre was the end-of-the-project counterpart to the teaming exercise genre. One old-timer said, "The purpose of the [post mortem] review is to achieve closure." Unlike the teaming genre, a person outside the team was asked to conduct the meeting to encourage openness in sharing feedback on the team. The exercise would start with an official task leader (Account Manager, Project Manager or R&D Group leader) talking about the "context" of the project (what happened). The exercise then involved reflections on such themes as:

- Adherence to Eserve Values and Culture
- Client Management
- Project/Scope Management
- Team Communication and Work Environments
- Staffing
- Sales Process and Business Development
- Assets, Tools, Techniques
- Effective Coaching and Knowledge Management
- Use of the Service delivery model
- Training, Skills, and Growth
Each person would then be asked to use post-it sticky notes to write as many positive and negative comments on each topic under the guideline of “no taboos as long as the objective is to improve team’s performance.”

While the idea behind the post mortem review was to share constructive criticism with each other and the rest of the organization afterwards, some enactments of the genre achieved that purpose and some did not. Some team members were not as active in posting comments as others. After one of the sessions, a facilitator commented, "I sensed that there was something that the team was not saying. Jane and John were very quiet." In addition, there usually was a good deal of criticism expressed towards clients, who were not there (so-called "client bashing").

The main distinction reproduced through the post mortem review genre was the distinction between those who were "open" and "sharing" and those who were "reserved" and "selfish." The hierarchical distinctions between "leaders" and "followers" were reproduced through the fact that leaders provided the background for the discussion and made first remarks about how the project had gone. The bullet points that guided the discussion highlight other distinctions that were reproduced: "committed to Eserve" vs. "indifferent," and "consultant" vs. "client." Through their comments and guidance on the process, “old-timers” were clearly distinguished from “newcomers.”

**Career Development Genre System**

Career development was a tricky issue at Eserve. With the emphasis on no hierarchies and an egalitarian rather than authoritarian approach, Eserve was working hard to invent new genres for career development. A complex genre system was developed with the purpose of facilitating employee growth (including skill growth and positional responsibilities) while adequately staffing client projects. There were four elements that distinguished the Eserve career development genre system: career mentoring, a multi-disciplinary growth profile, 360-degree project evaluations, and the staffing system. I will discuss each briefly.

First, each Eserver was given a career mentor. Unlike skill mentors in other organizations, who help their advisee build professional skills, career mentors at Eserve were usually “experienced” Eservers, who understood Eserve values well and helped their advisee “succeed at Eserve.” Career mentors served as intermediaries between the
office manager, who dealt with promotion and evaluation, and the advisee. They were responsible for their advisee’s growth evaluation. Every Eserv, without regard to their primary discipline, was evaluated based on his or her “growth” in each of the following competencies:

- Consulting Craft
- Client and Project Management
- Building Eserv
- Strategy
- Design
- Technology

In addition, to participating in the growth evaluation genre, mentors were also involved in the performance evaluation genre. The latter was a project-based evaluation genre, which involved post-project 360-degree evaluations written for each employee and by three other consultants on the project. These evaluations pertained to each individual’s contribution to the project (e.g., hard work and innovativeness) and their ability to work with others and with the client (e.g., commitment to the team). Evaluations would be rolled into the project appraisals for the employee written by the project manager.

Individuals’ ratings in growth and performance would influence the staffing genre system. Mentors would relate individual profiles and preferences for project assignments, especially around issues of travel, to the people involved in the staffing genre system. A key aspect of the staffing genre system was that employees through mentors and other liaisons (“office staffing consultant”) could “openly” provide input into their next assignment. This was facilitated by each employee having full access to the EED (Eserv Employee Database), which contained all project and employee information.

The enactment of the career development genre system produced and reproduced “Eserv’s values” and its contradictions. Access to EED and to the staffing process through fellow consultants, mentors, and staffing consultants reproduced the opposition between decision making that was “egalitarian,” “participatory,” and “merit-oriented” and that which was “authoritarian,” “autocratic,” and “politics-oriented.” However, because the system was based on consultants doing these duties as extra service to the company, the system reproduced such distinctions as “leaders” and “followers,” “old-timers” and “newcomers,” “committed to Eserv” and “indifferent,” “hard working” and “slacker.” The growth and evaluation genre system highlighted the distinctions between
"good consultants" and "poor consultants," "leaders" and "followers," and the three different disciplines. As a whole, it objectified the notion of the "Renaissance person"—an individual with a diverse background who can do anything. Finally, through the 360-degree evaluation genre, the "egalitarian," "participatory" ideal was reproduced once again. On the other hand, the final performance review written by the project manager for the project and judged by the office leadership reproduced the "leader" vs. "follower" distinction.

**Service Delivery Model Genre System**

The Eserve service delivery model genre system had at its core a three-phases of specific staffing and deliverables, which provided general guidelines for what had to be accomplished to build and deliver a web site and supporting services to the client, as well as the discipline-specific genres that fulfilled certain steps in building the site. The purpose of the service delivery model was to have "a repeatable, scalable, and efficient" model to guide Eserve client projects. At the same time, Eserve took great pains in underscoring that the service delivery model was a "flexible" guide with plenty of room left for "innovation" to happen. In addition, it was commonly acknowledged at Eserve that another purpose of the service delivery model was to sell business to clients on the basis of Eserve's experience of how to build web-based businesses.

The three phases of the model comprised: Plan (analyze market context to develop digital operating model, assess technical capabilities, and specify initiatives), Prototype (specify functional requirements, develop brand identity and the look-and-feel for the site, test and prototype technical solutions, market test), and Execute (code and test the system, (re)design support processes, develop communication plan) phases. This was sometimes followed by an Operate (ongoing site support) phase, which was offered through partnership with an outsourcing consulting firm. Each of the three core phases was sold separately to the client and it was possible for clients to do any of the phases without doing the others, as long as the clients could provide Eserve with the necessary information to start the next phase (e.g., the definition of the strategic initiative to pursue before to start the Prototype Phase). Eserve always wanted to get business for all three phases.
One of the critical things that the *service delivery model* specified was the involvement of different "roles" in each phase. The cross-disciplinary service delivery model had all disciplines involved in each phase of the project with their own types of deliverables. However, the number and seniority of people involved from each discipline varied, in what one NHTP instructor called a “wave fashion:” the Plan Phase was dominated by the strategy discipline, then design, and then technology; the Prototype Phase was dominated by the design phase with the strategy wave subsiding and the technology wave picking up; and the Execute phase was where the technology wave would rise, while design subsided, and the strategy wave was almost gone (illustrated in Fig. 4.1). In such a way, the Eserve service delivery model genre system emphasized the distinctions between the three disciplines by making the typical differentiation between people making the decisions about what artifact to build (strategists) and people building the artifact (designers and technologists). Although all three disciplines were involved in each phase, and there was much hands-on work done by strategists, the critical decisions about the site's functionality were assigned to strategists through their involvement in the Plan Phase. Also, the time allocation in the model highlighted that strategists were "fast moving," while the work of building sites (technologists' and designers') was "slow moving." A few strategists would then “guide” others until the project was completed.

**Figure 4.1: Eserve Service Delivery Model Phases**

<table>
<thead>
<tr>
<th>45-90 Days</th>
<th>90 Days</th>
<th>90-120+ Days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan</strong></td>
<td><strong>Prototype</strong></td>
<td><strong>Execute</strong></td>
</tr>
<tr>
<td>Strategy</td>
<td>Design</td>
<td>Technology</td>
</tr>
</tbody>
</table>

104
In addition to the discipline distinctions, the service delivery model genre system was one of the key ways of reproducing the opposition between newcomers and old-timers through the use of specialized terms and complicated diagrams. That is, the Eserve service delivery model used what Eserver's themselves called "consultant speak," i.e., special terminology that nobody but Eserve's old-timers understood. Such terminology as "perform digital diagnostic" or "analyze digital assets" was continuously interpreted in different ways by Eservers and by clients alike. As one old-timer put it, "It is impossible to teach the service delivery model, you have to experience it to understand it." Old-timers acted as guides for the service model throughout projects as others relied on them for instructions on what to do.

Finally, the service delivery model was critical in distinguishing consultants from clients. The fact that Eserve's Plan Phase had an official mission of building a digital business model and brand strategy for the client in 6-12 weeks based on a "flexible" guideline rather than a "rigid" methodology and to do the whole project in nine months with almost no time allocated for learning about the client's business highlighted that consultants set themselves apart as "sharp," "fast moving," "working long hours," and "independent" as opposed to "mediocre," "slow moving," "working 9-5," "dependent" clients. Also, a clear distinction between clients and consultants was visible in the fact that phases of the model had "project objectives" (e.g., "choose and clarify digital venture") stated separately from "Eserve objectives" (e.g., "earn trust, credibility, and loyalty with the client").

**Discipline Genre Repertoires**

The service delivery model genre system was composed of the genres from discipline genre repertoires. The strategy genre repertoire was the basis for much of the Plan Phase and had two parts—meeting planning and facilitated meetings (workshops). Many genres in the strategy repertoire were built on management consulting industry genres and included preparation of slide presentations and their delivery to clients in facilitated meetings. The specific genres that overlapped with the slide presentations and meetings included such MBA staples as competitive analysis, strategic initiative generation, market profiling, economic analysis, risk analysis, defining prioritization criteria, initiative prioritization, etc. All of these genres ("tools") were identified by their purpose,
expressed through their name in the NHTP class, and characterized by structured forms that included lists of things to consider in a given exercise or a structured description of a particular initiative. Many genres included the identification of multiple dimensions (for the phenomenon, initiative, or decision making) in a “framework” that would be used to structure spreadsheets, trees, maps, and scatter plots. This analysis was usually captured in Microsoft PowerPoint slides, Excel spreadsheets, and Word documents. In the Prototype and Execute stages, the strategy repertoire, which was now the primary domain of the functional analyst role, relied on Use Case Scenarios—a requirements analysis technique for specifying system functionality. A critical feature of most strategy genres was that they involved working closely with clients in many facilitated meetings with slide presentations. The analysis tools were based on generating multiple options and narrowing the list based on specific criteria.

The design genre repertoire at Eserve was built on genres from marketing, human interface design, and the digital arts industry. The brand development genre system involved a brainstorming meeting with clients, customer focus groups, customer surveys, analysis of competitor brands, and interaction with client marketing and communication departments around current brand collateral. Other genres in the design genre repertoire included various forms of usability testing, storyboarding, and design brief development. Most genres that were seen as part of the design discipline involved sharing multiple options (often dozens) of visual artifacts with others, getting feedback, changing and narrowing options.

Many designers complained that except for brand audit and audience segmentation, Eserve was not teaching the “design process,” but was rather underscoring the individually-based and “mysterious” creativity involved in producing the design. One senior designer commented:

So, after going through NHTP, non-design people might think (just like most people do believe) that there is no creative process. It just happens. It is all mystery. In fact, one can describe the creative process fairly well. ... The process starts with generation of many ideas. You then try out several ideas. Decide which ones are working or not. Abandon those that are not working or try others, and go deeper in development. Just like tree navigation.
What this senior designer did not mention, but what was apparent in practice, was that creating multiple options and iterating them many times was a very time-consuming process. Moreover, getting ideas for different options often involved designers exploring the outside environment (museums, design magazines, web sites) and "incubating." Design was a process with no definite end time. Yet, Eserve's service delivery model genre did not allow much time for design to evolve, leading to designers being frustrated with their work process. As one designer put it, "I hate the tyranny of urgency."

The main characteristic of the technology genre repertoire was that it was based on extremely specialized language. While the genre repertoires of all three disciplines used specialized language ("competitive analysis," "brand audit," "design brief," etc.), technical language was considered incomprehensible by most non-technical Eservers. New specialized terminology was entering the technical vocabulary all the time and keeping up with it was a distinction for technologists. The diagrams and maps created by technologists would have names like "Authentication Server," "Blue Tooth," "XML Server," "API," etc. After technical presentations at NHTP, I would hear people saying to each other:

**Designer:** I did not get any of that.
**Strategist:** Do not worry. I did not get any of that either and I have a technical background.

On other occasions, when technologists were presenting their work, they would take into account the audience's limited knowledge of their language, and would make brief general presentations without discussing any technical details and would apologize for any "jargon" that they used.

The genre repertoires of the disciplines established interesting distinctions among the three groups. Strategists were most "involved with clients" (especially client managers). Designers would occasionally get involved with clients, but were more "involved with users," while technologists were mostly involved with client technologists and, even that involvement depended heavily on the amount of technical work the client was doing. Strategists and technologists were associated with a "well-organized," "process-driven," "logical" approach to their work, while designers were associated with a "haphazard," "mysterious," and "intuitive" creative process. Designers' practices were clearly marked by "pursuing multiple options at a time" i.e., a much greater number of alternative
options that were created and shared with others for feedback. Strategists “pursued multiple options at a time and one option at a time” i.e., would generate multiple options, but would then narrow them down individually based on criteria agreed upon by the group. Technologists, on the other hand, “pursued one option at a time” i.e., would create their product (code or diagram) one option at a time, refine each through testing, and then share more finished product with other technologists for feedback and the next iteration. Finally, all three disciplines relied on professional language, but the designers’ work and strategist’s language could be understood through short explanations, whereas technologists’ work was produced in “obscure professional language,” that would take months or years to learn.

Leadership Committee Meeting

Although not clearly explained in the NHTP, leadership committees were the way Eserve was governed. In this genre, top Eserve managers would set up a series of meetings where executive decisions on governance issues were made. When I started my study, there were four or so such committees including committees on firm operations, strategy, personnel growth, etc. A notable feature of these committees was that they invited participants from across Eserve who were distinguished consultants, (i.e., usually old-timers who were doing a lot for the company growth through their volunteer commitments). In addition to standard committees, new strategic initiatives at Eserve warranted the creation of new committees. Participation in leadership committee meetings was both a sign of the “flat” Eserve organization and a distinction for Eservers.

One distinction of these meetings that was not, however, mentioned among Eservers was that since most top managers (9 out of 11) were male and since most old-timers were also men, some of these committees meetings did not include any women. These meetings were often held at off-site locations, and one such leadership committee meeting that I learned about took place in a "gentlemen's club."

Practices and Dispositions Summary

The analysis of Eserve genres reveals that by enacting Eserve institutionalized genres, Eservers were producing and reproducing a small set of distinctions that characterized key boundaries in the Eserve field and between Eserve and the rest of the social world.
One set of dispositions, summarized in Table 4.1, set Eserve apart as an institution (an agent in the field of power) from the rest of the social space, including clients. At the same time, within Eserve, it set the “Eserver old-timers” who embodied much of what Eserve valued, apart from the “Eserve newcomers” who did not yet do so. The table depicts a set of structurally homologous relative dichotomies, which typically do not hold true in absolute terms. So an “Eserver” (or “Eserve old-timer”) is not always “young.” It is in the opposition between Eserve and the outside social world that Eservers (or “Eserve old-timers”) are thought of as being younger, whereas outsiders are considered older. The boldfaced items in the table highlight those distinctions that were institutionalized as boundaries in other fields and could not be changed inside the Eserve field by one agent’s action: age, gender, professional background, family status, etc. Non-boldfaced items, however, are distinctions that label certain perceptions about individual behavior and preferences in the Eserve field (symbolic representations) that could with some (often very considerable) effort be changed by agents (e.g., a “plainly dressed” person can with some expenditure of time and money become “fashionably dressed”).
Table 4.1 Distinctions in Dispositions Eserve vs. Outside

<table>
<thead>
<tr>
<th>POSITIVE DISTINCTIONS</th>
<th>NEGATIVE DISTINCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eserve</td>
<td></td>
</tr>
<tr>
<td>young</td>
<td>(old)</td>
</tr>
<tr>
<td>web experienced</td>
<td>new to the web space</td>
</tr>
<tr>
<td>(No Masters Degree)</td>
<td>Masters Degree</td>
</tr>
<tr>
<td>technology / sciences education</td>
<td>social science / humanities education or design education</td>
</tr>
<tr>
<td>fast moving</td>
<td>(slow moving)</td>
</tr>
<tr>
<td>modern</td>
<td>traditional</td>
</tr>
<tr>
<td>innovative</td>
<td>conventional</td>
</tr>
<tr>
<td>high-tech</td>
<td>(low-tech)</td>
</tr>
<tr>
<td>eager to learn</td>
<td>(reluctant to learn)</td>
</tr>
<tr>
<td>fun</td>
<td>(boring)</td>
</tr>
<tr>
<td>interesting</td>
<td>(unremarkable)</td>
</tr>
<tr>
<td>outgoing</td>
<td>(reclusive)</td>
</tr>
<tr>
<td>fashionably dressed</td>
<td>(plainly dressed)</td>
</tr>
<tr>
<td>well designed</td>
<td>(utilitarian)</td>
</tr>
<tr>
<td>sharp</td>
<td>(mediocre)</td>
</tr>
<tr>
<td>thinking on your feet</td>
<td>(slow in analysis)</td>
</tr>
<tr>
<td>committed to Eserve</td>
<td>(indifferent)</td>
</tr>
<tr>
<td>flat organization</td>
<td>hierarchical organization</td>
</tr>
<tr>
<td>open</td>
<td>(reserved)</td>
</tr>
<tr>
<td>sharing</td>
<td>(selfish)</td>
</tr>
<tr>
<td>accessible</td>
<td>(inaccessible)</td>
</tr>
<tr>
<td>sensitive</td>
<td>(insensitive)</td>
</tr>
<tr>
<td>egalitarian</td>
<td>(authoritarian)</td>
</tr>
<tr>
<td>participatory</td>
<td>(autocratic)</td>
</tr>
<tr>
<td>merit-oriented</td>
<td>politics-oriented</td>
</tr>
<tr>
<td>flexible</td>
<td>rigid</td>
</tr>
<tr>
<td>passionate</td>
<td>(neutral)</td>
</tr>
<tr>
<td>Renaissance person</td>
<td>(narrowly focused)</td>
</tr>
<tr>
<td>team player</td>
<td>(individualist)</td>
</tr>
<tr>
<td>working collaboratively</td>
<td>working in solitude</td>
</tr>
<tr>
<td>unrestricted in schedule and travel</td>
<td>(restricted by family and school commitments)</td>
</tr>
<tr>
<td>willing to travel</td>
<td>(unwilling to travel)</td>
</tr>
<tr>
<td>working long hours</td>
<td>working 9-5</td>
</tr>
<tr>
<td>experienced in management consulting</td>
<td>inexperienced in management consulting</td>
</tr>
<tr>
<td>worked for the CEO's OldCo</td>
<td>(did not work for the CEO's OldCo)</td>
</tr>
<tr>
<td>good consultant</td>
<td>poor consultant</td>
</tr>
<tr>
<td>independent</td>
<td>(dependent)</td>
</tr>
<tr>
<td>leader</td>
<td>(follower)</td>
</tr>
<tr>
<td>working well under pressure</td>
<td>not coping well with pressure</td>
</tr>
<tr>
<td>articulate</td>
<td>(inarticulate)</td>
</tr>
<tr>
<td>well-organized</td>
<td>(haphazard)</td>
</tr>
<tr>
<td>logical</td>
<td>intuitive</td>
</tr>
<tr>
<td>good listener</td>
<td>(poor listener)</td>
</tr>
<tr>
<td>sophisticated</td>
<td>(simple)</td>
</tr>
</tbody>
</table>

Table Note: The use of parenthesis indicates that the label is based on my interpretation and was not habitually used in the field.
The second set of distinctions set apart different types of Eservers on the basis of their roles in wider professional communities, i.e., by their Eserve discipline. These distinctions are depicted in Table 4.2, which follows the same presentation format as Table 4.1. The reading of the table is as follows, for example: “relative to technologists and strategists, designers tended to be associated with a more ‘intuitive’ approach to problem solving, while technologists and strategists with a more ‘logical’ approach.”

**Table 4.2. Distinctions in Dispositions across Disciplines**

| STRATEGISTS || TECHNOLOGISTS || DESIGNERS ||
| HIGH STATUS || MID STATUS || LOW STATUS ||
| DECIISON MAKER || BUILDER || BUILDER ||
| social science / humanities education | technology / sciences education | design education |
| MBA | (no MBA) | (no MBA) |
| top-ranked school | (non-top-ranked school) | (non-top-ranked school) |
| experienced in management consulting | (new to management consulting) | (new to management consulting) |
| good consultant | poor consultant | poor consultant |
| leader | (follower) | (follower) |
| independent | dependent | dependent |
| involved with clients | (backstage role) | (backstage role) |
| articulate | (inarticulate) | (inarticulate) |
| understands web space | does not understand web space | does not understand web space |
| logical | logical | intuitive |
| quantitative | quantitative | qualitative |
| thinking on your feet | thinking on your feet | (slow in analysis) |
| well-organized | well-organized | (haphazard) |
| fast moving | (slow moving) | (slow moving) |
| (utilitarian) | (utilitarian) | well-designed |
| process-driven | process-driven | mysterious |
| working well under pressure | working well under pressure | not coping well with pressure |
| (client-centered approach) | (client-centered approach) | user-centered approach |
| working collaboratively | working in solitude | working in solitude |
| (pursues multiple options at a time and one option at a time) | (pursues one option at a time) | (pursues multiple options at a time) |
| oral and visual communication | email communication | visual and oral communication |
| (comprehensible professional language) | obscure professional language | (comprehensible professional language) |
| unknown outside | unknown outside | well-known outside |
| male and female | male | male and female |
| fashionably dressed | (plainly dressed) | fashionably dressed |

*Table Note:* The use of parenthesis indicates that the label is based on my interpretation and was not habitually used in the field.
According to Bourdieu’s practice theory, these distinctions are produced and reproduced (and possibly transformed) by agents based on their relative positions in the Eserve field. It is now time to analyze the distinctions in positions on the basis of objectified characteristics of agents in the Eserve field.

**The Structure of the Eserve Field**

As described in Chapter Two, in trying to understand the structure of a given field and arrive at those properties that are at stake in the field, one needs to compare agents to each other on the basis of as many objectified properties as are distinguishable in a qualitative understanding of the field.

These properties only function as capital, that is, as social *power* relation, in and through the field that constitutes them as stakes and instruments of struggle, rescuing them thereby from the meaninglessness and uselessness to which they would be just as necessarily doomed in another field or another state of the same field.” (Bourdieu 1996: 264)

The goal of such a comparison is to understand Eserve field structure with respect to another field. An analyst chooses which field to compare the given field to form an understanding of the phenomenon in question. Because the goal of my analysis is to understand how different boundaries associated with three different professional fields, Internet consulting field, Pubco’s academic publishing field, and domestic life field as well as other fields relate to Eserve, I chose to analyze Eserve field in comparison to the field of power (as opposed to, for example, management consulting field). Thus, the analysis should relate the capital produced by the Eserve field (Eserve capital) and the different forms of capital from the field of power. According to Bourdieu, the field of power can be understood through the relative amounts of economic vs. cultural capital possessed by agents. These two types of capital can be represented along one dimension because they are defined relationally with respect to each other and constitute a dichotomy in a given field. Thus, a field can be analyzed by showing how the unique capital that it produces (and agents accumulate in different proportions) relates to economic vs. cultural dimension in the field of power. These two dimensions comprise the structure of the field that can be used to place agents in relative positions to one another on a two-dimensional chart (Bourdieu 1996: 270). The difficult part of the analysis is to understand how different sub-species of the economic and cultural capital
(educational, gender-based, professional experience, etc.) map to these two dimensions and which become more salient in the given field. This analysis has to be undertaken inductively because agents in a given field relate different species of capital to the capital that they produce in a given field in different ways from agents in another field. The two-dimensional representational represents most adequately the sub-specie of capital that is most salient in a given field, while the relation of the other species of capital to the Eserv Capital will not be as accurately depicted. If a given form of capital is of particular importance in the analysis, it is possible to generate a separate chart that shows its relation to Eserv Capital and how agents are relatively positioned on its basis. Because I was not interested in understanding a specific form of capital better (e.g., gender-based capital), I did not conduct these separate analyses. Analyzing salience of different capital with respect to the two dimensions is equivalent to understanding the salience of different boundaries in a given field because agents are separated across boundaries on the basis of the relative accumulation of a given form of capital.

In my study, the mapping of boundaries was arrived at through various data reduction techniques such as the “table of pertinent properties” technique which is aimed at finding those properties that explain to the greatest extend possible variations among agents based on other properties (the properties used were based on Table 3.3). Looking at the dispositions that were associated with agents’ properties objectified in the field of power or in the Eserv field (boldfaced in Tables 4.1 and 4.2), the comparison of Eserv agents’ properties indicates that these dispositions could be grouped together on the basis of homologies (similarity in differences) operational in the Eserv field as follows:

1. “Decision makers”: ”Builders”|| “social science / humanities education” :
   “technology/sciences or design education” || “experienced in management consulting” : “inexperienced in management consulting” || “MBA” : “no MBA” || “top-ranked school” : “non-top-ranked school”
2. “Eserve old-timer”: “Eserve newcomer” || “web experienced” : “new to the web space” || “worked for the CEO’s OldCo” : “did not work for the CEO’s OldCo” || “technology/sciences education” : “social science/humanities education or design education”
3. “young” : ”old” || “no Masters degree” : “Masters degree”
4. “well known”: “unknown”
5. “male”: “female”
6. “restricted in mobility and work hours”: “unrestricted in mobility and work hours”

These groups were based on data analysis (not on a priori conceptions of the way a society is organized). The idea behind identifying the structure of the Eserve field is to understand which two of these six boundaries differentiate agents most significantly in the Eserve field. The two that are most salient define Eserve capital and the conversion rate of this capital into other forms of capital in the field of power.

The first grouping that was most prominent was predominantly associated with those boundaries that separated “decision makers” from “builders.” This boundary reflected agents’ status in the field of power: “decision-makers” in the larger society are associated with control over economic capital, i.e., over the instruments of reproduction, while “builders” in the larger society are associated with the control over instruments of production (invention), etc. (Bourdieu 1984; 1996). In the analysis of the Eserve field the group was distinguished by prior professional experience (status and experience in management consulting positions) and by the related academic credentials (capital in the academic field). Understood in such a way, the social status boundary was the reflection in the Eserve field of the agents’ positions (capital) in the field of power. In other words, it reflected what economic and professional (cultural) capital agents brought with them to Eserve.

The second grouping was the only one unique to the Eserve field because it differentiated who was the “Eserve old-timer” and who was the “Eserve newcomer”—the Eserve experience. This grouping reflected how the capital in the broader field (web development field and its sub-field “OldCo”) was converted into the Eserve field. In addition, it showed how the capital from the academic field was distributed among newcomers and old-timers at Eserve. The boundary was associated with the Eserve distinctions based on demonstrating knowledge of Eserve “culture” and practicing in line with Eserve “values.” The experience boundary was the boundary that defined Eserve capital—a capital uniquely produced by the Eserve field. While the status boundary reproduced distinctions in the broader society, the experience boundary set agents apart
based on their status in the Eserve field. It was this unique symbolic capital (i.e. a capital that only designated objectifications of other types of capital in a certain way) that Eservers termed “Eserve culture.” This capital was objectified originally by Eserve founders as a way for “builders” (technologists at the beginning) to free themselves from the domination of “decision makers” (corporate managers and builders). All the “egalitarian” ideals that this capital entailed were a form of rebellion against the “authoritarian” ideals that governed the larger society. Thus, it is not surprising that unlike typical management consulting firms, Eserve experience did not directly correlate with the social status in the field of power (MBAs, top-ranked school, etc.). When Eserve’s CEO said in the quote cited at the beginning of this chapter that Eserve culture was “easy to start, but hard to scale” he referred to the difficulty that Eserve experienced in not letting the larger social structures (the boundaries in the field of power) reshape the Eserve field structure with the influx of newcomers especially in top management positions. At the same time, Eserve needed to convert its “culture” capital into various forms of capital in the field of power to survive. The idea expressed in the CEO’s quote was that Eserve capital was a new type of cultural capital that allowed for a generation of new kinds of cultural goods (integrated web sites) that could be converted into economic profit.

With this understanding of the two main boundaries, let me now discuss how other boundaries that were prominent at Eserve relate to the two main boundaries. The age-based boundary was the third most prominent at Eserve. Eserve considered itself a “young” company and was setting itself apart from clients and from many systems integration and management-consulting competitors based on that boundary. Eserve founders were in their early 30s when they founded Eserve. So “young” age was a characteristic associated with Eserve founders and hence with “old-timers.” However, with time, the company recruited leadership with considerable management consulting experience in order to get legitimacy with investors, expand its social network, attract clients, and organize larger-scale operations. As a result, more recent company leadership, that is “decision makers,” was clearly older (35-45 years) than “builders” (25-35 years). Thus, age boundary was a boundary that was advantageous, when considered
with respect to Eserve experience, and disadvantageous, when considered with respect to Eserve status. Having a Masters degree played the same role.

The fourth boundary at Eserve was based on gender and had an interesting relation to other boundaries. On one hand, Eserve, like most companies in “its space,” was founded by men. Moreover, in its early years Eserve primarily provided technology services and, most technologists at Eserve were and continued to be men. Women at Eserve were relative “newcomers.” However, at the same time, Eserve was one of the few companies in its space to have any women in leadership positions and, especially, in top management positions. In addition, as my study progressed, Eserve hired and promoted more women into management positions including senior management. As a result, at the time of my study, there was not a significant gender difference between “decision maker” and “builder.”

Fifth, the boundary between people who were well known in their professional field outside Eserve and those who were relatively unknown became prominent at Eserve only recently. As Eserve grew, it started attracting some people who were well known in their fields, especially, in the design discipline. Many of these well-known people were older than average Eservers but otherwise did not conform to the image of Eserve “old-timer.” In essence, these people were “buying” their Eserve entrance through the recognition that they had in the outside professional communities and the benefits that such recognition brought to Eserve through Eserve’s participation in the overall social field.

The sixth, and last, important boundary was among people who were restricted in their travel and schedule and those who were not. Eserve’s history indicates that in the early days of Eserve as a start-up, which was not too long ago, people had to work night and day and wherever the work was. Some would relocate to another continent to start a new Eserve office and travel to US occasionally to visit their wives and kids. Over drinks, old-timers would tell stories of weeks without sleep to finish projects. Others would say how extra-long hours were “the dirty secret” of the consulting industry. With time, Eserve instituted some policies to limit consultants’ travel. This attracted a wider pool of workers, but little changed in practice to accommodate parents with working spouses (meaning that somebody had to be with kids at night) or people who were attending night
school. The restrictions in schedule and travel were new to the Eserve field and were associated with “newcomers.”

To summarize, the Eserve field structure was differentiating agents and their external capital as follows:


2. **Eserve Experience Boundary**: “old-timer”: “newcomer” || “web experienced” : “new to the web space” || “worked for the CEO’s OldCo” : “did not work for the CEO’s OldCo” || “social science/humanities education or technology/sciences education” : “design education” || “unknown” : “well known” || “male” : “female” || “unrestricted in schedule and travel” : “restricted by family or school commitments” || “young” : ”old.”

The analysis of qualitative data (specific to the time of my study) indicated that with respect to these boundaries “the decision maker” and the “old-timer” designated agents who were dominating in the Eserve field and who could convert this dominance into the field of power through economic rewards and participation in institutionalized practices such as project management, account management, etc. Tables 4.1 and 4.2 also show how agents’ dispositions reflected the key boundaries at Eserve with “Eserve old-timers” being associated with such dispositions as “committed to Eserve,” “understanding Eserve values,” “hard worker,” “team player,” etc. On the other hand, “decision makers” were associated with such dispositions as “articulate,” “logical,” “quantitative,” etc.

Now, with our understanding of the field structure, we can place the three discipline groups (aggregation of agents with similar distinctions) and groups designated by their organizational status into the Eserve field space. Strategists are clearly “decision makers” but they are a mixture of newcomers and old-timers. Technologists were “Eserve old-timers” who were also “builders,” while designers belong into the dominated quadrant of “newcomers,” who were “builders.” Not surprisingly, executive and top-level leaders fall into the dominant quadrant as “Eserve old-timers” and “decision makers.” Mid-level
managers, many of whom were strategists with significant management consulting backgrounds, fall into “Eserve newcomer” and “decision maker” quadrant, and lower-level employees are less Eserve experienced “builders.” The field structure and positions are captured in figure 4.2.

Figure 4.2: Structure of the Eserve Field

As a result of this understanding of both the boundaries within the Eserve field and the power distribution produced by this field, I can now address the research question of
which boundaries are more salient in practice at Eserve: those boundaries that are most closely associated with the status boundary and the Eserve experience boundary such as prior work experience, education, age, professional recognition, gender, and family status.

4.2 The Eserve R&D Group Field

Modern organizations have multiple units and it is possible, but not necessary, that a given organizational unit becomes a field in its own right. An organization unit would constitute a field if it had its own unique logic of practice and the structure of capital and its own stakes. These stakes while shaped by the larger organizational field would be different from and, probably, more attainable to the unit members than the stakes that the larger field offers. In addition, a sub-field must have institutionalized an “admission fee” so as to preclude outsiders from claiming its stakes. To see if that is the case, one needs to look at the practices of the unit members as they compare to the larger organization. This is the analysis that will be undertaken here for the R&D group within Eserve.

The R&D group at Eserve stood out from the rest of the organization in its function and composition. The integration of the disciplines had an interesting path in the history of the R&D group. Eserve’s first research group was created at the beginning of Summer 1998. This group was part of the design discipline and was called the Design Lab. It concentrated on research projects based on developing innovative user interfaces by using web-based, wireless, and other technologies. In October 1998, a Tech Center was created to do some advanced technology development for internal applications, such as Eshare, Eserve’s document sharing system. In May 1999, a research project on advancing the strategy discipline at Eserve was launched. In the Fall of 1999, it was decided to combine the three research groups into one R&D group under one Eserve VP, who had many years of management consulting experience, and who was a technologist by background and training. With the formation of the new group, people who had worked on the strategy project returned to the consulting field, and the R&D group became composed of technologists and user interface specialists. In addition, the Fall of 1999 brought an influx of newcomers into the group—primarily technologists, user interface specialists, or both. A new program manager, who had been a project manager in the
consulting practice, was made responsible for organizing the researchers. Interestingly, the group was a mix of people with graduate education (three in technology, two in design, two in psychology, one in communications) and without (two). Only one person in the group had a Ph.D. Two of the ten group members were women. The group was somewhat geographically distributed with eight group members residing at the location that used to be the Design Lab, and two group members residing in two other branch offices spread across the US. It turned out that those two remote group members were also the only "Eserve old-timers" in the group.

Majority of the R&D group’s members were located in custom-designed facility (former Design Lab location) within Eserve and, if nothing else, the space itself set the group apart as “special” within Eserve. Not only was the R&D space much nicer than the rest of Eserve space, but it also gave group members much more individual space. One person in the R&D group, who interfaced a lot with other consultants, noted in a group meeting, “People feel that we are an exception to the rule.” In the office tour genre, people would hear about the R&D group as an especially “creative” and “innovative” group of people engaging in generating tomorrow’s ideas and testing technology that was ahead of the times. In the interviewing cycle and later in the NHTP, people would hear that Eserve, although still young and small, was already investing in the future through the R&D group. While the exact role of the group was always in flux and was the center of many discussions inside the group, the group was clearly associated with “innovation.”

Here is an excerpt from my notes of an NHTP class tour to the R&D group:

**Question from a student:** Is this R&D for Eserve like PARC for Xerox and Bell Labs for Lucent?

**Answer:** I do not think it is the equivalent of these places. We are realistic as to what we can achieve with 10 people. Doing PARC "out there" stuff is more difficult. We are in between R&D organization and commercialization. Our role is changing. Clear message from the Leadership team is that we are outward facing, looking into the future. We are not necessarily doing research in laser-guided mice—this might be too much "out there." But what kind of interactions are possible among people if you have cell phones and you can communicate with computers 30ft from you, etc.

During the NHTP visit, people commented “cool” and “awesome” after each demonstration of what the R&D group was doing. People were told about opportunities
to do “a rotation” at the R&D group as part of their “rewarding careers” at Eserve. Both among consultants and inside the R&D group, there was a sense that working for the group was a privilege. One of the NHTP students noted after the visit:

This R&D group is the reason why I joined Eserve. They are “out there.” They are forward thinking.

In practice, in the nine months that I spent at Eserve, only one consultant with research background was given a short rotation opportunity at the R&D group while he was not “staffed” on a project. No other consultants were given an opportunity to do a rotation at the R&D group due to staffing demands from revenue generating client projects. It was quite evident that the R&D group had high barriers to entry, objectified primarily through academic and industry “research” credentials.

One of the important characteristics of the R&D group practice was that there was always a great deal of non-project-based activities associated with choosing projects, defining the direction for the group, participating in public relations and marketing, teaching in NHTP, etc. Thus, along with project-based genres that were enacted by consultants, the R&D group enacted many non-project based genres. Exactly which “communication strategy” to adopt inside and outside of the group was a large part of the group’s ongoing debate. The issue was so big for the group that it warranted a separate “communication strategy project” on the topic, which took six months and was still unfinished when I left the field. I will focus here on a few notable genres that were enacted widely while the debate on how to change them was going on.

One of the internal genres in the R&D group was an emergent genre that I will term using *self as user conversation* genre, during which R&D group members would use their own daily experiences as examples for potential web applications. It was typical for the people in the R&D space to start conversations about a work-related topic, for example, the use of new wireless technology, and then to switch to more personal topics such as their morning commute or shopping and the potentially useful application of wireless technology in these everyday experiences. Because most of the lab projects were about user interface design for B2C applications, R&D group members would constantly use their own user experiences appearing as their own clients and users through this genre enactment. While this genre may be typical in academic or artistic fields, I did not
observe this genre enacted broadly in Eserve outside the R&D team. One part of that was that consultants were so pressed for time that they simply did not have the opportunity to talk about non-work related issues. Secondly, the critical distinction between the R&D group and the consultants was that the R&D group had no specific clients. This conversational genre reproduced the distinction between people working for a client or a direct boss (consultants or enterprise people) and people pursuing broader and more open-ended agendas (researchers), who were free to lead non-work related conversations during their working time because such conversations could spark their creativity and lead to good research ideas. The accountability to Eserve management was secondary to the satisfaction of researchers' own intellectual curiosity. Because this genre relied on R&D group members' non-work experiences, it was especially important for R&D group members to be and remain "interesting people," so that they could draw on their non-work life for research ideas. In the introduction genre, many R&D group members would say that their main interest was to be around "interesting people." On the other hand, many consultants, whose schedule on projects would consume days and nights, would be hard pressed to come up with interesting outside experiences on a day-to-day basis.

Another aspect of the conversational genre at the R&D group was referring to ECS, an Elite Coastal School, with which one half of the group members were associated through their educational or other experiences. There was lots of talk about what was going on at ECS, referring to famous people at ECS, and drawing examples from intimate knowledge of the way ECS runs. As one person who felt excluded from such conversations noted, "The group has the ECS culture and I am not part of it." Many conversations were about how the R&D group should run more like ECS to attain the same fame.

Related to pursuing researchers' agendas and having interesting experiences were R&D group members' conference travels. In the conference reporting genre system some research group members would travel to conferences and industry shows to listen to talks and report on the findings and then would write reports for the rest of Eservers and post them in Eshare. In contrast, I often found consultants struggling to find the time to attend training classes that were offered at Eserve (e.g., "Advanced Presentation Skills"). In a similar vein to conference travel, R&D group members would regularly (often weekly) have external meetings with people outside the organization at research universities

122
(often ECS) and with their prominent friends. On any given day, there typically would be no more than four (out of eight local) group members in the R&D space with one of them being the program manager. The R&D group director, who had other leadership duties at Eserve and a great number of outside connections, was rarely in the R&D space.

One of the most frequently enacted genres at the R&D group was giving a demonstration. Producing demonstrations was part of the R&D group mission statement:

Develop applications, prototypes, demonstrations that point in the direction where our clients will most likely go, that show how people will work, shop, interact.

The demonstration genre, well familiar to people in technology research lab settings, was one of the few tangible outcomes (material capital) of the R&D group work. Every finished research project at the R&D group was expected to result in a demonstration that was based either on a physical prototype of the new application and/or on a “virtual prototype”—a Day In the Life Of (DILO) scenario of a potential application. A demonstration would involve a presentation in the R&D lab that was based on posters on the walls, on computer-based slides, or on computer-based animations. All demonstrations were prepared with the help of graphic designers and wcrc carefully fitted into the “well-designed” R&D space. After the initial technological or interface design idea had been developed on a project, it usually took the group a long time (one month on a three month project) to prepare a well-designed demonstration. In response to the Eserve leadership’s push towards the R&D group “showing tangible value,” various demonstrations as well as papers and presentations associated with them were called “assets” and catalogued in the Eshare system like consulting deliverables (a form ofintellectual capital).

Demonstrations were given to NHTP students as well as to outside visitors—potential clients, press, professional organizations, investors, etc. In the demonstration genre, one of the research group members would show one or several demonstrations to visitors. There were R&D group members who were good at giving the demonstrations and teaching in the NHTP program. Most of the demonstrations were based on projects produced by the Design Lab and were situated in the Design Lab space (now the R&D group space), so it was the Design Lab people who knew what was behind the project and would be most qualified to give the demonstration. In addition, however, those who were
most often asked to give a demonstration were “articulate” people with management consulting or similar client-based business experience—just like “strategists” in Eservé. Several times when they were not available to give the demonstration, I would observe their substitutes who knew the work intimately wondering around, giving extraneous amount of details about the project, and, in short, boring many visitors despite the initial excitement about the demonstration. One consultant listening to such a presentation sighed to another, “I have no idea what he is doing. I am so tired.” Just like the rest of Eservé, the demonstration genre set apart “decision makers” (the dominant pole of the Eservé field status dimension in Figure 4.2) with management consulting or similar backgrounds, who were articulate and well organized in their presentations from “builders” (the dominated pole of the Eservé field status dimension in Figure 4.2).

The distinction between “decision makers” and “builders” at the R&D group was produced and reproduced through a variety of meeting genres enacted at the R&D group. The R&D group changed its meeting structure several times during the nine months of my study, but among the meeting genres that were recognized by the group members were the weekly status meeting, the project team meeting, the project leads meeting, and the monthly off-site meeting genres. A variety of meeting genres in the R&D repertoire revealed what several R&D “builders” called “too much hierarchy.” Starting in February 2000, work in the R&D group was classified into three themes or projects. Each project was lead by a “decision maker,” a person with more business management experience than other team members. In fact, the R&D group originally came up with just two projects, but a third project was added so that all “senior” group members had something to lead. Project leaders would conduct weekly meetings with their teams of about three people (two projects also used subcontractors) to get an update on work status and set directions for the projects. In the project leads' meeting the three leads discussed important issues and received updates from the R&D group director and the program manager on what has been going in the rest of the organization. Finally, the weekly status meeting was to be attended by all R&D group members and involved an agenda that was set up by the program manager. Others were supposed to channel their issues to the program manager to put on the agenda preferably before the meeting. During the meeting, information from the leads' meeting was communicated to the rest of the R&D
group. Typically, summary notes of the weekly meeting were posted by the program manager in the R&D group space within Eshare. The monthly offsite meetings took place either at a local university or at various Eserve offices. In the latter case, they were combined with "roadshow" presentations of demonstrations to consultants, which also solicited feedback and ideas from them.

An analysis of weekly meeting transcripts reveals that status distinctions were reproduced very strongly through the meeting genre. The meeting genre consisted of several forms of utterances: questions on a new topic ("How is your project doing?"); clarification questions on something that had been said ("When is the leadership team meeting?"); directives ("We need to do a presentation to the client next week.") action proposal ("Let's have this ready by Thursday"), process proposals ("Let's specify criteria and then rank order the list"), requests ("I need two more days to get this done"), and announcements ("I will be on vacation next week"). The status meetings would start with the program manager "driving through the agenda" asking questions on agenda topics and deadlines. This would be followed by the R&D group director (who was on the phone most of the time) reporting on updates from the leadership team. Many updates would be reported as directives from the leadership team to the R&D group. The program manager would give updates in the form of directives about staffing and budgets. In addition, for each issue that was on the agenda, the R&D group director would typically make a proposal or give a directive for its resolution. Almost never would his proposals get seriously challenged. Sometimes group members would ask clarification questions or express concerns, but the definitive answer that the R&D group director would give them would often end the argument. If the discussion of an issue continued through more than three or four utterances without a resolution or if the issue appeared challenging right away, one of the two female team members would often make a process proposal. These proposals, while not direct issue resolutions, were stated in a definitive form ("Let everybody come up with a list of projects. Then we will decide on criteria and rank them"). They were almost never challenged. The other two "decision makers" who were more involved in "building" did not ask questions or make proposals, but were primarily engaged in replying or asking for clarification. All five "decision makers" made various announcements typically demonstrating their connection to the leadership at Eserve (their
economic and social capital) or outside professional communities (their cultural and social). One of the patterns reproduced over and over in the meeting was that “decision makers” pushed “builders” to deliver outcomes faster and to meet various deadlines, while “builders” would defend themselves with arguments for why things could not be done faster—a typical tension between economic and cultural capital holders. The three team members previously with the consulting practice, would often propose “to do things the Eserve way,” referring to the need to set up a “democratic,” “open,” and “egalitarian” decision process and to involve the consultants in it.

Finally, in almost all meetings, the R&D group director would use harsh language and profanities as well as other male distinctions. Here is an interaction excerpt from a meeting of the R&D group:

Joseph [facilitator]: You are tough crowd. Now I see why Ann is leaving.
Susan: This is also a male crowd (to Davis)
Davis: I guess.
Susan: With Julius [the group director] around it is even more so.
Davis: He was very enthusiastic about hiring you.
Susan: Well.
Davis: Though he is all testosterone.
Julius: Good morning, Gentlemen.
Susan: See what I mean.

It is evident, the distinction between “male” and “female” group members was very prominent in the R&D group.

Appendix D summarizes how agents’ enactment of R&D group genres produced and reproduced distinctions at the R&D group. Table 4.3 shows the homologies among distinctions inside the R&D group. Analyzing how properties were distributed among agents (using the “table of pertinent properties approach”) one can conclude that the main distinction between “builders” and “decision makers” was not only reproduced but also made much more prominent at the R&D group with the top “decision maker,” the R&D group director, being opposed to other “decision makers” and “builders.” This is especially notable given the fact that the group considered itself a research group. Moreover, just like the rest of the Eserve, the distinction between “builders” and “decision makers” was also associated with the amount of management consulting or equivalent management experience and with Social Sciences/Humanities and Technology/Sciences education. However, unlike Eserve, it was not associated with
having an MBA or having attended a top-ranked school because none of the group members had an MBA and all were from top-ranked schools.

Table 4.3 Distinctions in dispositions inside R&D Group

<table>
<thead>
<tr>
<th>HIGH EVERSE STATUS</th>
<th>MIDDLE EVERSE STATUS</th>
<th>LOW EVERSE STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>experienced in management consulting</td>
<td>experienced in management consulting</td>
<td>inexperienced in management consulting</td>
</tr>
<tr>
<td>Eserve executive leadership</td>
<td>Eserve management</td>
<td>Eserve regular employee</td>
</tr>
<tr>
<td>leader</td>
<td>leader</td>
<td>follower</td>
</tr>
<tr>
<td>articulate</td>
<td>articulate</td>
<td>(inarticulate)</td>
</tr>
<tr>
<td>meet deadlines</td>
<td>meet deadlines</td>
<td>(extend deadlines)</td>
</tr>
<tr>
<td>ask questions</td>
<td>ask questions</td>
<td>respond to questions</td>
</tr>
<tr>
<td>fast moving</td>
<td>fast moving</td>
<td>(slow moving)</td>
</tr>
<tr>
<td>facing outside of the group</td>
<td>facing outside the group</td>
<td>facing inside the group</td>
</tr>
<tr>
<td>social sciences/humanities or technology/sciences education</td>
<td>social sciences/humanities or technology/sciences education</td>
<td>design education or technology/sciences education</td>
</tr>
<tr>
<td>Design Lab location</td>
<td>Design Lab location and remote location</td>
<td>Design Lab location and remote location</td>
</tr>
<tr>
<td>male</td>
<td>female and male</td>
<td>male</td>
</tr>
<tr>
<td>resolve issues</td>
<td>define resolution process</td>
<td>(follow resolutions)</td>
</tr>
<tr>
<td>(gender improper language)</td>
<td>(gender proper language)</td>
<td>(gender proper language)</td>
</tr>
</tbody>
</table>

At the same time, a great number of distinctions produced and reproduced through the R&D group genres set the R&D group apart from the consulting field as “well known,” “privileged,” “interesting,” “pursuing open-ended agenda,” “educating others,” especially “innovative,” and “resource unconstrained.” The homologies among these distinctions are captured in Table 4.4. While those group members who had previously worked on Eserve consulting projects (five people, of which two old-timers were remotely located) pushed for the group to be more like the rest of Eserve, in its practices the group reversed Eserve’s experience-based dispositions, i.e., those dispositions that set "old-timers" from "newcomers" in the Eserve field. One of the key dispositions associated with the distinction between “team player” and “individualist” was reversed in the R&D group practices. As many people put it in interviews, “the group never gelled” or “we had a bunch of egos to deal with.” This "bunch of egos" and the desire to get external recognition translated into each R&D group member trying to “lead” something. Even those R&D group members who were working under somebody’s leadership on a given project, attempted to carve out side projects for themselves to lead. Out of five “builders” in the R&D group, one got himself involved in a major corporate project, another “led” the relationship with ECS, another started leading various efforts at his local Eserve.
branch, and another was developing a business venture. The reversal of experience-based distinction was privileging "well-known" and "newcomer" over "unknown" and "old-timer" and brought together most of the dispositions in Table 4.4. While in general, most R&D group members had ties and were recognized in some outside communities, some were clearly more prominent than others and produced and reproduced this distinction through their practices, for example, speaking engagements.

**Table 4.4 Distinctions: R&D Group vs. Consultants**

<table>
<thead>
<tr>
<th>R&amp;D GROUP ACADEMICALLY RECOGNIZED</th>
<th>ESERVE CONSULTANT ACADEMICALLY NOT RECOGNIZED</th>
</tr>
</thead>
<tbody>
<tr>
<td>well-known outside</td>
<td>(unknown outside)</td>
</tr>
<tr>
<td>ECS</td>
<td>(non-ECS)</td>
</tr>
<tr>
<td>interesting</td>
<td>(unremarkable)</td>
</tr>
<tr>
<td>well connected</td>
<td>(limited network)</td>
</tr>
<tr>
<td>pursuing an open-ended agenda</td>
<td>working for a client/boss</td>
</tr>
<tr>
<td>privileged</td>
<td>(not privileged)</td>
</tr>
<tr>
<td>special space</td>
<td>regular space</td>
</tr>
<tr>
<td>resource unconstrained</td>
<td>(resource constrained)</td>
</tr>
<tr>
<td>flexible in location</td>
<td>(tied to an office)</td>
</tr>
<tr>
<td>research</td>
<td>Industry</td>
</tr>
<tr>
<td>educator</td>
<td>Student</td>
</tr>
<tr>
<td>big idea</td>
<td>detailed implementation</td>
</tr>
<tr>
<td>intangible value</td>
<td>tangible value</td>
</tr>
<tr>
<td><strong>Eserve newcomer</strong></td>
<td><strong>Eserve old-timer</strong></td>
</tr>
<tr>
<td>hierarchical organization</td>
<td>flat organization</td>
</tr>
<tr>
<td>(individualist)</td>
<td>team player</td>
</tr>
<tr>
<td>accountable to oneself</td>
<td>accountable to the team</td>
</tr>
<tr>
<td><strong>Design Lab</strong></td>
<td><strong>new to the group</strong></td>
</tr>
<tr>
<td><strong>Eserve designer</strong></td>
<td><strong>Eserve strategists or Eserve technologists</strong></td>
</tr>
<tr>
<td>design education or technology/sciences education</td>
<td>social sciences /humanities or technology/sciences education</td>
</tr>
<tr>
<td>slow moving</td>
<td>fast moving</td>
</tr>
<tr>
<td>marketing</td>
<td>service delivery</td>
</tr>
<tr>
<td>user-centered</td>
<td>client-centered</td>
</tr>
<tr>
<td>well designed</td>
<td>(utilitarian)</td>
</tr>
</tbody>
</table>

I will now examine why the R&D group members reversed the logic of the Eserve field and what the implications of this were. It is easy to note that most of the local R&D group members belonged to the "design" discipline (five out of eight local members). In the Eserve field at large, the "well known" distinction was associated with the design discipline. In addition, none of the local group members were old-timers. Only one of the group members was a strategist and none had MBAs. Hence, if lower status members of the R&D group engaged in attaining stakes in the Eserve field directly without forming their own field, they would have fallen into the dominated quadrant where the design
discipline was positioned (see upper right quadrant as indicated in Figure 4.2). By forming their own sub-field with its own logic and "research" or "academic" capital, the R&D group members isolated themselves from the demands of competition in the consulting practice in which they had less ability and interest in succeeding. Instead, they were participating in the research field at large (the capital of which was converted into the "well known" distinction), which they then struggled to get recognized as valid in the Eserve field (as I will describe in Chapter Five).

The R&D group members at Eserve adopted a logic that was homologous to the logic of practice of researchers (designers and intellectuals) in the larger social field. The separation of artistic and intellectual fields from the economic field to establish their autonomy is a major hallmark of the past several hundred years of western society (Bourdieu and Wacquant 1992: 109-110). This semi-autonomous sub-field counteracted Eserve's logic allowing R&D group members to engage in accumulating capital that was attainable to them as "non-MBA" intellectuals and designers with limited management consulting backgrounds. As one of the consultants who observed an R&D group meeting noted about R&D group practices, "this would not last a day in the [consulting] field."

The reversal of the experience-based distinction had major implications for the functioning of the R&D group. While the experience boundary at Eserve encouraged Eserver to build Eserve and commit to it with the promise of becoming old-timers and attaining the rewards of the dominating dimension, the reversal of that distinction meant that R&D group members were not interested in the stakes offered by the Eserve field at large, and were instead engaged in attaining stakes in the larger professional communities that could increase their outside fame. This resulted in what by everybody's admission became a group "disconnected" from the rest of Eserve.

Because R&D group field reversed some of the distinctions at Eserve, it had to be analyzed with respect to the field of power and not only with respect to the Eserve field. Figure 4.3 depicts the structure and boundaries produced and reproduced by agents in the R&D group field.
Figure 4.3: Structure of the R&D Group Field

The two dimensions in the table represent the most relevant boundaries in the R&D Group: one inherited from the academic research field ("WellKnown" vs. "Unknown") and one inherited from the field of power (Economic vs. Cultural capital).

Point labels are based on Tables 3.3 and 3.4.

Other boundaries relevant to the R&D field are represented with respect to the two main boundaries. For example, agents distinguished by being "Female" were opposed to agents who were "Male" primarily according to their "Relative Status in Society." That is, these agents were separated by the "Relative Status in Society" boundary and not by the "Academic Recognition" boundary. On the other hand, the table cannot be read to say that "Male" had "TechSci" education despite the two points being closely collocated. The purpose of the table is to display how different distinctions relate to the two main boundaries and not to each other.

Underlined items indicate distinctions institutionalized at Eserve to designate various social groups. Thus "DesignLabMember" was opposed to those "New-in-Group" according to their "Academic Recognition" and according to their "Relative Status in Society."

Most of the other Eserve distinctions, such as age and travel restrictions, did not play a major role in the R&D group. However, the gender distinction certainly became salient in the R&D genres. R&D had only two women out of ten group members, one of whom was a well-known newcomer and the other was a relatively unknown old-timer. Both of these women had managerial roles in the group due to their extensive managerial experiences. Yet, just like in Eserve, the R&D head and the person with the highest positional
authority was a male. This translated into an interesting set of practices. To strengthen their authority, the two women drew on a powerful genre element of defining the resolution process, i.e., they typically defined which genres would be used to arrive at a decision. They halted an open discussion in the R&D group and in that way reproduced their "decision making" roles, but they also gained popularity with "builders" by differentiating themselves from the male leader who was giving directives (a more direct form of domination). In turn, the male leader was using improper language to strengthen his position by associating with the other males in the group, which turned out to be less than helpful as it alienated some of the men.

4.3 The Pubco Field

Pubco was an old US publishing company. It was a traditional multi-divisional organization and Eserve was working for its Academic Publishing (AP) division. I conducted 20 interviews at Pubco, but as noted earlier, I did not observe Pubco as much as I observed Eserve. However, unlike the web consulting industry, the publishing industry is well-established and many genres and distinctions within it are standardized, well-known, and documented in books (Korda 1999; Epstein 2001). I also interviewed a graduate of a six-week long publishing training program that is one of the gateways for entry to the publishing profession, and reviewed the program materials. This additional information confirmed my data from interviews and books on publishing.

Pubco AP like most publishing companies has strong departmental distinctions between the book producers ("Editorial" and "Production" functions) and book sellers ("Sales" and "Marketing" functions). Editorial communicative practices included building relationships with authors and literary agents through formal and informal networks, calling on them, reading manuscripts and replying to submissions. Once manuscripts were accepted, editors worked with the authors on revising the manuscripts and submitting them to copy editing. In meetings with Eserve, Pubco’s participants emphasized that revisions, academic reviews, and rewrites of manuscripts were especially important in Academic Publishing as many academics “did not write well.” Typically 13% of book costs went into development costs. In addition, editorial activities usually included finding and supervising artists who designed the book and working with the
Production department on the book's schedule and costs. It usually took five to seven years for the first edition of a new book to hit the market. One of the major genres in the Production department was creating, overseeing, and managing multiple-year book project schedules and the associated costs. It is the job of the Editorial department to be in touch with the authors and keep them happy over the years. In addition, at Pubco's AP division, the Production department oversaw the design group and both were supporting the Editorial function. As an Eserve strategist put it, "Pubco is a process-driven product management firm."

As in most other large publishing companies, two other major departments at Pubco AP were Sales and Marketing. Marketing people got involved in the process early on in a "forecasting" role, trying to predict if the book would make money. At this point, there might be a debate between Editorial and Marketing people on whether the book was worth signing up. Only two or three of the ten books that were signed up would ever make it to the market. Most Marketing departments, and especially those in Academic Publishing, worked on seasonal cycles producing new book "lists" in Spring, Summer, and Fall. New books became part of the publisher's "catalogue," which involved working with graphic designers and copy editors. Marketing and promotion departments promoted the books at various educational and academic conferences and found reviewers for the books. The Sales' function major genre was the "Sales Conference," a biannual meeting of all sales representations and sales and marketing departments responsible for selling the books to bookstores and end customers.

The Sales function in the Academic Publishing industry was quite different from the rest of the publishing industry because the person paying for the book was the student, but the person with the most influence on the buying decision was the instructor. The books were sold through geographically organized sales representatives making contacts with instructors, providing them with a complementary evaluation copy of the book, and other information that would help them assign the book to students. Sales forces would also work with bookstores to order books for courses. In addition, at Pubco there was a telephone sales force reaching out to smaller colleges that were not covered by field sales representatives.
In addition to these primary functions (or departments), many Academic Publishers also recently started producing and selling technological and other media products such as software, CD-ROMs, automated test engines, etc. that went with the books. As a result, Pubco AP also had a Technology department and a Customer Service group, which supported such technological products. This was in addition to the IT function, which was typically located within the Finance department.

Much like the Eserve field, the first most prominent boundary of the Pubco field was also the social status boundary, but the different types of capital that were associated with it were represented differently at Pubco. Pubco field distinguished economic vs. cultural distribution of capital with cultural producers (book authors) being on one end of the continuum and economic producers (book sellers) being on the other end, with the Editorial department being closer to authors and the Sales department being closer to book sellers. Technology departments were in between those two poles, while Finance and IT were more closely aligned with the Sales function.

To understand the second dimension of the Pubco-valued capital, we can look at the hiring and promotion genres in the publishing industry. Most workers in the book publishing profession were majors in English or other Humanities subjects. They often started young, right after college and devoted their whole careers to the publishing industry. People without a publishing background, independent of age or graduate degrees, were typically hired only at entry-level "Editorial Assistant" or "Marketing Assistant" positions. Their promotion was a function of performance on completed projects (book production), which took years. Among publishing people it was well known that business and editorial success depended for the most part on developing a strong social network, which took time. Since the industry was not growing very rapidly, a person was promoted when a position opened up, and that was not very often. While there was some movement among departments for the junior personnel, there was little of that later on. Two of the people involved in my study had both significant editorial and sales backgrounds. In general, people who got to management positions were in their 40s. Top managers for the most part were in their 50s or older. It is also well known that most of the people in the publishing profession in 2000 were women and it was well known that most people in the publishing profession did not earn much money. The starting
salary for an entry-level position were among the lowest for college graduates (as opposed to Eservers for whom salary levels were among the highest—at least twice as much for an entry-level position as Pubco’s). In Publishing, salaries did not grow fast, although executive management compensation was on a level with most other industries. The gender mix at the executive level was also quite different from that among line employees, with men still prevailing in large publishing companies, although the proportion of women in senior non-executive positions was much larger (about 30-40%) than in the consulting business. Finally, the finance and IT hiring and promotion genres were quite different from the other departments and were much more in line with the finance and IT functions in other industries. I did find, however, that at Pubco, even Finance and IT people had undergraduate educations in the humanities, but had then acquired technical or business educations. The situation was also quite different in the technological divisions of publishing companies where younger people had moved up the corporate ladder much faster. This was so because AP companies were investing heavily in technology and the technology industry had developed differently from publishing with many top level managers being relatively young compared to Publishing. Publishing companies wanted to attract top talent and were willing to promote technologists. Thus, the second dimension of the Pubco AP field was experience much like Eserve, with old-timers in the publishing industry dominating newcomers. The scales of “experience” distinctions were quite different when comparing the centuries-old publishing industry with the years-old web-development industry. These created some tension inside Pubco, where young technologists took on top leadership positions, and as the relationship with Eserve intensified.

Publishers often called themselves "the book people," and, despite being set in an economic firm, many people in publishing companies, even those in sales and marketing, associated themselves with intellectuals and cultural producers. Here is an excerpt from one of the popular books on the publishing industry:

Trade book publishing is by nature a cottage industry, decentralized, improvisational, personal; best performed by small groups of like-minded people, devoted to their craft, jealous of their autonomy, sensitive to the needs of writers and to the diverse interests of readers. If money were their primary goal, these people would probably have chosen other careers. ... Most publishers and editors I have known prefer to think of themselves as
I do, as devotees of a craft whose reward is the work itself and not its cash value (Epstein 2001: Ch1).

Academic publishing was even further along the economic vs. cultural production continuum as this business was considered to be less profitable in the publishing industry. Members of Pubco's AP considered themselves to be especially dedicated to the intellectual and pedagogical value of their products. Pubco's editors were building ties to the educational community and were offering many seminars for instructors that were not necessarily tied to the bottom line. Pubco's AP was headed by a person with an editorial background. Thus, with respect to the social status boundary, it is not possible to say that economic producers (sales and marketing and finance) were dominating cultural producers (editors and designers). If anything, in Pubco's AP case, the cultural producers were more privileged.

Working with consultants was often perceived as a necessary evil at Pubco AP. However, Pubco hired a lot of consultants in technical areas to supplement Pubco's staff at the time of expanded development. In these cases, Pubco treated consultants as people who were paid to do a specific task. Talking about Pubco AP's relationships with consulting firms, Pubco's top managers joked about their bad experiences with arrogant consultants who were paid too much with just a few exceptions.

Figure 4.4 summarizes the major distinctions in the Pubco's AP field. From this point on, I will use "Pubco" to refer to the Pubco's Academic Publishing division.

4.4 Pubco Project as an Emergent Cross-boundary Field

Pubco had a web presence for several years before contracting with Eserve. It started putting up various web sites in 1995 at the request of editors who wanted to support their books through web content. Fairly soon, a "companion web site," a site that accompanies a book with some additional content such as tests, presentation slides, or links to items mentioned in the book, became a standard offering for most educational publishers. In addition, Pubco's editorial and marketing departments had put up sites that addressed academic communities of different disciplines by providing extra resources to educators.
The marketing department had put up a text-based version of the catalogue online as well as other minor marketing material. Pubco’s sales department asked for an online bookstore to be put up. There were also web pages for customer service for technology products. For five years after Pubco had entered the web space, the several hundred pages on its web site had been growing ad-hoc through responses to editorial demands without
an overarching business strategy or brand development. Since Editorial Departments were run independently and were the main business producers in the company, it was quite difficult to achieve coordination across them. The marketing department, on the other hand, was getting increasingly frustrated with the amount of inconsistencies in brand representation across the uncoordinated web site, especially because some of Pubco’s competitors had a much more integrated web offering.

At the same time as the web wilderness was growing, Pubco was experiencing business pressures on its bottom line and was concerned with improving its sales efforts. Pubco’s sales force was not as large as some of its competitors and it had a hard time reaching a wider audience of instructors. In 1998, it hired a strategic marketing consulting firm to help deal with that problem. The consulting firm interviewed Pubco’s management and did market surveys to conclude that Pubco should increase its customer reach by using alternatives to direct sales force such as telephone, email, and web sites. In addition, generation X students, unlike their parents, needed some extra convincing to buy the books recommended by course instructors and only about 60% of students were doing so. This meant that Pubco had to find a way to reach students—an audience that was largely ignored in the marketing efforts of academic publishers.

By Fall 1999, Pubco’s top management—under pressure from the sales and marketing departments—concluded that several problems could be addressed through an integrated web site offering that would target a wide audience of professors, improve Pubco’s brand, attract a student audience, improve customer service, and open new business opportunities for selling Pubco’s products. In Fall 1999, B2C web sites were still the talk of the town and there was both a sense of necessity due to competitive pressures and a sense of an emerging opportunity to put up a "good" web site quickly. In the words of Pubco’s CEO, there was a sense that Pubco “has hit a web wall” and needed to do something fast.

One decision Pubco needed to make was whether it could undertake the web site redesign and enhancements in-house. Aside from corporate IT responsibility for the technological infrastructure, Pubco had a web development group supporting the Editorial function and Technology products, and an IT group that supported the Sales department, the web site infrastructure, and the special testing software that was
complementary to the book products. Pubco could have hired a design agency to help with its brand development efforts, a systems integrator (e.g., IBM, EDS, etc.) to help with the lack of technological expertise, and subcontractors and freelances to help with the web site coding functions. However, this solution still did not address the question of who would define the overall architecture and strategic direction for the site. Thus, Pubco decided to hire an integrated strategy, design, and technology web services firm. Eserve competed for the contract by putting together a business development team that included a strategist with a background in education. Eserve won the contract against two other top competitors on the basis of its better integration of the three disciplines and less arrogance, which is what bothered Pubco about other consultants. In addition, Eserve had earlier won a contract with a different division of Pubco, so Pubco’s corporate management reasoned that it would be better to deal with one firm rather than two. In the initial business development stage, it turned out that Eserve was proposing a major strategic effort and was asking for more money than Pubco had bargained for. Contract negotiations were long and painful and as a result, a reduced scope was agreed upon, which focused on improving Pubco’s sales and marketing efforts with a certain group of professors. Reaching the student audience and implementing other initiatives was no longer part of the contract scope. The estimated cost of all three project phases (plan, prototype, execute) was about 6% of Pubco’s (AP) annual operating income, a very significant amount for Pubco to invest into a web site upgrade. Due to the reduced scope, Eserve allocated only a half-time client account manager, brand specialists and lead technologists for the Plan Phase of the project. This meant that they all also worked on another Eserve project at the same time. During the staffing process, the strategist with the educational background was also assigned to a different client. Most importantly, the Plan Phase was abridged and planned for only six weeks (instead of the eight advocated and twelve preferred by Eserve). As the project progressed, the Plan Phase ended up lasting seven weeks in order to complete the work that had to be delivered. The Prototype Phase, which I also followed, was scheduled to last eleven weeks, but ended up taking thirteen weeks. The project phase duration and Eserve team’s composition is shown in Table 4.5.
### Table 4.5. Eserve’s Team Composition

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Duration</th>
<th>Strategists</th>
<th>Designers</th>
<th>Technologists</th>
</tr>
</thead>
</table>
| Business Development | 3.5 months Oct'99-Jan'00 | - Account Manager (AM)-strategists (old-timer)  
- Senior Strategist (old-timer) | - Brand Specialists (newcomer)—half-time | - Senior Technologist (one old-timer) |
| Plan Phase       | 7 weeks Jan'00-March'00 | - Account Manager-strategists (old-timer)—half-time - same as in Business Development  
- Project Manager-strategists (newcomer) (Plan PM)  
- 3 Strategists (newcomers) |                           | - 2 Technologists (one old-timer—half-time, same as in Business Development, and one newcomer) |
| Prototype Phase  | 13 weeks March'00-June'00 | - Account Manager (old-timer)—half-time — same as in Plan Phase  
- Project Manager-strategists (newcomer) —different from the Plan Phase (Prototype PM)  
- 3 Strategists—same as in Plan Phase, but one of them only half-time | - Brand Specialists (experienced—half-time)—same as in Plan Phase  
- 2 Designers (newcomers)  
- Information Architect (newcomer—started in Week four of the Prototype Phase)  
- Creative Developer (newcomer—started in Week eight of the Prototype Phase)  
- Additional designers added ad-hoc | - 2 Technologists (2 from the Plan Phase, but the lead technologists left Eserve and was replaced in Week 8 by another experienced lead technologists). |

In promises made to clients and to new hires, each Eserve project had to have 60% Eserve-experienced consultants (with six to nine months of Eserve experience) both to teach newcomers and to reproduce the Eserve way of doing things—providing Pubco with the benefit of using Eserve's unique capital. However, due to the extremely high demand for Eserve services at the time of the Pubco project, and a limited ability to hire and train “Eserve-experienced” staff, only 23% of Eserve’s Plan Phase team was “Eserve-experienced.” The Prototype Phase team was 19% Eserve-experienced. The smaller than usual proportion of Eserve-experienced staff played a significant role in practice when project participants were trying to enact genres from Eserve genre repertoire and often had no competence in these genres as described in Chapter Five. Also, the discipline composition of Eserve team varied on the Plan and Prototype Phases with some notable exceptions from the service delivery model. Due to the shortage of
designers and the contract scope, the Plan Phase only had one half-time instead of one full time designer. The Prototype Phase also initially had four strategists and only three designers and only later had two design discipline members join the project (Information Architect with expertise in usability testing and technology and Creative Developer with expertise in HTML coding). Thus, the early involvement of designers on the project was even more limited than the official service delivery model genre definition would suggest.

In the contract, Eserve asked Pubco to put together a “core team” of its people who would interact with Eserve and provide consultants with expertise about Pubco. Eserve asked for 30-40% commitment from the “core team” and a several days per week commitment from a couple of key Pubco sponsors of the project. In addition, Eserve asked for some commitment from senior Pubco leadership. This was translated into a “steering committee” that consisted of top Pubco managers overseeing the project and approving key decisions.

Pubco put together a core team that consisted of eight people who actually cleared 40% of their schedules to work on the project with Eserve. The core team consisted primarily of mid-level managers, whose bosses reported directly to the Pubco (AP) head. This core team was headed by a VP of Finance, who also reported directly to the head of AP. In addition, Pubco put a full time project sponsor on the project who was hired as a subcontractor from the firm that had headed a two-year strategic marketing study on improving Pubco’s sales efforts. The strategic consultant was a woman (35-40 years of age) with an MBA from a top-ranked school and over ten years of management consulting experience. Through her involvement at Pubco she knew most of Pubco’s top managers.

The team composition was carefully chosen by Pubco AP’s head, who wanted to have a balanced team across departments and wanted a neutral person, the head of Finance, at the helm. The strategic consultant was put on the project to help Eserve span the boundary with Pubco. The Pubco core team consisted of people who had worked with Pubco for at least five years and despite their diverse departmental settings had worked together before and knew each other fairly well. The Pubco core team composition is shown in Table 4.6.
Table 4.6 Pubco core team composition

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Steering Committee</th>
<th>Project Sponsors</th>
<th>Sales and Marketing</th>
<th>Editorial</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Development</td>
<td>- Pubco AP head - Corporate VP</td>
<td>- VP of Finance</td>
<td>- Mid Level Marketing Manager</td>
<td>- Chief of Editorial</td>
<td>- Mid Level Technology Manager</td>
</tr>
<tr>
<td>Plan Phase</td>
<td>- Pubco AP head and her direct reports</td>
<td>- VP of Finance Pubco AP</td>
<td>- Mid Level Marketing Manager - Mid Level Sales Manager</td>
<td>- Editor-and-Chief for a set of disciplines - Mid Level Production Manager</td>
<td>- Mid Level Technology Manager - Junior Level Web Technology Manager for Editorial - Head of IT</td>
</tr>
<tr>
<td>Prototype Phase</td>
<td>- Pubco AP head and her direct reports - Corporate IT representatives</td>
<td>- VP of Finance - Marketing Consultant</td>
<td>- Mid Level Marketing Manager - Mid Level Sales Manager</td>
<td>- Editor-and-Chief for a set of disciplines - Mid Level Production Manager</td>
<td>- Junior Level Web Technology Manager for Editorial - Senior Level Web Technology Manager - Head of IT - Corporate IT developer</td>
</tr>
</tbody>
</table>

I will now turn to an examination of what happened in the cross-boundary space when agents from the two fields of Eserve and Pubco. From the analysis of each field, we can see that both fields shared the “economic vs. cultural” producer dimensions, except that in Pubco’s case the power balance between the two dimensions was quite different, with cultural producers holding a great deal of power and Pubco being positioned much closer to the cultural pole than Eserve in the overall field of business firms. As for the experience boundary, both companies valued experience in their own industry and in their own companies, but with the age distinction completely reversed. The Eserve experience-dominant pole was associated with young males engaged in earning a lot of money (strategists and technologists who founded the company), while at Pubco the experience-dominant pole was associated with older females engaged in producing high quality cultural materials (editors). In addition, Pubco’s core team was 20% male and 80% female, while Eserve’s team was 75% male and 25% female.

As I noted earlier, the enactment of such Eserve genre systems as recruitment and service delivery model already bestowed on clients a whole slew of distinctions: “traditional,” “old-fashioned,” “slow moving,” “old,” “dependent,” “mediocre,” “low

141
tech,” and “politics-oriented” (see Table 4.1). Pubco, in addition, was not just a client, but an old, multi-divisional product firm (vs. services for Eserve), staffed primarily by Humanities majors (mostly English and History) with hardly any MBAs, with a great number of women and older employees. Thus, by virtue of the Eserve dispositions (Eserve's way of perceiving the world and acting towards it), Pubco was associated with the lower right hand quadrant of the Eserve field in Figure 4.2, which represented Eserve newcomers (or outsiders) with more economic capital than cultural capital.

Eserve project participants, on the other hand, consisted of young men, hardly any Humanities majors, and mostly under the age of 30, who, thus, were associated with the lower left quadrant of the Pubco’s field as depicted in Figure 4.4, where Pubco’s IT and web developers were positioned. An especially young age and junior status of Eserve team members translated in Pubco terms into “dealing with kids,” albeit “bright kids.”

In other words, two parties had relatively disadvantages position in their partner’s field and associated “negative” dispositions towards each other. If agents in each field are engaged in accumulating capital in their own field, then engaging in practices in a field that has an opposite logic of practice should weaken their position in their own field. So if the two parties are to collaborate with an expectation of having mutual benefits, they have to rely on genres that are not specific to their fields. Fortunately for this relationship, there were field-specific economic incentives through various evaluation genres that made both parties interested in the project being perceived as successful by their respective companies (fields).

The predictable struggle between the two fields unfolded around whose genres should drive the project. This struggle is described in subsequent chapters. However, the project also used a series of standard project management genres (Hallows 1998) such as the project scheduling genre system including Gantt chart-based genres, various types of status meetings within Eserve and with clients, and the consulting industry staple client presentation genres and deliverable handoff genres (some of these genres are described in the Appendix E). While there was nothing unique about the standard project management or consulting genres enacted on the Eserve-Pubco project, they were critically dependent on the project history starting with the business development stage. These objectified the decisions made and the deliverables produced on the Eserve-Pubco project. The main
disposition that was produced and reproduced through these genres was the distinction between “people who knew what this project was about” and “people who did not.” Every status meeting and Gantt chart relied more and more on what had happened in the project to date and, especially relied on the emerging artifact—the web site itself. For example, the first Gantt chart produced for the Prototype Phase had various dates and responsibilities associated with standard Eservé genres: “A Use Case due in Week two of the project.” The last Gantt chart produced had such items as “Graphical Treatment 2.3 “Instructor Book Evaluation Page” due on Week 8.Day 3.” Similarly, status meetings increasingly relied on project details and jargon, for example, “Julie, do you have any issues with getting text for the 'Accounting sample' page.” Because these genres overlapped with Eservé’s and Pubco standard genre repertoires, the status boundary that separated Eservé disciplines and Pubco’s functional departments was reproduced by through the enactment of these genres. However, through the enactment of these genres agents also produced a new project experience boundary and a new type of cultural capital signified by experience on the Eservé-Pubco project. Early involvement and participation in status meetings and web site development (emergent artifact) was thus an important boundary.

The two boundaries—the social status and the experience boundary of the cross-boundary field—specified common, although temporary, stakes (goals) for Eservé and Pubco agents. Relative to the social status boundary, clients were privileged as holders of economic capital and consultants were associated with cultural capital. In addition, the two boundaries were not independent. Because the Eservé service delivery genre was such that the Plan Phase was dominated by strategists and most decision and customer contact was with strategists and relied on strategy genres, strategists were also privileged relative to the second experience boundary. Because the project team was designed to have some turnover in the second and third phases, many of the project decisions were objectified in various documents and deliverables. As these documents and deliverables were for the most part produced through the strategy genre repertoire, newcomers to the project with a strategy background had an advantage in learning what had happened on the project. Technologists, whose dispositions and practices were more closely aligned with strategists than with designers (see Table 4.2) and who were represented by one full-
time and one half-time person on the Plan Phase vs. a half-time designer, were also more in touch with the project history. However, most of the designers joined the project in the Prototype Phase and were further removed from the strategy genres, and, thus, had a hard time gaining project experience—the capital of the new field.

As for Pubco’s participants, their core team stayed quite stable throughout the phases. However, as the Prototype Phase began it was mostly Pubco’s sales and marketing people and web developers—that is, people who were most like Eserve’s strategists, that were getting more and more involved with the project. The editorial, finance, and IT people, who lacked web and strategy backgrounds were further removed through their exclusion from various meetings led by Eservers. Other distinctions such as the organizational boundaries themselves, the temporal and hierarchical distinction within each field, age, gender, educational background, etc., were still relevant and played a role on the project as defined by agents’ participation in their own fields. However, the project’s own experience boundary defining the new project capital created a way for the diverse group of Eservers and Pubco agents to work towards a shared interest. The new project capital not only created common stakes for agents from different fields to pursue, but also changed the relative positions of agents in the EServe and Pubco fields. So two newcomer strategists with no MBAs, but who were involved in the project from the very beginning, acquired considerable power on the project through their knowledge of the project and early involvement in decision-making. Not surprisingly, they moved up in the Eserve hierarchy reaching mid-level manager positions within a year, despite Eserve’s downsizing.

Figure 4.5 summarizes the boundaries of the new field. The points on the chart represent Eserve and Pubco distinctions that are objectified to the Eserve-Pubco field because they are external to it. In the next chapter, I will show how Eserve designers and technologists and Pubco’s IT agents struggled to change the genres in this cross-boundary field to better reflect their interests.
4.5 Analyzing Boundaries Using a Communicative Genre Lens

In this chapter, I have demonstrated how the enactment of communicative genres in organizations produced and reproduced a variety of distinctions and, in the final analysis, produced and reproduced internal and external boundaries of a given field and, hence, its unique capital. This understanding is important for studying collaboration across boundaries because it shows which boundaries are at stake in collaborative practices of a given field or when agents from two fields engage in collaboration.

The communicative genre lens focuses on the symbolic capital of a given field, that is, on the representations of the social order that agents recognize in practice. At the same
time, analyzing the results of genre enactment in the fields, it is possible to uncover different forms of capital that are valued in a given field—both produced by this field and inherited from other fields (education, gender, age, professional recognition, etc.). A genre set recognized and habitually enacted in a given field, the “field’s genre repertoire,” objectifies a series of dichotomous distinctions in the field, which agents apply to perceive and improvisationally generate practices. There are a great variety of different distinctions used in the field, but they represent just a few boundaries. These few boundaries distinguish agents based on the relative amount of different forms of capital that are valued in a given field. The analysis shows that by comparing various distinctions based on genres' definitions and enactment, it is possible to understand how boundaries (different forms of capital) relate to each other and which are more salient in a given field. Specifically, it is possible to understand relationships (conversion rates) of different boundaries inherited from the field of power to the boundary unique to a given field. I used a two-dimensional grid to represent these relationships, with one dimension of the grid showing the boundary unique to a given field (based on the amount of field specific capital) and another dimension representing the main boundary inherited from the field of power. By analyzing agents' relative positions in a given field (accomplished by looking at the results of genre enactment and agents' titles, degrees, awards, and other valued properties), it is possible to show in this grid how boundaries from other fields relate to the two main dimensions according to the logic of practice of a given field.

My inductive analysis of the two organizations, R&D group, and the client project shows how new fields emerge when agents in the dominated position in an established field struggle to create a social space where they have the ability (competence) and interest in achieving dominance. Thus, Eserve R&D group members, who through their “objectified” characteristics would be placed in the dominated quadrant of the Eserve field, created a sub-field with its own logic and stakes that were attainable and of interest to R&D group members. An interesting implication of this analysis is that while the experience boundary was present in both the Eserve and R&D group fields, it played a different role in each of these fields—aiding field reproduction in the Eserve field, but aiding field transformation in the R&D group field. The analysis suggests that it is necessary that agents in the field collectively reward the accumulation of experience in
this field to ensure the reproduction of the field. This did not happen in the R&D group field (as I recount in Chapter 5), resulting in the group’s eventual disconnectedness.

Finally, the chapter examined the question of what happens when agents from two different fields need to collaborate on a project. On a client-consulting project, agents from two very different fields with a very different logic of practice, but both interested in the project’s economic and symbolic success (profit), collaborated through practices situated in a shared cross-boundary field. Agents in this new project-based field developed a logic of practice and a unique capital, which was associated with early involvement on the project. An early involvement on the project resulted in agents having competence in the definition of the emerging IS artifact. These logic of practice was different from the logic of practice of the Eserve and Pubco fields, which rewarded experience in these fields respectively. The new field privileged people who were involved in the project early and were competent in practicing genres enacted early in the project's history. Such approach had implications for newcomers on the project. The new project-based boundary was used by agents sometimes to reproduce and sometimes to transform the boundaries that were objectified in the two parent fields, as I will discuss in the following chapters.
Notes

1 I cannot be precise about the time of Eserve incorporation because such information may compromise the anonymity of the site.

2 In this study, a “top-ranked school” refers to one of the top 25 undergraduate, graduate, or professional schools in US (according to the 2000 US News and World Report Ranking found in www.usnews.com) or to one of the top 25 international schools (according to the ranking at www.library.uiuc.edu/edx/rankint.htm).

3 Similar observations were made by Schultzze and Boland (2000).

4 “Old-timer” was a term used at Eserve but with no strict definition. I used my field data and employee records to understand who was considered an “old-timer” at Eserve to conclude that it was people who joined the company in the first year of its founding. The only official distinction was between “Eserve-experienced” and “Eserve-inexperienced” people defined as first nine months or, later, as six to nine month with the company. In my use of categories of “old-timer” vs. “newcomer” I want to highlight the temporal dichotomy involved in this boundary. For example, R&D group members were for the most part “Eserve-experienced,” but none of them was an “old-timer,” and this difference mattered in their practices.

5 Except for the distinction among top management and consultants, I did not include enterprise people in my analysis. There were few of them relative to consultants. R&D group people were occasionally considered “Enterprise,” but they were too distinguished from such functions as HR and Benefits to include them under the same label in the analysis.

6 The HBDI methodology is described on the HBDI web site (www.hbdi.com). For information about the use of HBDI in organizations, see Leonard (1997). According to the test providers, it has been taken by more than three million people worldwide.

7 Public financial records from the publishing industry reveal that most of the people in VP positions who are under 50 are technologists or from finance.
“The critique which brings the undiscussed into discussion, the unformulated into formulated, has as the condition of its possibility objective crisis, which, in breaking the immediate fit between subjective structures and the objective structures, destroys self-evidence practically.”

Chapter 5  Genre Change and Field Transformation

An understanding of collaborative practices would be inadequate without an understanding of their evolution and change. Such understanding is also necessary to try new approaches to practice and improving collaborative results. In general, a dialectical approach to social studies adopted here aims at understanding a phenomenon as it changes, because all things contain contradictory sides, which eventually lead to their transformation and dissolution. As discussed in Chapter Two, the social order—the relative positions of agents within and across fields—is produced and reproduced based on principles that are "objectified" (in things, rituals, language, documents, etc.) and "embodied" (in people’s dress, bearing, physical and verbal manners, etc.) (Bourdieu 1977). Principles that are embodied are left unquestioned and cannot be "touched by a voluntary, deliberate transformation" (Bourdieu 1977). The social order can only be challenged and transformed when it is made explicit through objectification, in other words, when it becomes part of a discourse. In Chapter Four, I demonstrated how the established social order was objectified through communicative genres—socially enacted structures that enabled and constrained discourse in a given field (Orlikowski and Yates 1994). Chapter Four focused on the static state of the Eserve field and its sub-fields as of April 2000. I discussed how the enactment of a variety of communicative genres produced and reproduced the established social order. In this chapter, I will discuss how agents in some circumstances were able to challenge, and ultimately transform, the established social order through the enactment of different communicative genres.
The analysis of data led me to the following four main points regarding genre formation and evolution:

1. In the formation of a new field, agents opportunistically draw on genres (symbolic capital) institutionalized in other fields in an attempt to attain dominant positions in the new field.

2. Deliberate and emergent changes to the established genres in a field are based on alternatives drawn from other fields. Substantial genre changes seem to be associated with perceived crisis situations.

3. Symbolic struggles in the establishment of new genres are associated with attempts to transform the existing social order, not only in the field where a communicative practice is situated, but often in the parent field and the field of power as well.

4. Change in genres does not necessarily change the structures of a given field, but may sometimes re-enforce the old structures in a new way.

In the first two sections of this chapter I present two stories that illustrate several instances of substantial genre change in two recently established fields: the Eserve-Pubco project and the Eserve R&D group. In the first story, I will highlight how struggles that unfolded at the time of the Eserve-Pubco field formation centered on whose genres were to be enacted on the project. In the second story, I will highlight how the influx of new members into the R&D group brought with it the establishment of new genres, many of which were different representations of the already established social order in the field's discourse. As fields got more established, agents, who were dominated in a given field or in the field of power, tried and, sometimes, succeeded in transforming the social order that disadvantaged them by drawing on genre alternatives from other fields. In the third (and last) section of this chapter, I analyze the genre changes that occurred in both of these stories, and then propose an explanation for those instances when I observed a lack of substantial change in genres, despite attempts to do so.
5.1 Story One: Eserve-Pubco Project Initiative Selection

During the Eserve-Pubco engagement, Pubco's executive repeatedly stated that Eserve had been engaged because Pubco had "hit the web wall" and was looking for Eserve's web expertise. Pubco had spent a lot of time and money on web initiatives, but had generated more questions than answers. Eserve's sales pitch to Pubco emphasized that Eserve had a methodology (the service deliver model) and experienced consultants, who would constitute at least 60% of the team, to address questions related to technical, strategy, and branding issues. Eserve's service delivery model gave Pubco confidence that Eserve had a systematic way of executing projects.

Due to a staff shortage when the Plan Phase got under way, the Eserve team consisted of only two Eserve "old-timers": a technologist, who had never taken part in the Plan Phase, and an account manager, who was 50% on this project, 50% on another project, and 20% fulfilling a branch office management responsibility. When the Eserve team assembled, they quickly realized that, on the one hand, they had to follow the Eserve service delivery model (genre) "sold" to clients, but, on the other hand, most of them had no competence in using the model outside a two-hour training session. In addition, the account manager was significantly overextended and hardly available to guide them through the model. Yet, they had to try to accomplish this task.

The first three weeks of the project were very disappointing to the clients. At one point, clients discussed abandoning the project altogether before they had invested too much effort into the relationship. The main complaint was the inexperience of the Eserve team ("we did not get an ‘A’ team") and the lack of a defined process. The clients were upset that Eserve had not taken the time or made the effort to learn the client's complex business. When Eservers interviewed the client stakeholders, their questions indicated a lack of perception of what the client business was about. Most notably, in the first couple of weeks, consultants did not read any of the strategic and marketing reports given to them and kept asking the same questions over and over. Further, Eserve's service delivery model and contract stated that clients had to put together a "core team" that would dedicate 30-40% of their time to close collaboration with consultants. In practice, Eserve's account manager never expected the core team to be ready and eager to
participate, intending instead to rely primarily on consultants' expertise. There were thus no tasks for clients to do in the service delivery model for the first few weeks. Busy Pubco managers, who cleared their schedules for the project, were disappointed that their time was wasted and complained. To make things worse, Eserve conducted a client workshop with materials critiquing their poor web site branding effort thus far. It was expected that clients would resist the criticism and that the workshop would take hours. Instead, clients immediately accepted the criticism saying that they had hired Eserve to provide a solution to this problem, and that they were willing to listen. Unfortunately, Eserve did not prepare any solutions for the meeting.

Towards the middle of the third week, when according to the Eserve service delivery model, Eserve would be up-to-speed with the client's business, Eserve was scheduled to conduct a brainstorming workshop (genre) with the client. By this time, Eserve's "decision makers" had formed an opinion about the clients as a group of people who were afraid to speak their mind due to political concerns, not engaged in generating solutions, "culturally stubborn," and "process obsessed," but who wanted to participate in the process and needed "pieces of paper" to come out of it. At the same time, Eservers on the team were struggling to define what they were trying to achieve with the workshop. There was much debate about the meaning of terminology in the Eserve service delivery model, for example, about distinctions among such terms as "needs," "intents," "activities," and "opportunities," which were to be used in the brainstorming session. Some Eservers warned others that "we should not stereotype" or "they will question our methodology," but their voices did not resonate with the rest of the team. It was concluded that the main objective for the meeting was to make clients feel "that they had contributed."

At the end of an hour and a half brainstorming session, clients generated more than a hundred ideas for what the site functionality. Eservers primarily facilitated or observed the workshop. The next question was what to do with all the initiatives generated. According to the Plan Phase genre system, initiatives had to be "rationalized" in a workshop session before "prioritization." However, nobody on the team, except the account manager, had an idea what the Eserve service delivery model meant by "rationalization". At the end of the day, the Eserve team members decided to map a
“fleshed out” list of initiatives to market trends and the competitive landscape, although it was not clear to the consultants what to do with such a mapping. The clients were also struggling to understand what the rationalization workshop (genre) was about. They were hoping it was another chance to brainstorm ideas as many of them had more ideas to share, but they soon learned that this was not the intent. Having gone through the rationalization session, both clients and consultants were quite disappointed. After a grueling half-day session, clients did not get to brainstorm new ideas and consultants did not know what to do with a huge matrix that mapped 17 "themes" of initiatives to 10 "market trends" in a process that nobody fully understood. Reflecting later on this Plan Phase of the project, several consultants noted that they had simply abandoned the "giant matrix" after the workshop.

At the same time, one conscientious new Eserver was getting worried that the Eserve team did not hold "their own" brainstorming session that could generate "really innovative" ideas. This newcomer with some consulting experience expected Eserve to do things differently and was disappointed to see “consulting as usual” especially "throwing tangibles at clients" without deep insights. This consultant convinced the project manager of the necessity of an internal brainstorming session in order to deliver "high-quality," "truly innovative" Eserve results. However, when the Eserve brainstorming session took place, only a handful of initiatives were added to the list because of the Eserver's lack of expertise in the publishing business.

The third major step of the Plan Phase was a prioritization workshop. This was where the “scorecard” genre came in. The whole fourth week of the project was allocated to this exercise. First, clients were supposed to rank the relative importance of about fifteen prioritization criteria used by Eserve (e.g., items such as "strategic impact" and "technical feasibility"). Then Eserve was to rank all the hundred plus initiatives generated in the brainstorming session based on each of the ranked criteria. For each criterion, consultants were to support their judgment with "research" including user's perspective, competitive analysis, and a technological assessment of the client's capabilities. Then all the ratings were to be run through a complicated and automated reduction algorithm that would "spew out" nice reports indicating which initiatives to pursue. Clients would then provide their feedback and choose the top alternative to implement.
It was during this fourth week, halfway through the Plan Phase of the project, that something "unusual" happened. Still lacking an understanding of what the Eserve service delivery model was about and disappointed with the rationalization results, some of the key clients from sales and marketing started worrying that critical initiatives which they believed to be essential (based on their business and extensive web experience) were not prominent on the Eserve list (lost among a hundred initiatives or missing altogether). Under this pressure from the sales and marketing participants on the core team, Pubco's project manager conducted two workshops where Pubco's core team members identified and prioritized their "critical" initiatives under the heading of "key elements of our web presence that we know we need to develop for our core business." The list was relayed to Eserve's project manager and sent to the Eserve team mailing list to be included with the previously brainstormed initiatives.

Meanwhile, Eservers continued struggling with the Eserve service delivery model. The only thing that Eservers had to guide them was a deliverable binder from a previous project and a computer-based tool that was supposed to support the rating process. Another young consultant wrote an email memo to the group expressing his concerns with the service delivery model and proposing to build business cases for initiatives that made the most sense to consultants. A newcomer with significant consulting experience added that this kind of rating never worked and that decisions had to be made based on intuition. When the Eserve team members convened the day before the client prioritization workshop they came to several realizations:

1. The special prioritization tool with nice reports was not working properly and had to be abandoned
2. Different team members did the ratings in incomparable ways
3. The algorithm did not make sense. For example, something that web site users did not need according to the scores in one dimension could get selected due to high ratings in another dimension.
4. In the final ranking, there were no urgent or strategically important initiatives.
5. The account manager, who could have guided them, was on vacation.

Ultimately, the Eserve team gave up on the Eserve service delivery model. A strategist who had been on the project since the business development stage proposed top themes
and a justification for them (technologists who had been involved with the project the longest got only partially involved). The number one theme was taken from Pubco's "must have" memo. Three others were based on Pubco's brainstormed initiatives and one was added by consultants. In addition, consultants proposed a modification to the "must have" initiative based on their perception of the market demand and strategy in the Internet era. The issue was how to present these choices to clients, who "invested time into determining prioritization factors" and "were process obsessed."

In the prioritization presentation, clients were quickly shown one (of four) outputs that the prioritization algorithm produced, which, while not fudged for the presentation, was chosen to show the data in a light that favored the consultants' recommendation. It was argued that "ratings were approximate," and cases were justified with arguments. The reaction from Pubco's core team surprised Eservices.

Consultant: I am getting puzzled faces.
Client: Some of this [initiative list] is a given.
Consultant: Oh, this is a given?

Instead of the arguments that consultants expected ("I am waiting for somebody to throw something at me"), clients expressed disappointment that they got the initiatives that they themselves proposed and had talked about for years at Pubco. In my interviews, clients reiterated this disappointment, but still assumed that Eservè had arrived at their conclusions through a sophisticated and well-grounded methodology and based on consultants' own web expertise.

After the workshop, the problem still remained to narrow down the list of initiatives. Five themes in fact covered 70 or so initiatives. In subsequent meetings, core team members struggled to eliminate some initiatives. However, Pubco core team members represented different departments (editorial, sales, marketing, and technology) and had a problem agreeing to eliminate something that was important to at least one person in the group. The only initiatives eliminated were modifications proposed by Eservè. The following week, Eservè's project manager and account manager went over to Pubco to present the five themes (minus Eservè modifications) to a steering committee consisting of Pubco's executive and her direct reports. With little debate, Pubco's executive gave her feedback on what she thought was more or less appropriate. She gave her unreserved approval for two themes that were oriented towards sales and marketing: one was exactly
what Pubco proposed in the "must do" memo, the other was something that Pubco was not able to make money on for awhile, but Eserve promised that they would make money on soon.

Not involved in the steering committee presentation, Eserve line consultants continued with their scheduled meetings prioritizing 70 initiatives and agonizing over the quality of their judgments in late night debates. Meanwhile, in a ten-minute hallway conversation after a bathroom break, the account manager and the highest ranking member of the core team decided to pursue those two themes that were supported by Pubco's executive (as I learned from interviewing one of them later).

Looking back at the Plan Phase of the project, one of the Pubco's managers concluded:

In our business we are smart people, we have an elitist attitude. Eserve is smart too, but was not getting our feedback or internalizing. They were forming their own opinions. Then something happened week three and a half—four to turn things around.

**Story One Summary**

The Eserve-Pubco project selection story highlights struggles among agents of two types: 1) within the Eserve field among old-timers and newcomers, and 2) between Eserve and Pubco in the formation of the Eserve-Pubco field as a sub-field in the field of power. The Eserve service delivery model genre system objectified, through its specialized terminology and sophistication, the Eserve old-timers' approach to projects, which was hard for newcomers to learn. The symbolic capital of the Eserve service delivery model genre system had some symbolic value for clients and for consultants who wanted to learn the Eserve way of doing things and become Eserve old-timers. However, without guidance from the account manager, it was very difficult for Eservers on the project to gain competence in this genre system and to use it effectively. While Eservers were investing time into learning the Eserve service delivery genre, they had less time left for understanding the client's business, so they relied on the competencies they already had (from prior consulting backgrounds). At the same time, the Eserve service delivery model genre system objectified the distinction between consultants and clients by privileging "knowledgeable" consultants over "money-paying" clients who were in need of consultants' guidance. This distinction was sensed by clients who wanted to establish the value of their own business expertise (cultural capital) on the project.
Hence, they enacted the “directive memo” genre. Because clients also had economic capital on their side, Eservers had to accept the genre. In addition, under economic pressure (deadlines), Eserve newcomers decided that spending time in following the Eserve service delivery model was no longer a worthwhile investment and they switched to the usual consulting genres of building cases. The end of the story highlights the tradeoff that Pubco agents faced without fully realizing it: the tradeoff between using the power of their economic capital to make consultants value their cultural capital (expertise in Pubco’s business and ideas about web initiatives) vs. allowing consultants to partially disregard their cultural capital with the possible upside of converting Eserve’s cultural capital into higher economic profit for Pubco in the field of power—the official reason why Eserve was engaged.

5.2 Story Two: The Eserve R&D Project Initiative Selection

The Eserve R&D group was formed on the basis of the Design Lab (DL), which had preceded the R&D group by about a year and a half. The Eserve leadership team sponsored the formation of the DL primarily in a marketing effort. The lab was founded and headed by a prominent member of the web development community with some academic and business credentials ("the DL founder"). Initially, the DL founder handpicked three other group members with some academic background. A year and a half later, the DL founder hired a technical specialist with significant research credentials. Projects in the group were selected by the DL-founder, who did so "after talking to people." While all "builders" at DL expressed some disappointment that projects they were most interested in were not chosen, some were still hoping that they would get a chance to pursue their projects later. At the time of the DL creation, the leadership team gave the DL-founder a free mandate "to do what he liked," and one of DL's early outcomes was an audience segmentation tool that became very successful in Eserves's business development. The CEO was quite happy with the group at the beginning.

As time passed, the DL founder pursued projects that were based on his own research interests and had less and less applications to Eserves's marketing efforts. I once observed Eserves's CEO coming into the DL space and sarcastically commenting on the lack of
relevance of DL projects. Eserve's leadership team got particularly frustrated when the DL founder started asking for budgetary increases without providing any kind of return on investment justification. Academic publications and conference talks given by group members did not correspond to the CEO's idea of the sort of "thought capital" that one would get from being mentioned in such prominent business press publications as "Forbes" or "Red Herring." Eserve consultants also started questioning the lab's contribution to the company. As one DL member put it:

The challenge of the lab was to justify cool toys and space while not working on a client project.

In late November 1999, shortly before my study began, the DL was converted into the R&D group, accompanied by an influx of new members. Officially, the group merged with the internally-facing technology group. In practice, the technology group contributed only one group member. The R&D group got three new managers—a new director who also served as an Eserve VP ("The R&D director"), a senior Eserve "old timer" who was also a member of the leadership team ("senior old-timer"), and a Program Manager, who was a long-time acquaintance of the Eserve's CEO and a member of the consulting practice. In addition, the group hired a senior researcher who had experience in organizing R&D groups. The new leadership consisted of the DL founder and these four new managers (totaling five managers) and was intended to ensure that the group would meet Eserve's interests in exchange for the promise of increased financial support.

Shortly after the R&D group was formed, it was time to choose projects for the next quarter. The Program Manager, responsible for "coordination and administration," involved the group in enacting a project selection process based on a "scorecard" genre that was drawn from the consulting practice. The ideas (projects and criteria) were supposed to be brainstormed by the group and then "fleshed out," and the group members were responsible for rating the ideas on the basis of identified criteria. The highest-ranking project(s) would be recommended to the Eserve leadership team as the one(s) to implement.

In the enactment of this genre system at the R&D group, the scorecard exercise was led by the DL founder, the R&D director, and the senior old-timer—three of the group "decision makers," who recorded their own ideas and those brainstormed by "builders."
Although officially everybody participated in the project-selection process, in one of the meetings a "builder" was reminded several times that he could "leave the meeting to work on real projects."

None of the prioritization criteria in the final scorecard mentioned the approval of the Eserve leadership team, nor was the scorecard offered to the leadership team for their rating. Initially, one of the brainstormed prioritization criteria concerned the projects' relevance to Eserve's marketplace initiatives undertaken by the leadership team, but the criteria were dropped by the DL founder in subsequent periods of "fleshing out." Eserve field consultants were also not involved. One Eserve old-timer, who had just joined the R&D group, suggested involving consultants and even received supporting comments from other team members, but the people responsible for doing the ratings never followed up on his suggestions.

While the R&D group members were busy deciding which projects they were interested in working on, the leadership team was putting pressure on the group through its main appointee—the R&D director. For example, shortly after the R&D group formation, the R&D director reported that despite earlier promises, the group's budget had not been approved and was pending based on subsequent performance. The R&D director also informed the group members that they had to cut extensive conference travel. The CEO perceived the group's substantial travel expenses as "people pursuing an individual agenda before the company's" and was particularly annoyed by this. In addition, shortly before the final presentation to the leadership team, the group learned that two (out of five) “builders” in the group were being pulled into a client engagement for one or more months. This was a major blow to the R&D group. Before the merger, the DL members had often been pulled into non-research projects, but it had been promised to the group that the new R&D director would "protect" them. Finally, the CEO insisted that the R&D group would show all the projects to the leadership team and not just those selected by the group members. To add insult to injury, the R&D director asked group members to submit weekly status reports that he would aggregate for the leadership team—a practice hated by all research groups, as the director admitted. The R&D director concluded to the group:

We are going to be under a microscope for a while, probably always.
On a Monday in January 2000, the R&D director, senior old-timer and the DL founder gave a two-hour presentation to the leadership team. The leadership team got project descriptions and an empty scorecard on Friday before the Monday's meeting and many of them did not appear to have read the documents. In the meeting, the leadership team asserted that the R&D group needed to 1) adjust the scorecard to reflect their primary marketing goals, and 2) make sure that the projects followed Eserve's strategic marketplace initiatives. The number one ranked project idea that was proposed (and, eventually, led by the senior old-timer, a member of the leadership team) was selected along with the number eleven ranked project idea that had to be modified to fit with Eserve's marketplace initiatives. While this latter project idea had not been highly ranked by the R&D group, it was of great interest to the DL founder. In his status reports prior to the meeting, the DL founder had noted his interest in the idea. Although the modification suggested by the leadership team was unwelcome, he immediately volunteered to lead the project.

After the meeting, the scorecard was modified to include a new "necessary" criterion that each project:

is approved by & understood by the leadership team, and the rest of the company.

In interviews, I asked R&D group members about their understanding of how the first project selection process took place. The most commonly expressed opinion was:

Guess what, we can spend as much time going through it [the selection process] as we want, but, ultimately, the leadership team is going to pick for us. And, we can make a recommendation to them, but, ultimately, it will be their final say.

One group member also noted with some skepticism that the number eleven-ranked project that was selected was the project written up by the DL founder.

The second project selection process started in May 2000 and was not only longer, but also significantly more frustrating for the R&D group members. The relationship among the R&D group members and between the R&D group and the leadership team had some history by this point. One significant characteristic of group practices was that the R&D director was less and less part of the R&D group and more and more part of the market-facing efforts of the leadership team (e.g., giving interviews to investors). Also, the R&D
group's performance on the two selected projects with respect to marketing value was questionable. For example, the R&D director expressed concerns with the quality of the DL founder's project output. Finally, Eserve as a whole was starting to sense an economic crisis with Eserve's market valuation dropping to a third of what it had been during the first project selection exercise.

In mid May 2000, the R&D group went through project brainstorming again and created an updated scorecard, which reflected the group's marketing purpose. One of the R&D group managers leading the effort reminded the group of lessons learned:

I believe that even the scorecard will merely set priorities. We cannot go to [the leadership team] and say—here are the two we picked. 'You like them, do not you?' …

Another manager added:

We need to have a week for them to look at it before decision making.

However, the project selection process generated little enthusiasm this time around as the R&D group members were disappointed with the first experience. I observed one group member filling out the scorecard and commenting that he did not understand most of the project descriptions, but that he was not going to spend time figuring them out. Another group member noted:

It is so arbitrary. I do not feel I have enough information.

The same "old-timer" who had put a major effort into involving consultants in the process the first time around, again pushed for the group to make a posting on the Eserve intranet and solicit feedback. Instead, proposals were circulated among a small group of "research liaisons"—special consultants designated to interact with the R&D group. Only one of these filled out a scorecard and, interestingly, gave the lowest score (twos and threes vs. the R&D group members’ fours and fives) to all the projects. Nobody seemed to notice.

By the beginning of June, the scorecard was done and top projects were identified. However, this time around, the idea was for the R&D director to present the list of projects (ten this time), the scorecard, and the aggregated ratings to the leadership team in a ten-minute presentation, to follow this up with face-to-face meetings with the leadership team members, and then to make the final presentation in a later leadership
team meeting. The expected outcome from these meetings was a short list of projects, which would be kicked off in mid June.

The R&D director reported the leadership team's feedback as usual. Again the message from the leadership team was that the R&D group needed to get "big splash" marketing results and that so far this had not been achieved in the proposals. He also emphasized that Eserve leaders wanted the R&D group to focus on a specific technology and a specific market segment with the hope of eventual commercialization of outcomes. The leadership team members mentioned some projects on the submitted list that fit these criteria, but the R&D director's conclusion was to re-write all projects to fit with the new direction. The R&D director noted that there was one project that the leaders were particularly excited about—the project proposed by the R&D director himself, which was ranked six out of ten on the scorecard.

Subsequent project selection process took another month and a half totaling two and a half months for a three-month long project. By this time several R&D group members were frustrated with the lack of "real work." Towards the end, out of five "builders" in the group only two remained and the Program Manager was replaced with an outside subcontractor, who was appointed by the R&D director. This time around three group members (two managers and a builder) with research background did not simply accept the leadership team directive. Instead, they proposed an alternative Research Process Model (a new genre in this field based on the Eserve service delivery genre), which would allow them to pursue projects of interest as long as they could find an outside sponsor willing to work with them. This idea was introduced by a researcher with significant academic background and was presented to the COO. The COO "loved the idea" as he saw potential revenue opportunities behind it. However, the R&D director was not particularly excited about the proposal, arguing that the approach could compromise research integrity.

In the final project selection meeting in mid July, the main question became whether R&D group members should each pursue their own projects and look for outside funding or whether they should all work on one project. This was the first R&D group meeting that engaged "research liaisons" from the consulting field, who kept raising concerns over project feasibility and relevance to Eserve. These concerns were not addressed. At the
end of the day, the project that was a combination of the R&D director's and senior old-timer's proposals got selected. The "sponsorship" approach stayed on the map, but the R&D director insisted that group members had to work on the selected project full time before they would pursue sponsors for their own projects. By the end of the meeting, the discussion turned towards "volunteering" who does what with the one project selected. Despite "builders" volunteering to lead some efforts, the selected "leads" were the R&D director, the DL founder, and the senior old-timer. As one "builder" observed about the meeting:

Here is how I read it. 'No, you will just program,' is how I read it. 'Others will do research.' That is the subtext.

After the meeting's conclusion, the "builders" continued their involvement in defining the Research Process Model. The process was led by one of the "builders" and lingered on for at least six more months, as reflected in the official meeting notes. Eserve was undergoing a full-blown economic crisis and was expecting big layoffs. In the third project selection process enacted in the November 2000—January 2001 period, one of the group "builders" led the process along with a senior consultant from the field. The emphasis was on serving the consulting field. The R&D director left the company shortly thereafter.

**Story Two Summary**

The R&D group project selection story highlights two types of struggles: 1) internal struggles among R&D group members who each wanted to pursue their own projects, and 2) the external struggle between the R&D group members and the Eserve consultants represented by the leadership team or regular members of the consulting practice. In the story, the "directive" genre used to select projects by the DL founder was challenged by the "scorecard" genre enactment by group members, which allowed "builders" to represent their ideas to the group. However, in practice, the DL founder and other group "decision makers" using the scorecard enacted a different genre in which they reaffirmed their privilege to choose projects. The story also shows how throughout the R&D group's existence, the researchers tried to establish their independence from the consulting field (economic capital holders) based on their cultural capital in the research field. This happened in the first and second project selection genre system enactments, when
researchers used their own "research-based" criteria to recommend which projects to pursue, while Eserve top leadership using the "directive" genre pushed them to pursue marketing interests. Finally, when researchers found a way of establishing temporary independence from the pressures of economic capital holders through the enactment of the Research Process Model genre, which promised high long term returns, the R&D group director lost his decision making power in the group leading him to leave the company.

5.3 Analysis: Doxa, Orthodoxy, and Heterodoxy of Genres

In an established social order, the relative positions of agents and the distribution of capital among them are reinforced through symbolic mechanisms such as language, documents, and rituals. A social order produced through symbolic means only exists as long as agents are recreating it in their practices (Bourdieu 1977). Thus, to change the representation of the social order through symbolic means, to redefine the legitimate vision of the world, means to open room for the transformation of the social world itself. The legitimate representation of practice in discourse becomes both the object and instrument in the field struggle (Bourdieu 1977: 169).

The legitimate language no more contains within itself the power to ensure its own perpetuation in time than it has the power to define its extension in space. Only the process of continuous creation, which occurs through the unceasing struggles between the different authorities ... can ensure the permanence of the legitimate language and of its value, that is of the recognition accorded to it. (Bourdieu and Thompson 1991: 58.)

An experience in which symbolic representations are in full correspondence to the established social order, so that representations of an alternative order do not enter the field's discourse, is called "doxa" in Bourdieu's terminology (Bourdieu 1977: 164). This is the preferred state of affairs for the dominant group. When an alternative opinion exists and schemas of perception no longer fully correspond to the established social order, but an alternative viewpoint is "straitened" or censored in discourse, this experience is termed "orthodoxy" (Bourdieu 1977: 164-169).
The dominant classes have an interest in defending the integrity of doxa or, short of this, of establishing in its place the necessarily imperfect substitute, orthodoxy (Bourdieu 1977: 169).

The co-existence of "competing possibilities" in the symbolic representation of the social order is an experience called "heterodoxy" (Bourdieu 1977: 169) or pluralism (Bourdieu and Thompson 1991: 234).

Communicative genres represent a form of symbolic power that only exists through their social recognition as legitimate and their enactment in practice. In the state of "doxa," the only representations of reality, thus, the only communicative genres that we would find, are those that reinforce the existing social order. However, at the time of formation of new fields that by definition must counterpoise their logic of practice to the logic of their parent field or fields, we will observe multiple opinions—heterodoxy. Otherwise, the new endeavor would not form a field in its own right. The co-existence of several open or oppressed viewpoints represented in diverse genres was characteristic of the R&D group and the Eserve-Pubco project sub-fields, which I observed early in their formation. Agents in the R&D group and on the project drew on the genres from Eserve, Pubco, academic research, and other constituent fields to opportunistically promote their viewpoint through genres. In the newly formed Eserve-Pubco project field, Eserve consultants drew on the Eserve service delivery model genre system that privileged consultants over clients, whereas Pubco employees drew on their own memo and directive genres in response. In the R&D group field, group members drew on the academic genres of defining a research project based on their own academic interests and competencies in enacting these genres, whereas, the top leadership drew on the directive genre of the business field. What I observed at the formation of these two fields was each party trying to draw on their parent field genres, which they considered proper, in order to promote their position and quickly establish orthodoxy or, preferably, doxa in the new field. On the Eserve-Pubco project and in the Design Lab (the early state of the R&D field) the movement was from the state of doxa (the client/leadership team respectively accepting the proposed genres as appropriate), to orthodoxy (the client/leadership team starting to question the genres used by their counterparts), to heterodoxy (the client/leadership team rejecting proposed genres and enacting their own genres), and to
new orthodoxy (the client/leadership team genres are accepted in practice, but not considered valid by other parties). See Figure 5.1.

**Figure 5.1: Universes of Discourse and Undiscussed**

Doxa
(The Universe of Undiscussed)

Universe of Discourse

Heterodoxy
Multiple genres represent interests of different groups and are enacted by all groups.

Orthodoxy
Genres represent interests of the dominant group and are recognized as such by the dominated group, but still enacted by all groups.

Rejecting in Practice

Recognizing an Alternative

Genres represent interests of the dominant group, but are recognized as valid and enacted by all groups.

**Figure Note:**
The figure is based on Bourdieu's, "The Outline of Theory of Practice," (1977: 68).

In my study, substantial genre changes, that is, changes that transformed the social order of a given field, seemed to be associated with the presence of two conditions: a perceived alternative drawn from another field, and a perceived crisis situation. First, on the Eserve-Pubco project, the change from the scorecard genre to the building cases genre in the Plan Phase of the Eserve-Pubco project was proposed by a newcomer who used to be a traditional strategy consultant. At the same time, the Pubco's project manager drew on Pubco's memo and directive genres to inform Eserve of mandatory initiatives. Similarly, in the R&D group, the leadership team directive genre was part of the leadership team repertoire practiced by the new R&D group director. Second, the scorecard genre was part of the consulting practice repertoire practiced by the new
Program Manager. Both genres challenged the previously established directive genre practiced by the DL founder.

The timing of genre changes was also interesting. On the Eserve-Pubco project, "something happened" at the mid point of the Plan Phase when both parties felt that their deadline was fast approaching with little progress having been made. That is when Pubco team enacted a directive genre and Eserve "newcomers" rejected the Eserve service delivery model genres. Similarly, the R&D group was pushed to change its genres in the first project selection process under a threat of budgetary crisis. An even worse economic crisis for Eserve at large helped R&D group "builders" transition from the leadership directive to the Research Process Model genre enactment.

It is not possible to categorically claim that a crisis situation and a perceived alternative genre were necessary (or sufficient) conditions for substantial genre change. However, several observations of the lack of a substantial change in genres seem to corroborate the necessity of these conditions. First, let us consider the necessity of the perceived crisis. For the Eserve field at large, I did not observe agents sensing a crisis situation until the very end of the study. At the same time, most of the genres in the Eserve field at large were reinforcing doxa despite a great influx of new members (30-60 new hires every three weeks for a company of several hundred people). Many of them were not only new to web consulting, but were new to the consulting field and to the IS development field. Like "newcomers" on the Pubco project, many of them struggled to gain competence in enacting genres established at Eserve. The established social order disadvantaged new entrants into the field by privileging "old timers." However, I did not see any new genres emerging to challenge the "old-timer" domination in the Eserve field at large. The genre change that rejected the Eserve service delivery model in the Eserve-Pubco project was never elevated to the Eserve field at large. Similarly, I learned about a significant genre change introduced on another project by a new account manager who came from "builders" and made an attempt to redefine the "builder" vs. "decision maker" relationship by challenging the service delivery model genre system (where "builders" were especially dominated). This account manager introduced an alternative service delivery model that was based on a small team doing extremely rapid prototyping early
on, which allowed builders to be involved in early decision making. I did not see this change taking hold or become objectified in training documents.

One might argue that the Eserve field was much more established than the two sub-fields and that this was the reason why no change was visible, rather than the presence or absence of two conditions. This is certainly a factor, however, even within the newly established sub-fields I observed a lack of substantial changes outside the two conditions. For example, it was not until the mid point crisis on the Eserve-Pubco project (threat of the loss of economic and symbolic capital if the deadline is missed) that "newcomers" decided to reject the Eserve service delivery model genre system.

Second, the need for genre alternatives is most acutely seen in the case of the Eserve-Pubco technologists’ conflict. Throughout my study, technologists were producing representations that were not accessible to others due to their technical language. Technologists’ genres had twofold implications: on one hand, they led to a great degree of autonomy for technologists in their decision making; on the other hand, when technologists actually wanted to mobilize others to support their decisions they had a hard time doing it. For example, on the Eserve-Pubco project, Pubco technologists put the whole relationship in a crisis situation by arguing that the project had to be halted to accommodate a system upgrade. Eserve technologists were making an alternative claim that the project could go on without an upgrade by implementing an innovative architecture, but neither party was able to explain their arguments to others. Eserve technologists knew that not only Eserve, but also Pubco's marketing and sales managers were interested in the project’s expeditious completion, and perceived the work stoppage as a drawback. However, despite a number of attempts, Eserve technologists were unable to find new genres that would allow them to explain their viewpoint to gain support from either Eserve managers or Pubco's project managers (i.e., to draw on their economic capital in the relationship). The explanation may be that no one at either Eserve or Pubco perceived an alternative genre through which technologists could express their views in a language understood by others. Pubco’s technologists managed to convince their non-technical colleagues through the power (trust) accumulated from a long-term relationship. In my interviews, Pubco managers acknowledged that they did not understand the alternatives proposed by technologists and were more likely to trust their own folks than
outsiders. Since the final decision was Pubco's, Eservers had to accept it, and the project was put on hold for three months (out of the nine months originally planned). The story tends to support the necessity not only of perceived crises, but also of alternative genres—an alternative form of symbolic capital to draw on.

One story that sheds doubt on the necessity of the crisis condition is the change in R&D meeting genres, which occurred without a perceived crisis situation. One of the R&D "builders," who was involved in the consulting practice in a more "decision maker" role challenged the project lead meeting genre, where R&D "decision makers" made many critical decisions without "builders." After some debate, which took place while the R&D director was on vacation, the meeting was eliminated first on an experimental basis and then permanently. However, the elimination of the "project lead" meeting did not change the underlying social structure, as the same five "decision makers" were "leading" R&D projects and were invited to meetings with the Eserv leadership team. It was only after the economic crisis hit Eserve hard and the builders got involved in defining the Research Process Model that the established social order was transformed.

The timing of social change is a long-standing issue in the organizational literature. Some organizational scholars argue that changes occur more gradually and incrementally (e.g., Meyer, et al. 1993) while others posit that periods of relative stability are interrupted by periods of rapid change (Tushman and Romanelli 1985; Gersick 1988; 1989; 1991; Romanelli and Tushman 1994; Sastry 1997). It is this latter "punctuated change" tradition that often associates change with times of crises characterized by exogenous shocks and uncertainty (Tushman and Romanelli 1985; Gersick 1991). Gersick's (1988; 1989) work on changes in teams seems particularly relevant to the Eserve-Pubco project where major changes occurred almost precisely at the mid-point of the Plan Phase. Bourdieu also makes a theoretical claim that the questioning of the symbolic representations is necessarily, but not sufficiently, tied to periods of economic and political crises (Bourdieu 1977: 168).

Although, at first glance, this study seems to support "the punctuated change" perspective, it is hard to agree with the punctuated change view that "relatively long periods of stability (equilibrium) [were] punctuated by compact periods of qualitative, metamorphic change (revolution)." (Gersick 1991: 12). Hardly any genres that I observed
remained rigid or unchanged. Indeed, on a granular level my observations are much more in line with the "emergent change" perspective (Orlikowski 1996) where small changes in genres were happening all the time. Thus, for example, the change in the R&D group meeting genre system can be seen as a step towards eventual transformation of the social order through the Research Process Model genre. In Bourdieu's terminology adopted here, the move from doxa to orthodoxy was a necessary step before heterodoxy. In a similar vein, consultants' dissatisfaction with the Eserve service delivery model and the enactment of an "unplanned" Eserve brainstorming session on the Eserve-Pubco project was a step towards eventual abandonment of the service delivery model genre. Yet, these latter substantial changes only occurred at the time of perceived crisis, when the economic capital that project participants were expecting at the end of the project was threatened by missing a deadline. The data suggests that the timing and impact of social change is greatly dependent on the scale and degree of granularity of observations and that small changes that shake the social order may be necessary for a larger substantial change to be realized at the time of crises when "legitimate" symbolic representations in genres come into question.

In analyzing genre change in the Eserve field, I have looked at when substantial changes were taking place (at the time of field formation or crises) and what were the sources of change (alternative genres from other fields perceived by field entrants). It is also useful to understand what kinds of changes were observed, that is, what characterized the symbolic struggles that resulted in genre changes. In Bourdieu's sociology, agents are distributed in social space according to the overall volume of capital they possess and according to the composition of their capital (hierarchy). (Bourdieu and Thompson 1991: 231). Bourdieu differentiates two primary species of capital in the field of power: economic which gives agents power over institutions (or instruments of reproduction) and cultural (or knowledge) capital, which gives agents power over symbolic instruments of production (Bourdieu 1996: 270). Thus, agents' struggles in fields evolve around increasing their total capital accumulation or changing the exchange rate between the different kinds of capital so as to improve their position. Most of these struggles do not take place directly in the field of power, but rather are enacted through attaining stakes offered by the sub-fields (Eserve, Pubco) and sub-fields of sub-fields
(R&D group and Eserve-Pubco project). Thus entrepreneurial agents in trying to enact new genres are often engaged in double or triple plays trying to change the structure not only of their local field, but also of the larger social fields.

On the boundary between Eserve and Pubco in the field of power, consultants, as holders of cultural capital (they provided expertise), were opposed to the clients, as holders of the economic power (they paid the bills). The holders of cultural capital drew on the Eserve service delivery model project selection genres that privileged cultural producers (consultants) over economic producers (clients). The scorecard genre objectified decision-making that was based on knowledge (various rating dimensions) vs. decision-making that was based on economic power ("the client/leadership team tells us what to do"). The clients challenged the consulting genres by enacting a directive genre in a memo. Finally, the projects that were chosen as an outcome of genre enactment increased the total (economic and cultural) capital accumulation of those agents who proposed and later led these projects. Table 5.1 illustrates how the evolution of genres on the Eserve-Pubco project related to structures of various fields by showing which structures were produced and reproduced through a given genre enactment.

Similar struggles unfolded in the R&D group. The R&D group was situated on the boundary of the economic field (Eserve being an economic firm), and the academic field, which is the primary domain for conducting research. The R&D group members involved in the more academic (cultural) pursuits interested in publishing, conference presentations, and teaching were engaged in symbolic (genre establishment) struggles with the R&D group members interested in more economic pursuits such as Eserve's revenue. Thus, the struggle on the boundary of the R&D group and Eserve fields epitomizes the overall struggle in the field of power between the holders of cultural and economic capital. Academically-inclined agents in the field such as the DL founder drew on the genres that established the R&D group as a group of independent researchers, while the economically inclined agents in the field such as the members of the leadership team drew on the genres that established the R&D group as a marketing group serving the company's interests in gaining more business.
Table 5.1 Esrve-Pubco Project Genre Evolution

<table>
<thead>
<tr>
<th>Timeline for Plan Phase</th>
<th>First 3 weeks</th>
<th>Middle of the 4th week</th>
<th>End of the 4th week</th>
<th>5th week</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Genres Enacted</strong></td>
<td>Esrve consultants try to follow Esrve service delivery model and do not engage clients</td>
<td>Pubco core team members under pressure from sales and marketing conduct a workshop and issue a directive memo to Esrve's project manager.</td>
<td>Esrve consultannts abandon the scorecard approach for the business case approach written by the strategists who has been on the project since business development phase.</td>
<td>Pubco executive gives suggestions on which projects to pursue which are chosen by Esrve account manager and Pubco senior manager.</td>
</tr>
<tr>
<td><strong>Field of Power</strong></td>
<td>cultural over economic capital</td>
<td>economic over cultural capital</td>
<td>economic over cultural capital</td>
<td>economic over cultural capital (agents whose proposal was chosen accumulated capital)</td>
</tr>
<tr>
<td><strong>Eserve field</strong></td>
<td>- &quot;decision maker&quot; over &quot;builder&quot;</td>
<td>N/A</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;newcomer&quot; over &quot;old-timer&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
</tr>
<tr>
<td><strong>Pubco field</strong></td>
<td>- &quot;editorial&quot; over &quot;sales and marketing&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>&quot;sales and marketing&quot; over &quot;editorial&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>N/A</td>
<td>- &quot;sales and marketing&quot; over &quot;editorial&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
</tr>
<tr>
<td><strong>Eserve-Pubco field</strong></td>
<td>- &quot;builders&quot; over &quot;decision makers&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
</tr>
</tbody>
</table>

*Table Note:* Highlighted cells represent a change in the social order with respect to prior time period (in the same row). The "old-timer" vs. "newcomer" (experience) boundary and "decision-maker" vs. "builder" (social status) boundary has different meaning based on the relevant field (depending on the row in the table).

Much like Pubco’s challenge to Esrve’s scorecard genre through a directive memo genre enactment, the leadership team challenged the R&D group scorecard genre by enacting a directive genre in a meeting. Table 5.2 illustrates how the evolution of genres in the R&D group related to structures of various fields by showing which structures were produced and reproduced through a given genre enactment.
Table 5.2 Eserve R&D Group Genre Evolution

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Genres Enacted</strong></td>
<td>Design Lab founder chooses projects by directive based on his knowledge and without Eserve leadership intrusion.</td>
<td>Eserve scorecard is used to rank projects with rankings handled by R&amp;D group's &quot;decision makers&quot; without Eserve leadership input.</td>
<td>Eserve leadership team gives a directive on projects to R&amp;D group &quot;decision makers&quot; which is based on Eserve's marketing efforts.</td>
</tr>
<tr>
<td><strong>Field of Power</strong></td>
<td>cultural over economic capital</td>
<td>cultural over economic capital</td>
<td>economic over cultural capital (agents whose proposal was chosen from accumulated capital)</td>
</tr>
<tr>
<td><strong>Eserve field</strong></td>
<td>- &quot;builder&quot; over &quot;decision maker&quot; - &quot;newcomer&quot; over &quot;old-timer&quot;</td>
<td>- &quot;builder&quot; over &quot;decision maker&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
</tr>
<tr>
<td><strong>R&amp;D group field</strong></td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;well known&quot; over &quot;unknown&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;well known&quot; over &quot;unknown&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;well known&quot; over &quot;unknown&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Genres Enacted</strong></td>
<td>Eserve scorecard is used to rank projects with rankings handled by R&amp;D group &quot;decision makers&quot; without Eserve leadership input.</td>
<td>Eserve leadership team gives a directive on projects to R&amp;D group &quot;decision makers&quot; which is based on Eserve's marketing efforts.</td>
<td>R&amp;D group &quot;builders&quot; define the project selection process with Eserve field consultants aimed at serving the consulting field.</td>
</tr>
<tr>
<td><strong>Field of Power</strong></td>
<td>cultural over economic capital</td>
<td>economic over cultural capital (agents whose proposal got chosen from accumulated capital)</td>
<td>economic over cultural capital</td>
</tr>
<tr>
<td><strong>Eserve field</strong></td>
<td>- &quot;builders&quot; over &quot;decision makers&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;old-timer&quot; over &quot;newcomer&quot;</td>
</tr>
<tr>
<td><strong>R&amp;D group field</strong></td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;well known&quot; over &quot;unknown&quot;</td>
<td>- &quot;decision maker&quot; over &quot;builder&quot; - &quot;well known&quot; over &quot;unknown&quot;</td>
<td>- &quot;builder&quot; over &quot;decision maker&quot; - &quot;well known&quot; over &quot;unknown&quot;</td>
</tr>
</tbody>
</table>

Table Note: Highlighted cells represent a change in the social order with respect to prior time period (in the same row)

Next we can look at the impact of genre changes on the Eserve and Pubco fields. The Eserve service delivery model genre system (including the scorecard genre in both the
R&D group and Eserve-Pubco project) enforced the dominance of "old-timers" vs. "newcomers" in the Eserve field. However, in the Pubco sub-fields, where most project participants and clients were newcomers to the Eserve field, this genre was abandoned and a new temporal logic that was based on the experience (tenure) on the Eserve-Pubco project was established. This local change, however, did not translate into the Eserve field at large, where the training program, the R&D group, and the business development efforts were relying on the "old-timers" service delivery model. In the Pubco field, the client meeting and subsequent memo genres were enacted to give power to "sales and marketing" agents over "editorial" agents.

The most contentious boundary in the Eserve field and its two sub-fields was the "decision maker" vs. "builder" boundary. However, in most cases, agents only managed to move from doxa to orthodoxy with no change in the underlying social order. For example, R&D "builders" were hoping that their projects would get selected through the scorecard genre, but this did not happen. When they succeeded in abandoning the project lead meeting, the R&D group "builders" hoped to get included in the decision-making. They were not. It was only through the enactment of the Research Process Model genre that "builders" gained some "decision making" power by proposing that each researcher "leads" their own project and finds outside sponsors to provide economic capital. In this way, they could become relatively independent of the group's "decision-makers." "Builders" on the Eserve-Pubco project were even less successful. For example, all technologists (Pubco's and Eserve's) soon realized that they were excluded from the strategists' ad-hoc working meeting genre. In the norm setting exercise for the next phase of the project, one Eserve technologists voiced his concerns:

    I want to be involved in things. Want things to be for sharing and learning.
    Do not keep things for yourself.

However, the technologists did not succeed in changing the strategists' genres.

These last examples suggest that changes in genres do not necessarily imply changes in social orders. In many cases, these changes represented a move from doxa to orthodoxy or even back to doxa, but with a different symbolic representation ("mask"), as, for example, with project selection at the R&D group where the DL founder and senior old-timer got to do the projects that they wanted to do. Bourdieu argues that
symbolic dominance requires dominant agents to enact strategies that continuously innovate representations and hence provide a new symbolic mask for the old structure (Bourdieu and Thompson 1991). This is the case because with enough time, dominated agents often gain competence in genres in which they were previously incompetent. This happened during the second project selection process when several of the "builders" recognized that they need to take a more active role the project selection process in order for their favorite projects to be selected. Thus, they started gaining competence in the project selection process and took part in enacting an alternative genre—the Research Process Model—reducing the privilege of the groups' "decision makers" to define the process by which the group functions.

In this chapter, I have argued that communicative genres were not only the instruments of production and reproduction of social order, but also the instruments of transformation introduced by entrepreneurial agents in pursuit of their interests. As such, understanding of the role of communicative genres enacted in collaborative practices may enable practitioners to change and improve practice. While most changes in genres enacted in the fields were visible at the time of a field’s formation, substantial genre changes also occurred in more established fields especially at the time of perceived crises. Agents attempted to enact a field transformation by drawing on genres alternatives that represented capital they accumulated in other fields in a different form in the given field. These were attempts to change the conversion rate of an agent's capital accumulated in a different field (e.g., management consulting capital) to the capital valued in the given field (e.g., Eservé capital). However, much like the agents who draw on their capital from other fields to transform the given fields, agents also draw on their capital from other fields to preserve a given field. Thus, in understanding genre evolution one needs to recognize that not all visible genre changes in a given field transform the social order. Agents in dominant positions in the field draw on the capital they accumulated in other fields to re-establish their dominance by facilitating enactment of new genre that represent the established order—providing a field with a new symbolic mask.

In Chapter Six, I will continue exploring the nature of field transformation or preservation through the enactment of communicative genres, and will focus more on how the enactment of genres shapes collaborative practices and project's outcomes.
"Here is Edward Bear, coming downstairs now, bump, bump, bump, on the back of his head behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels there really is another way, if only he could stop bumping for a moment and think of it." — A.A. Milne, Winnie the Pooh.

Poor Bear. I know just how he feels. He must have worked on this project, too."

—an email sent by the Eserve's Plan Phase Project Manager to the Eserve team.

Chapter 6  Shaping the IS product

6.1  Reframing the question

The question that I am addressing in this dissertation is how people in Information Systems (IS) development collaborate across boundaries. This requires understanding both the social boundaries involved in collaboration and the practices that produce, reproduce, and change these boundaries. In Chapter Four, I showed that IS development takes place in a "project field," where the definitions of the "IS product" and of the genres involved in producing it become stakes in the struggle of individuals participating in the field. While relational boundaries in the constituent fields matter, the collaboration is reshaped by the unique social dynamics of the new project field. The boundaries within this project field are defined by the agents' social status in the field of power ("decision maker" vs. "builder") and by the agents' project experience (old-timer vs. newcomer). "Project experience" is based on the agents' competence in understanding the design choices, and this competence is associated, but not determined, by the amount of time the agents have been involved in the development of a particular system. Due to the temporary nature of the project, the agents in the field are concerned with the value of the IS product that they can claim in their constituent fields, including organizational, industry, and other professional fields. The question that I ask in this chapter is how the
positions, and hence relations, of agents in the project field (the "boundary power dynamics") shape the collaborative outcome, namely the IS product.

In order to answer this question, we need to better understand the notion of "the IS product." From a practice-based IS perspective (Orlikowski 2000), the IS product can be understood as a technological artifact and its use in practice. From a genre perspective, this translates into the use of the artifact in the communicative practices both among different groups of potential users (professors, students, sales reps, etc.) of the technological artifact and between potential users and developers/owners (Pubco content providers and production technologists).¹ From Bourdieu’s perspective, agents can claim value from understanding and transforming fields through objectification. Thus, the goal of the agents in the project field is to objectify current and intended "use" and "production" genres within the IS artifact. This objectification then defines the "emergent IS product." The question for this chapter then becomes how the boundary power dynamics in the project field shape the emergent IS product and its value to participants.

To address this question, I draw on Donald Schön’s reflection-in-action lens to help me understand how collaborative practice produces certain outcomes. Schön's reflection-in-action lens has been used in the past to understand the design process in ISD practice (Bødker 2000). I draw on my field data to illustrate how the communicative genres enacted in the field shape and are shaped by a reflection-in-action spiral. I then analyze various tradeoffs that individual agents and institutions face in preserving or transforming the project field and associated constituent fields.

6.2 Reflection-in-Action

Agents on the Eserve-Pubco project always related their understanding of the current use and production genres with designing them. Even in the very first business development meeting, the discussion of Pubco customers’ current book buying process was immediately followed by a discussion exploring options for transforming the process in an experimental testing mode. What agents were doing throughout the project was exploring the phenomenon: reflecting on various existing objects (the web site, a market survey, a usability test), and experimenting with the new objects they had invented. The experiments were either exploratory (e.g., creating a map for an existing site), assumption
testing (e.g., interviewing professors), or transformational (e.g., creating a new site map). Reflecting and experimenting were inseparable in practice and together they constituted the process of reflection-in-action.

I have drawn insights about an individual professional practicing "reflection-in-action" from the work of Donald Schön, who proposed this concept to describe the way in which professionals address uncertain and non-routine, yet repetitive, problems in practice (Schön 1983: 60). Reflection-in-action is a reflective "conversation with the material of a situation" (78, 79). A designer "shapes" the situation and the situation "talks back" by producing unintended changes, which give the situation new meaning (1983: 79, 131).

The unique and uncertain situation comes to be understood through the attempt to change it, and changed through the attempt to understand it (1983: 132).

In Schön's view, the "back-talk" can be literal as in the case of a psychotherapist listening to a patient, or figurative as in the case of an architect evaluating a drawing that he/she created.

The process of reflection in action spirals through the stages of appreciation, action, and re-appreciation (1983: 132). Appreciation consists of thinking and framing the phenomenon. Action consists of experimentation. To experiment in Schön's framework means "to act in order to see what the action leads to" (1983: 145) and does not assume novelty of action. After experimentation, re-appreciation involves evaluating the phenomenon.

Evaluation is based on the practitioner's stance towards the phenomenon he or she is trying to understand and change. For example, when an architect produces a drawing, he or she evaluates it based on his or her appreciative system, which is defined by this professional's tastes and preferences for resolving the problem (e.g., the use of natural light in the design of a school building) (1983: 135). For this process to occur an individual's appreciative system must remain relatively stable or else the inquiry will become a series of disconnected episodes (1983: 272). In the framework of this study, an appreciative system can be seen as the agent's dispositions in the shared project field and the constituent fields of practice (their professional or organizational fields). The appreciative system represents the agent's competence and interests in designing a new phenomenon ("resolving the problem" in Schön's language). In the practice-theory-based
sense (Bourdieu 1977; Giddens 1984), the present is perceived and the future is created through the lens shaped by the past (Bourdieu’s “dispositions” and Giddens’ “stocks of knowledge”). Agents struggle individually and collectively over which experiments to preserve in the future from the experiments that produced the present.


Reflection-in-action is both a normative and a descriptive concept. On the one hand, Schön shows that all professionals engage in this way of practicing. Hence, “reflection-in-action” is an epistemology of practice. On the other hand, he encourages professionals to improve their practice by thinking, evaluating, and experimenting collectively with their clients and collaborators (1983: 287-354). Schön writes:

Our question then becomes not so much whether to reflect as what kind of reflection is most likely to help us. (1983: 280, original emphasis)

For Eserve-Pubco project’s participants the challenge was not only on the individual level, but was often in choosing between drawing on others’ appreciative systems objectified in prior experiments (e.g., using an established Eserve approach to the Plan Phase) or drawing on individual’s own appreciative system (e.g., using consultant’s own prior experience gained from work in other consulting firms).

Schön calls for studies of the “little-understood ability of inquirers to enter into one another’s appreciative systems and to make reciprocal translations from one to the other” (1983: 273-275). Studying communicative genres situated in fields of practice helps us understand how practitioners engage in role framing and translation. The design of the solution, namely an IS product, is then a process of negotiation that involves collective reflection-in-action enacted through communicative genres on the project.
In this chapter, I propose the following argument:

The outcome (IS product) of the collective reflection-in-action is determined by what kind of experimentation is undertaken by participating agents, and which experiments get preserved in time through collective reflection and experimentation. At the same time, the kind of experimentation that takes place and who gets to reflect on it is at stake in the field struggle. Hence, attaining this stake changes agents’ relations (positions) in the field. Agents’ positions in the field, in turn, shape their dispositions, including the communicative genres that they enact.

This analysis gives us a deeper understanding of how Bourdieu’s theory can be applied in organizational settings and sheds light on some tradeoffs involved in the IS development practice. See Figure 6.1

**Figure 6.1: Bourdieu's Cycle Revisited**

By analyzing the cycle in terms of the reflection-in-action spiral, I can address the main research question of this dissertation: how do people collaborate across boundaries to shape the emergent IS product? In addition, because the objects produced through such collaboration can then become capital in agents’ individual sub-fields of practice, understanding the reflection-in-action spiral provides insights into the tradeoffs faced by agents in collaborative IS development. Figure 6.2 demonstrates the idea that the
collective reflection-in-action spiral, which is produced by agents through the enactment of project field genres, shapes the value of the IS product that agents can claim in their fields of practice beyond the project.

**Figure 6.2: Reflection-in-Action Shaping the IS Product**

Project Field Genre Enactment  IS Product

Spiral of Collective Reflection and Experimentation

Value that can be claimed by agents in different fields

6.3 Genres Shaping Collective Reflection-in-Action

**Collective Reflection**

First, let us consider the reflection part in the collective reflection-in-action spiral. Reflecting on the results of other participants’ experiments is a primary way of collaborating. If there is no reflection on the products of other agent's experiments, then agents only work independently. Even in a simple market transaction, which represents the least dependent type of collaboration, there is a reflection on the product that is being purchased and on the money that is being paid for it.

Collective reflection, unlike individual reflection, requires that agents make their thoughts explicit (tangibly or orally) in the form of *explicit objects*, (henceforth, referred to as just “objects”). Such objects include verbal expressions, gestures, tangible artifacts,
virtual artifacts, etc.—any form of expression that makes an agent’s appreciative system visible to another agent. In case, when it is conventional to say that agents jointly produce an object (e.g., seat in front of the computer screen and produce a joint presentation), they still take turns explicating their “frames” in the form of an object. This object can be a single utterance, such as, “Let’s put an exclamation point there,” a gesture pointing at the screen, or a word typed in the document. In some shape or form agents involved in collaboration must produce objects for reflection by others. “We need to build objects to think with,” was the insightful observation of one of my study participants. This is why studying objects produced for collaborative reflection becomes important in collaborative settings (Star 1989; Star and Griesemer 1989; Boland and Tenkasi 1995; Wenger 1998).

The notion of “boundary object” was introduced by sociologists of science and technology (Star 1989; Star and Griesemer 1989) to describe “objects that are plastic enough to adjust to needs and constraints of multiple parties, yet robust enough to maintain a common identity across sites” (1989). In the growing body of literature on boundary objects, the concept has taken different shapes often including physical product prototypes (Carlile 1997; Bechky 1999; Carlile 2002), design drawings (Bødker 1998), use scenarios (Bødker 2000), various types of shared IS (Ackerman and Halverson 1999; Pawlowski, et al. 2000; Briers and Chua 2001), engineering sketches (Henderson 1991; Bechky 1999), accounting ledgers (Briers and Chua 2001), standardized reporting forms (Star and Griesemer 1989; Bowker and Star 1994; Bowker, et al. 1996; Carlile 1997; Briers and Chua 2001; Carlile 2002) and even shared design factors such as the product yield (Kim and King 2000). The question of how an object’s properties influence collective reflection (and experimentation) has been a topic of much interest for researchers of boundary objects. Beyond tangible and intangible (Carlile 1997), other classifications of objects include the degree of their concreteness (Carlile 1997; Bechky 1999), their accessibility and timeliness (Carlile 1997), and whether they are created in a shared language (Bradbury 1998; Bechky 1999; Lant 1999; Sitkin and Brown 1999).

To understand how object properties influenced collective reflection in my study, I will draw on the “Professor Interview Story.” The story will refer to deliverables and events on the project illustrated in Figure 6.3.
Figure 6.3 Eserve-Pubco Project Timeline and Deliverables
I was fortunate to be included in all the meetings described in the "Professor Interview Story" and shadowed two Eserve agents as the incident unfolded. In this incident, different types of objects (oral expressions and written documents) were transmitted by their producers to intended recipients in different ways (directly or through intermediary agents). However, some of these objects never reached the intended recipients causing much frustration and delay on the project. The story describing the incident will help us understand how object properties and their use matter in collective reflection.

The Professor Interview Story

On the Eserve-Pubco project, people who produced various objects were often frustrated that others were not using them. One vivid example of such frustration was associated with the interviewing of professors (current and future site users) in order to decide what kind of functionality the new site should offer. The project team had talked about conducting these interviews since the beginning of the Plan Phase and everybody on the project supported the idea. One of the strategists ("Eserve strategist") was assigned the task of conducting these interviews, and to generate results that would be used to influence the selection of initiatives.

The strategist began by designing an interview questionnaire and trying to "sample" professors from her personal network. She had already conducted three interviews when she realized that she needed help from Pubco in reaching more professors. She emailed her questionnaire to Pubco's Project Manager ("Pubco PM") to get the Pubco's customer contact list. The Pubco PM emailed back saying that she was not following Pubco's "interviewing guidelines," and insisted that unless she followed these guidelines, she "was on her own as far as interviewing." When the strategist asked for the guidelines, she found that Eserve's Project Manager ("Eserve PM") had already received a copy of them. The Eserve PM had simply not passed them on to other team members and they lay among other "useless pieces of paper" that the client had given to him. Following the Pubco PM's request, the strategist obtained a copy of the guidelines from the Eserve PM. The strategist then relied on the sampling guidelines to select an appropriate segment of Pubco's customers, planning to conduct 90 customer interviews.

A week passed by in other scheduled activities. When the strategist finally got around to conducting professor interviews, she realized that she had only about one week to
process the information and provide the results to the decision on initiative selection. Knowing that the project was "collaborative" and that the client's core team members had committed 40% of their time to the project, she decided to recruit the client's help. She sent an email to two client's core team members asking them to line up ten other Pubco people to conduct interviews starting the following day. She said that she would train everybody on the interview questions.

There was a status meeting at Pubco the day the strategist sent these emails out. During the meeting, the Pubco PM (and other Pubco people) raised concerns that a) the strategist’s request was too short-term and that Pubco could not suddenly come up with ten people not already committed to the Eserve-Pubco project; and b) that it was not appropriate to involve Pubco people in interviewing because they would have to indicate that they worked for Pubco, which might "taint" the interview results. The Eserve PM agreed. However, when he returned to Eserve to do his usual "debrief" to the rest of the team, he said that Pubco was not capable of conducting interviews and that they were concerned with "interviewer variability" in asking questions. This coincidently was his personal concern that he had shared with me before the meeting with Pubco, but which had not been brought up at all in the Pubco status meeting. As a result, the Eserve strategist did not learn the concerns Pubco PM's raised during the meeting.

The following day, there was another status meeting between the Pubco and Eserve PMs. In this meeting, the Eserve PM indicated that if Pubco was not going to help out in conducting customer interviews, the project would just have to make do with as many interviews as the strategist had time for in the few days remaining before the initiative selection meeting. In response, Pubco's managers reaffirmed that they wanted the interviewing done right, which meant not involving their employees in order to avoid "biased" results, and conducting interviews on a scale large enough to draw meaningful conclusions. To accomplish this, they proposed that Eserve extend the project (at Eserve's expense) and employ outside help (temporary workers). The Eserve PM (which prior approval from Eserve's higher management) agreed to extend the project and did not argue with the "temp-help" suggestion.

When the Eserve PM returned to Eserve, he did not relay any of Pubco's proposals to others. In fact, the Eserve strategist conducting interviews said that all she knew was that
Pubco was being bossy and did not want to do the work. The team's conversations with the Eserve PM about the meeting turned into the usual "client bashing," especially with regard to the Pubco PM who was known among Eservers as the "queen of darkness." The Eserve PM did not hire any additional help, nor did he postpone the initiative selection meeting to allow for more interviews to be conducted.

The Eserve strategist managed to interview only ten professors due to a low response rate and insufficient time to contact a new professor sample or follow up on leads. At the same time, she felt that she was getting valuable information from the interviews which was worth relating to others. The strategist wrote up her interview results and sent the final report to the clients. According to the report, key web site initiatives favored by Pubco were of little priority to the users. The Pubco core team argued that the sample size was too small and ignored the report. All in all, they were disappointed with the strategist’s performance, and this disappointment was conveyed to the Eserve PM. The Eserve PM then reported to the Eserve office general manager that the strategist had poor consulting skills. As a result, her hours on the project were cut back and her poor evaluation was filed with the office general manager.

A similar struggle that had to do with conducting a usability test with professors unfolded in the later Prototype Phase. Pubco first asked for three different tests with many different professors involved in each test. This time around, however, Pubco had agreed to pay for the test. The test was to be conducted by Eserve with help of an outside expert. Pubco was easily convinced by an "impartial" outside consultant that it was best to scale down the test to just five professors because even small numbers were indicative. The test was considered to be very credible by Pubco, which embraced its results and acted on them.

**Professor Interview Story Summary**

The Professor Interview Story highlights a series of steps involved in the collective reflection practice such as object production and transmission as well as the reflection on the object produced. First the Pubco PM (the producer) created (experimented) by producing interview guidelines (object), which she intended for an Eservewhod would be conducting the interviews (intended recipient) to use as an object for reflection. For that to happen, the Pubco PM needed to send the object to the intended recipient, and the
recipient needed to receive it. In this story, the producer first reproduced the object (copied it) and then used an intermediary (the Eserve PM) to relay objects to the intended recipient. As a result, this object and other objects like Pubco PM’s oral expressions in meetings were not accessible to the intended recipient. The story also highlights that once the object is made accessible to an intended recipient, as was the case with the interview results object, it is up to the intended recipients to actually use it for reflection or to ignore it. In this case, Pubco agents ignored the interview results object. Finally, the story highlights that when agents do reflect on objects, as happened when the Eserve strategist finally reflected on the interview guidelines, the agent can either change or add to the results of prior experiments in subsequent experiments. The Eserve strategist followed the guidelines, thereby adding to Pubco’s prior experiments objectified in them. Yet, in practice her experiments did not comply with the guidelines, and Pubco believed that she ignored their input and tried to reprimand her through their economic power. This illustrates how agents’ actions in reflecting and experimenting with objects have field (positional) consequences. I will examine this further in section 6.4. Figure 6.4 highlights my understanding of the steps involved in the collective reflection spiral. I will now turn to a discussion of how communicative genres and object properties shape the steps in this spiral.

Producing Objects Intended for Reflection by Others

When agents produce an object in a collaborative setting, they intend for another agent or agents to reflect on it (in a solitary work setting, many objects are produced for reflection by the producer). The intended recipients of the object as well as those who are not supposed to receive it are socially recognized actors in the communicative genre that the producer is enacting. Thus, in the client status meeting between Eserve and Pubco some objects (e.g., who pays for the project extension and why) were intended for reflection by Eserve “decision makers” (e.g., the Eserve PM) only. In producing and reproducing the “decision maker” vs. “builder” boundary, the client status meeting genre objectified who got to reflect on objects, and who did not. In the example described in Chapter Five where technologists asked to be included in strategists’ ad-hoc working meeting genres, they recognized that such genres typically excluded their participation in reflection.
Figure 6.4: Steps in the Collective Reflection-in-Action Spiral

In some cases, the object’s intended recipient is not precisely specified in a genre and thus requires certain “pull” on the part of the recipient or “push” on the part of an intermediary agent. Thus, when the Pubco PM originally gave Pubco’s documents to the Eserve PM, she did not specify exactly who should use these objects for reflection. This was the role of the Eserve PM. Genres that have a “pull” component often depend on the properties of the medium and on the intermediary agent’s actions. In such genres, objects may never reach the intended recipient, thus undermining the collective reflection-in-action spiral. Making an object accessible (Carlile 1997) to the recipient in time and place of use is thus the next step in the collective reflection practice.

Making the Object Accessible to the Recipient

An object producer is interested in the intended recipient actually receiving the object. This material (vs. symbolic) accessibility of the object to be perceived by recipients’ senses (see, hear, touch, smell, taste) is influenced by the technical properties of the
object's medium. I define "medium" here as any material or technological properties of the objects' production, transmission, and receipt that are unchangeable by agents due to the economic constraints of the situation. On the Eserve-Pubco project, the Microsoft PowerPoint product, a white board, and a telephone are all examples of a medium by my definition.

Looking back at the Professor Interview story, objects such as interview guidelines and oral expressions produced by the Pubco PM did not reach the intended recipient, i.e., they did not become accessible to the Eserve strategist. The genre that the Pubco PM enacted in sharing certain objects with Eserve was to pass objects (documents) to the Eserve PM (intermediary agent) who was expected to relay them to relevant people at Eserve for reflection. The Eserve PM was an agent and as such had interests and competencies associated with his position in the field, which shaped his dispositions, and the genres he drew on. When he received these objects, he drew on his dispositions to judge them as not worthy of others' attention. In other words, instead of enacting the genre that others expected him to enact, in which he would play the role of an "impartial, yet knowledgeable conduit," he enacted a genre in which he decided which objects were worthy of reflecting on by Eservers and which were not. From the Eserve PM's position, Eserve was the holder of highly valued cultural capital (Eserve's strategic knowledge), which did not need to rely on client's low-valued cultural capital objectified in "pieces of paper" (Pubco's strategic knowledge from prior experiments). Although the interview guidelines did not initially reach their intended recipient, the Eserve PM did not destroy the object given to him. The object was created in a medium that was "durable" and made for cheap storage, reproduction and transmission, that is, printed on paper. It was thus easy for the Eserve strategist to get the guidelines from the Eserve PM or to ask for another copy from the Pubco PM, once she found out about their existence.

The situation was different the above example when the Pubco PM orally shared her thoughts with the Eserve PM. First, she assumed that the Eserve PM would relay relevant objects to other Eservers in a debriefing meeting or in a summary document. Moreover, the Eserve strategist who was to conduct the interviews was also enacting the genre that the Pubco PM was enacting and actually reflected on the objects relayed to her. That is, she assumed that what the Eserve PM told her was coming from Pubco's PM and
concluded that client was worried about interviewer variability and was acting bossy. The genre assumption socially recognized by both the Pubco PM and the Eserv stratagist was that oral objects would be “passed on” just like documents. This assumption was flawed because of the Pubco PM’s and Eserv stratagist’s “misrecognition” of the role of the Eserv PM, who was not passing on oral objects, but was actually creating new objects in his conversation with the Eserv team members. The Pubco PM’s oral expressions were produced in a medium in which objects are not directly preserved beyond their time of creation. In terms of actor-network theory, the oral objects were not “immutable mobiles” (Latour 1990; 1991). In order to even remember these objects, the agent (the Eserv PM) had to perceive them through his set of dispositions, which are necessarily subjective and vary depending on his positions in various fields. In the enactment of the genre, he was not a "conduit," deciding which objects to "relay," but he was experimenting and producing new objects, which, in this particular case, had little resemblance to what had been originally produced. The crucial feature of the medium used was that there was no trace of the original object, and even if the Pubco PM wanted to reproduce it herself, she would have to act again. One can say that the Eserv PM enacted a different genre, playing a "free interpreter" role in which he used his dispositions to produce his interpretation of the object.

The properties of the medium that agents use to produce and share an object are relevant in shaping the choice of genres used by agents to produced and share objects. Agents have to recognize that certain objects are simply not durable or portable (not “immutable mobiles”) to be passed through an intermediary. An object can be harder (or impossible) or easier to access depending on the technical properties of the medium in which it was produced: oral, body language, wooden, plastic, typed on a typewriter, computer-based, etc. One technical property of the medium is its "durability," which defines the degree to which the object produced in a given medium remains unchanged in time outside agents’ actions. Change here refers to the change perceived by the recipient’s senses. Oral and "body language" objects are created in a "transitory medium" so that without an agent's further action (such as recording) they are not preserved in time. Objects created in a transitory medium require some form of simultaneous interaction between the producer and the recipient. Studies of boundary objects tend to
concentrate on objects created in "durable media" rather than ones in transitory media (oral expressions). When researchers discuss “sharing of narratives” (Brown and Duguid 1991; Orr 1996), the word “sharing” should be interpreted with caution. While agents can retell an unrecorded story, every time it is retold an agent acts upon it, thereby changing the structure of the collective reflection spiral. Thus, the degree of resemblance of the new object to the old object is influenced by an agent’s unpredictable action (experimentation). In the framework adopted here, the story retold by another agent is not no longer the same object as the original story and it is not even a “reproduction” of the original story as I reserve the term “reproduction” to refer to technologically based (predictable) transformations of objects. When an orally related story maintains its identity through time, it is because it is part of a genre that ties together different objects in a given field of practice in a specific way.

Experiments that are produced in more durable medium (“durable medium objects”) such as paper, recorded sounds, or on the computer hard disk do not rely on simultaneous interaction, but instead rely on various modes of transportation/transmission to be used for reflection. Thus, portability, or the degree to which an object created in a given medium can be moved around in space without being changed, is another technical property of an object’s medium. The ability to transport an object at different distances also shapes the genre’s creation and use for reflection. Thus, an oral (transitory media) object can be transmitted in space by means of a telephone line to be used for reflection by another agent who is remotely located. Durable media objects such as computer files and paper-based objects often have high degrees of portability.

With modern technology, many transitory media objects can be converted into durable media objects by means of technology. Thus, reproducibility, or the degree to which an object created in a given medium can be reproduced through technology in another or the same medium without being changed, also influences choice of genres. When the Eserve PM was asked for a copy of the interviewing guidelines, it was easy for him to make a copy for the Eserve strategist. Reproducibility enables the enactment of certain genres as it influences the agent’s ability to reach a greater number of intended recipients while also prolonging the “durability” of objects.
Producing and accessing objects in different media involves varying amounts of effort (time and other resources) associated with the object’s production, transportation, and replication in those media. In enacting various genres, agents are often cognizant of the costs involved. Thus, for example, that an object is created in a durable medium does not necessarily imply its longevity, as another action (experiment) can destroy it. A common example of the tradeoff between keeping and destroying an object is a white (black) board medium, which is often used for objects that are destroyed shortly after their creation. However, agents can with some cost reproduce objects created on a whiteboard in another medium with a reasonable degree of accuracy. For example, on two occasions Eserve-Pubco team participants asked to use my digital camera to take pictures produced on the blackboard (or whiteboard) as they wanted to retain the objects created there for future reflection. The availability of a camera at no cost enabled team members to use the objects produced in the meeting beyond their time of their creation.

A flip-chart medium is typically easier to transport, but is often less accessible to others at the time of creation due to its size (another technical property). Further, once the page of the flip chart is turned during a meeting, it is inaccessible for reflection until an agent expends energy to turn it back or place the paper on a wall (again of a limited size). The room (storage space) taken up by flip charts and white boards has costs associated with it which often leads agents to destroy the objects created in them. Objects can be perceived more or less easily by the senses (sight, touch, sound, etc.) In other words, besides durability, portability, and reproducibility, the technical characteristics of the medium associated with recipients’ ability to perceive an object through their senses influence an object’s accessibility for reflection by the intended recipient (a similar set of properties was discussed by Latour (1986), but not in the context of reflection-in-action). White boards are often larger than flip charts, and projectors make computer screens more accessible to a wider audience.

There are many accessibility examples associated with the different technical properties of different types of computer-based media. For example, on the Eserve-Pubco project, objects stored in the Eshare intranet system, although in theory accessible to clients, turned out to be hard to access due to technical problems on the client’s site. Again properties of the medium mattered in this case. A vivid example of this influence
on reflection was the attempt to try out various calendaring genres. A wall calendar was originally created at Eserve to reflect constraints on individual times and group events within the Eserve-Pubco project. Because this wall calendar was not portable to take with those team members who traveled to their home cities every week, its use was quickly abandoned and replaced by a series of email messages reporting on changes in people's schedules. Set in a new medium, those calendar events that agents intended others to reflect upon were made accessible to everybody on the Eserve side of the project (including myself for observation). The technical properties of this new email medium enabled and constrained the use of certain genres for scheduling an event. That is, in both calendaring approaches, events that others had to reflect on were made accessible to the group in one place (either email or wall calendar), but in the case of email, all other group members had to update their personal calendars or search for events for future reflection.

The tradeoffs associated with the effort necessary to make an object more accessible to the agents for their reflection shape genre establishment and enactment. The Professor Interview Story highlighted a simple observation that those genres that rely on sharing objects that are produced in a "transitory" medium require a simultaneous connection among the agent producing the object and the intended recipient because in the enactment of genres that rely on the intermediary it is not the same transitory medium object that is shared, but a different object is produced, with unpredictable degree of similarity to the original. If the socially-agreed upon purpose of the genre is to produce an object for reflection by a certain agent, one tradeoff to consider is between the effort it takes to produce an object in a more accessible (durable, portable, reproducible, larger, etc.) medium and the possibility (availability, willingness, and effort) for agents to make a direct connection in time and/or space. It is not, however, the tradeoff between passing an object to an agent using transitory medium or creating it in a durable and portable medium, that was recognized by the study participants. An agent in the conduit role cannot simply "store" a transitory object in memory, but instead is necessarily reflecting-in-action with the object (ignoring it, interpreting it, deciding whether and whom to relay his interpretations to). Of course, tradeoffs between creating more or less durable and portable or larger or louder objects often pertain to longer-term genre or genre system purposes such as repeating the reflection later on (as was expected at the time of creation
of Pubco's interviewing guidelines), or involving more people in reflection (as in a presentation), or having a faster iteration through the collective reflection and experimentation spiral (as in a workshop or a rapid prototyping computer tool). Nevertheless, the accessibility of an object in a given medium is not a guarantee that the objects will actually be used for reflection, as that depends on the genre enacted by the recipients.

**Using Objects for Reflection**

Once the object is made accessible to an agent in time and space, the intended recipient may or may not use it for reflection depending on the genre that the recipient is enacting. The Eserve strategist finally did reflect on the interviewing guidelines because in the genre that she was enacting she needed Pubco’s help (economic capital). However, receiving an object does not guarantee its use. Much like receiving junk mail—receipt may still lead to dismissal. Not reflecting on the object that was made accessible is, in effect, a refusal to accept the object producer’s genres. Pubco agents did not use the report summarizing the professor interviews although the Eserve strategist intended for Pubco to reflect on them and made them materially accessible. The object was dismissed because Pubco’s agents enacted a genre which based their initiative selection on their own experiments (as described in the “Prototype Phase Story” in Chapter Five).

Another reason why reflection often does not take place, is that the genre that the object producer intends for the recipient to enact in using the object for reflection may not be the one that the recipient has competence in. In “Informing the Designers Story” described below, designers’ who joined the team during the Prototype Phase of the project had no competence in the genres that strategists expected them to enact in using the objects they received for reflection. There were two types of competencies that designers were lacking: competence in using genres developed during the first Plan Phase of the project (e.g., genres based on client’s terminology), and competence in using genres from the strategists’ genre repertoire (e.g., genres based on structured documents).

**Informing the Designers Story**

The Prototype Phase was signified by an influx of new team members as well as an exit of some old team members. There were two new team members who were graphic designers and a new Prototype Phase PM (“Prototype PM”), who was from the strategy
discipline. New team members all met personally with the old Eserve PM who "relayed" to them "the story" of the site describing some of the decisions about the site. He gave project newcomers "an earful" of how difficult it was to work with Pubco and especially with the Pubco PM.

When the two new designers officially joined the team, they were given a copy of the final deliverable "deck" from the Plan Phase to read. In a "knowledge dump" meeting, the Plan Phase strategists walked the newcomers through the deliverables deck, which contained the Day In the Life Of scenario (DILO) that graphically depicted a future user interacting with a new site, the three functionality initiatives that the site was going to develop, the audience segmentation report, and the "how did we get here" story. While clients "loved" the graphical DILO set in the user context, the designers who did not know the industry well did not understand its terminology including such terms as "book adoption" or "ancillaries." Both designers and the Prototype PM asked many questions in the "knowledge dump" presentation indicating their difficulty (lack of competence) with the client's terminology.

To facilitate their learning of project decisions, the newcomers attended a series of meetings in which the old-timer strategists told them about the client and the initiatives that were planned, as well as what to do next. In addition, the newcomers were all encouraged to browse the existing Pubco site. It soon became apparent from the questions that were asked in interactions, that the Prototype PM was "getting" the language and decisions that had been made on the project, while the designers were not. In fact, it turned out that working with structured textual documents (decks, spreadsheets, and word processing documents) was not part of designers' practice and they did not have the competence to understand the numerous "dry" spreadsheets and structured documents produced by the strategists.

The next major task of the designers was to develop the look and feel for the site ("the style guide") and the front (home) page graphical treatment by the end of the third week of the project. These included specifying the fonts and the color palette. To do this, designers needed to understand the functionality of the site and the priority of intended audiences and features. Such decisions would shape the navigation of the site and the presentation of information, that is, the "Information Architecture." An Information
Architect, another member of the design discipline, but with technology skills, was brought into the project. Much like the other two designers, he had trouble understanding objects produced by strategists, the client’s terminology, users’ book selection genres, and client’s priorities.

Meanwhile, members of the strategy team, now playing the role of “functional analysts” in the Prototype Phase, were engaged in building “Use Cases.” Use Case Scenarios are part of the UML (Universal Modeling Language) object-oriented systems analysis genre system and typically rely on graphical representations of users’ and system’s actions. They have their origin in the Scandinavian school of design (e.g., Jacobson 1993; Tolvanen and Lyytinen 1994; Kyng 1995; Bødker 2000) and were developed in an attempt to draw users into the design conversation. At Eserve, Use Cases were the responsibility of functional analysts and the genres that produced them varied from project to project. Based on my participation in the Use Case training conducted by a CASE (Computer Aided Software Engineering) vendor at Eserve, it was apparent that creating Use Cases in the UML standard was a competence that only a few “hard core” technologists and none of the strategists at Eserve possessed. Thus, when the strategists were assigned the task of functional analysis in the Prototype Phase, instead of learning UML, they decided to create Use Cases in a language in which they already had competence (i.e., structured textual documents). These Use Cases were used to facilitate regular discussions with client’s sub-team consisting of mid level, non-technical managers. Relying on clients’ terminology that both parties knew, as well as on standard managerial genres (meetings, documents, spreadsheets), the “fleshing out” of functionality in Use Cases was seen as a valuable and even “fun” activity for Eserve strategists and Pubco’s managers. An example of one Use Case produced by the team is given in Appendix F.

In the genre that strategists enacted, Use Cases were supposed to be used by designers to create “graphical treatments” for the site, which would then be combined in a “Mockup”—a prototype with minimal functionality (i.e., merely “click through”). To facilitate this activity, strategists sent designers high-level Use Cases as soon as they were ready and then met with designers to discuss the site design in so-called “Information Architecture (IA) meetings.” Hours and eventually weeks were spent in meetings with
the three designers who were still not "getting it." Strategists were growing increasingly frustrated that designers were not "taking ownership" of the web site and were not "making an effort to learn." The Information Architect, a designer with the most "structured modeling" background, began manipulating Use Cases in an attempt to do his work. He cut out printouts of the Use Case documents and pasting them on a flip chart so as to create a navigational paradigm for the site—a tree-like "site map." However, he still did not know enough about the project and the tools used on it to do his work effectively. He also needed to facilitate the creation of "Wire Frames," black and white sketches of web pages that would show the navigational elements without any graphics or color. An example of one Wire Frame that was produced by the team is given in Appendix G. With one deadline coming and going after another, the Prototype PM started reflecting on the approach (genres) that was used for communicating with designers towards the mid-point of the Prototype Phase. Through a number of contentious conversations with designers, where much frustration was expressed, the Prototype PM realized that the designers were not accustomed to working with structured documents and were simply ignoring what was sent via email or handed out. One of them openly admitted having no ability or inclination to learn to read structured documents, while the others admitted trying to do so and then giving up.

Dissatisfied with designers' unwillingness to learn the strategists' tools, the Prototype PM asked strategists to build first-cut Wire Frames and give these to designers. Although other strategists supported this decision, they felt that they were doing work that was not part of their responsibilities. They expressed disappointment at seeing designers go home at 6 pm and on weekends while strategists had to stay sometimes until 3am to finish the Wire Frames. However, as soon as designers got the first Wire Frame from strategists, they were up and running—working long hours like strategists and producing results. Several graphical treatments for the front page were delivered in a few days and the project finally moved forward after a month-long delay and only three weeks before the delivery date. Pubco liked one of the designs and it was selected to set the "style" for the rest of the Mockup.

Initially, designers told strategists that for ease of navigation and aesthetic appeal, the top-level navigation should have three to five navigation elements and no more, which is
what strategists followed in the first set of Wire Frames that they produced. However, as the Prototype Phase of the project unfolded new understandings of Pubco's priorities, which emerged from various strategic meetings (so-called “scope creep”), led to some changes to the front-page navigation. Instead of the three navigational elements in the prior top-level Wire Frame, the front page now included six of them. With some compromising on the part of the designers, they accommodated the change without significantly affecting design integrity. When the seventh navigational element was added, the designers wrote in an email to the group, “Speak now or forever hold your peace.” A number of other links did not fit into the current design, and designers had to change the design to accommodate them. For example, they had to harden the edges (e.g., make the banner look more square-like) and decrease the text fonts. They did not like these changes. In fact, strategists did not like the new look and feel either. One of them, with some Photoshop skills but no design training, ventured on his own to create an alternative design in which he played around with the navigation elements. Other strategists applauded pointing out that the strategist took real ownership and had produced a beautiful design overnight. The original author of the design, predictably, did not support her colleagues devaluing her skills in public. Fortunately for her, in the client meeting presentation, Pubco insisted on the original design that they had chosen. However, the strategist’s experiment with now eight navigational elements was so well received by other Eservers that the original designer had to change her design to be more like what the strategists had created. She lost almost all of her “soft edges.” With a week left until the delivery date, designers did not argue. “There was no time and the strategists did not want to talk to us,” designers said in interviews.

Subsequent pages were designed in a similar manner. Strategists produced Wire Frames and designers added colors and graphics on top of them. The second level navigation added seven navigational elements to the first eight. At the end of the Prototype Phase, neither Eservers nor clients liked the outcome. The strategists blamed designers for not taking “ownership” of the site, not learning enough, not working hard enough, and not providing “creative input” into the Wire Frames. The Prototype PM raised a performance issue with the designers’ mentors at Eserve. The strategists were envious of other Eserve projects where there was apparently “no need for Wire Frames,”
and the designers took a more proactive role in the process. The usability test conducted on phase completion indicated what designers knew all along, but were afraid to voice—there were just too many main navigational elements that were decreasing the usability and aesthetic appeal of the site. Pubco decided to invest money into three more weeks of Mockup redesign guided by Eserve-experienced designers (since incorporating feedback from usability tests was not part of the original Prototype Phase contract). Because the full Mockup design was still not done, the Execution Phase included seven representatives of the design discipline for the first two months—instead of the usual two participating in that phase. In the final web site design, there were just four main navigational elements on the front page and plenty of soft edges.

**Informing the Designers Story Summary**

The story illustrates that in order to use an object for reflection it is necessary to have competence in using the object—*competence* in the genre of its use. In the beginning of the Prototype Phase, the strategists relied on structured textual documents as well as graphical presentations, such as the DILO, to teach newcomers (designers and the Prototype PM) about the IS product under development. The Prototype PM had experience working with structured textual documents and as a result, was quickly able to gain the necessary “product competence” (competence in emergent IS use and production genres). The designers did not have enough experience working with structured textual documents to gain this necessary competence. During the Prototype Phase, the strategists recorded their experimental results in Use Cases—new objects that were still based on structured textual documents, which again precluded the designers from *using them for reflection*. Without understanding the emergent product, the designers could not conduct their own *experiments* (i.e., produce graphical treatments). Consequently, the strategists and the Prototype PM became very frustrated with the designers. In order to facilitate mockup creation, they produced graphical representations of their Use Cases by using Wire Frames (new objects). The designers had experience with Wire Frames and, as a result, were able to use them for reflection. Despite the apparent progress, however, the genre that emerged around the use of Wire Frames was such that designers only felt empowered to *add* “graphics and colors” on top of the existing Wire Frames, but not *change* their underlying structure. The delivered mockup reflected the strategists’ but not
the designers’ competence in the design and was poorly perceived by project participants and clients.

**Having Genre Competence: Languages, Stories, Concrete Representations, and More**

The Informing the Designers Story illustrates that designers struggled to gain “product competence”—an ability to reflect on the emergent use and production genres of the IS artifact as objectified in the Plan Phase of the project. The struggle was apparent in the attempt to use the DILO object described at the beginning of the story and the Use Case objects later on. The lack of competence in the genre led to designers ignoring (*not using the object for reflection*) the objects and breaking down the collective reflection-in-action spiral. Let us examine what is involved in having genre competence.

One aspect of such competence is a competence in the *language* of an object’s creation. Creating objects in shared language has been found to be a key element in enabling cross-functional collaboration (Bradbury 1998; Bechky 1999; Lant 1999; Sitkin and Brown 1999). In the Use Case example, designers stated that they did not read long structured documents or tables. Wire Frames, which designers did use for reflection, contrasted sharply with Use Cases in this sense because they relied on graphical language. Many professional fields use graphical languages in their object creation and hence graphical objects are often prominent boundary objects: maps (Star 1989; Star and Griesemer 1989; Carlile 1997) and engineering sketches (Henderson 1991; Carlile 1997; Bechky 1999; Carlile 2002). Staples of collaboration on IT projects include such graphical objects as data models, work flow diagrams, and technical architectures (Kyng 1995; Bødker 1998). While graphical language is often effective, the DILO-based presentation example highlights that it is not sufficient: the graphical language of the DILO was not enough for designers’ to successfully use it in their reflection.

In the DILO-based presentation, the DILO was actually part of telling a narrative, or story, about the future “use genre.” It went something like, “A professor needs to teach a class. She heard about Pubco’s new site in an email ad and decided to give it a try. She goes to the site and starts by …” Much like the Eserve (Plan Phase) PM told newcomers the story of their relationship with the client, the DILO presented by project old-timers in the “knowledge dump” meeting told the story envisioned by Eserve for use of the web
site. Stories have been described as a key tool for learning in communities of practice (Brown and Duguid 1991; Lave and Wenger 1991; Orr 1996). Yet, designers did not seem to be learning from this story.

The DILO was also "concrete" in the sense of being tied to designer's practice, as opposed to Use Cases, which were "abstract," that is, not tied to designer's practices (Lave and Wenger 1991). In fact, creating DILOs was a standard practice for designers and it was an exception that on the Eserve-Pubco project the DILO was done by a strategist, but was of the same (perhaps less polished) form as the DILOs created by designers on other projects. In other words, the tools used to create DILOs were familiar to designers, yet the designers still were unable to gain project competence from the DILO, i.e., to effectively use it in their future experiments.

Finally, the DILO was also "concrete" in another sense—it was a "concrete representation" of the web site "use genre." Studies of collaboration in organizations (Carlile 1997; Bechky 1999) point to the value of creating such representations. Here "concreteness" refers to "the degree to which [the representation] resembles the actual problem or object that is of concern" (Carlile 1997; Bechky 1999). Understanding and designing the "use genre" for the web site was the problem that was of concern in the field. In current literature, the most prominent concrete representations of this type appear to be prototypes of various kinds (Carlile 1997; Hargadon and Sutton 1997; Bechky 1999; Leonard and Swap 1999; Schrage 2000). The DILO was a first cut "non-functional prototype." In other words, "concrete" here can be understood as "user centric" (vs. "not user centric"). Unlike Use Cases, but very much like the existing Pubco site, the Wire Frames, and the Mockup, the DILO had a great degree of resemblance to the objects used in the "use genre." The usefulness of these objects for collective reflection is often associated with the fact that they are part of a genre that has a user as its audience—an audience that is often still removed from technology product development projects (von Hippel 1988). Like a Mockup that can be shown to the user, DILO was a big hit at Pubco and was shown to a variety of stakeholders, who were not involved in the project but were familiar with the current "use genres" of Pubco's customers.

Developers of consumer products often have competence in "use genres," which explains why objects relying on such competence can be effectively used for reflection.
For example, in the case of the R&D group, the “use genres” included “buying apparel” or “asking people to lunch.” DILO-based presentations were by far the most used and most liked genres in the R&D group. In this case, a use genre was a common denominator in which all project participants had competence. However, this was not the case among Eserve consultants on Pubco project. Although they often commented on how lucky they were that they were to be building a site about books and not about space rockets, many of them had little familiarity with professors’ “use genres” in dealing with publishers and had to invest time in learning these genres. As a result, the “use genre” depicted by the DILO could only be used for reflection by agents already familiar with the “use genres”—Pubco agents and Eservers from the Plan Phase.

The use of the DILO on the project relied on recipients’ competence in current “use genres,” and instead of facilitating designer’s reflection was the very reason why it was not used. The issue with the DILO-based presentation genre enacted by Eserve strategists was that it required newcomers (designers and the new PM) to be competent in the “use genre” already enacted and envisioned for communication between professors and Pubco. There were many aspects of having competence in this genre which constituted answers to questions who/why, what, where, when, and how (Orlikowski and Yates 1998). This competence included knowing how Pubco segmented its customer audience and internal departments (who/why), professor’s intents in adopting books and Pubco’s goals and priorities for the web offering (why), terminology used by Pubco to describe its products and by professors to choose among them to teach courses (what), and the steps in the book adopting and purchasing process including their possible places and times (where, when, and how). The old-timer giving a presentation was actually involved in the project for three months, was conducting client interviews, participated in all the workshops as well as engaged in Eserve debates about the site, in other words, gained competence in this genre through his early involvement in the field. The DILO-based presentation genre, which was based on the “use genre” unknown to designers, was actually reproducing the project old-timer vs. newcomer boundary by drawing on competence in a “use genre” that designers did not have. Expecting a recipient to enact a genre in using an object for reflection, in which he or she did not have competence, was often why the collective reflection spiral was undermined on the Eserve-Pubco project.
Studies of boundary objects elicit different aspects of genre competence required to use shared objects for reflection, including various languages that the genre draws on, presence of a chronological dimension in genres (as in stories), and different faces of genre “concreteness” (such as relationship to practices of the professional groups involved and relationship to the phenomenon being addressed). However, these characteristics of an object and the parties involved in collaboration change depending on the actual genre (socially recognized forms and purposes) of the object’s use. In this sense, they are not properties of an object. The very same DILO-based presentation was effectively used at Pubco, but when the audience changed, it lost its effectiveness. More recent developments in the boundary object research (Carlile 2002) focus on the way in which boundary objects specify dependencies among agents involved in collaboration, that is, specifying the boundary itself. Applying this lens, we would see that the DILO-based genre did not specify how newcomers could learn what the old-timer’s knew. However, Carlile’s approach would require a focus on the whole genre of the object use (looking at all the questions outlined by Orlikowski and Yates (1998)), and not just on the object (the part that answers “what” question). Had, for example, designers figured out a way of translating the scenario in the DILO into their own book adoption behavior through questions and answers (a different “how” in the DILO-based presentation genre definition) or had the designer involved in the Plan Phase presented the DILO (a different “who”), then the analysis of the enactment of this genre might have reflected the dependency between project newcomers and old-timers even though the analysis of the DILO object by itself did not.

**Collective Experimentation**

If we were to adopt the boundary object lens in this study, a Wire Frame would be a boundary object *par excellence*. It was tangible, created in a shared graphical language, easily identifiable (through a name and number), materially accessible, easily adjustable (in the Microsoft Visio tool in which it was created), concrete, and, most importantly, used for reflection by Eserve strategists, Eserve designers, Eserve technologists, and clients. Although in the lens adopted here, many of these properties do not describe an object, but rather pertain to its creation and use genres (language, identifiably,
concreteness, and use in practice), use of Wire Frames certainly moved the project forward. According to all the project participants I interviewed, Wire Frames constituted a useful communication tool. As an object, a Wire Frame was “plastic enough to adjust to needs and constraints of multiple parties employing them, yet robust enough to maintain a common identity across sites” (Star 1989). The issue on the project was that in the genre in which designers experimented, they never felt *empowered* enough to adjust the Wire Frames to their needs.

Once the recipient of an object has reflected on the object, (barring forgetting) in the recipient’s subsequent experimentation with the phenomenon he or she can either *add* to the results of prior experiment(s) or *challenge* these results. There appear to be more logical possibilities than these two. For example, think about needing to sauté one onion. If one agent minces the onion and another agent just takes and sautés it, the recipient just adds to the experiment of the producer. If the recipient does not like the results of mincing, he or she may try throwing away this onion, getting another onion and mincing it him- or herself, thereby, challenging the producer. If the onion is cut in half and each agent does the mincing and sautéing him- or herself, then the results still have to be combined at some point and somebody has to move first. Thus whoever is moving second can either add to the results of the agent moving first or can get another half of a new onion and start over. Clearly, this action would be restricted by available onions (economic capital), but it is a possible action. The other logical possibility seems to be replication. If the first agent takes a half of the onion and goes through the whole process, then the second agent takes the other half and tries to replicate the steps exactly. At the point when the results are combined, the same (add or challenge) choices appear. The situation is different, of course, if the interest is not in sautéing one onion, but in learning how to sauté. In this sense, the subject of reflection is not the onion but the genre of sautéing, which can be replicated multiple times with many onions all of which can go into a trashcan and still satisfy the learning interest. This is the logic of practice in many professional communities of practice, where the main goal is gaining competence in enacting genres rather than in producing a product.  

When the subject of reflection is the object of production, then in a given “reflection-in-action loop,” the actor using the object for reflection can either *add* to the emergent
product reflected in it or \textit{change} that product in his or her own experiments. In the enactment of the Wire Frame-based genre in the Eserve-Pubco project field, designers simply \textit{added} their experimentation to the experimentation of strategists. This is what is typically done in the “waterfall” design models where the next agent adds to the work of the prior agent. The results of such reflection-in-action spiral resemble an assembly line, so such practice can be termed “\textit{execution}.” Because designers were dominated in the Eserve-Pubco field (they were newcomers and “builders”) in the genre that they were enacting they simply executed the will of the strategists in the creation of graphical treatments. Even the terminology of functional “requirements” emphasizes this mode of reflection-in-action.

The technical properties of a medium in which an object is created also play a role in such “execution” practice. It is often convenient in such types of collaboration to replicate an object to which a new component is added. When one of designers did not have the computer tool, which could enable him to replicate what strategists have done before adding to it, he had to spend (waste) a lot of time retyping the labels and texts from the printouts. He did so to his own frustration and to the frustration of others concerned with his slow work progress.

Finally, the enactment of some communicative genres on the Eserve-Pubco project \textit{challenged} the results of prior experiments upon reflection. There were different kinds of “\textit{challenge}” mode experimentation. Some were undertaken when the producer expected the “execution” mode to take place, while others were undertaken when the producer expected to be challenged. For example, it was often the case that one strategist challenged the experiments of the other Eserve or Pubco strategist in a workshop on Use Cases. These types of genres enacted among positional “peers” are akin to many academic collaborative discussion genres. Interestingly, strategists on the Eserve-Pubco project were expecting designers to challenge (“engage with”) their Wire Frames. However, designers did not feel empowered enough to do so based on their relationship with strategists. Strategists, in contrast, were quite empowered to challenge designers’ work in the genres that they were enacting, while designers were not expecting such challenges. This, for example, was the genre that one of the strategists enacted when he
made his own graphical treatment experiment or when strategists changed the top-level navigation and asked designers to accommodate it by changing their design.

To summarize, the enactment of communicative genres in the Eserve-Pubco project field shaped the reflection-in-action spiral. Agents' enactment of various genres on the project shaped whether and how collective reflection took place by defining:

- the “producer” agent’s intention to produce an object for reflection by another “recipient” agent in the genre that the producer was enacting
- the method of sharing an object for reflection
- the recipient’s competence and intention to use the object for reflection in genre that the recipient was enacting

Agents' enactment of various genres on the project also shaped how collective experimentation unfolded by defining whether:

- the recipient agent would add to the results of the producer’s experiment—“execution” mode, or
- the recipient agent would challenge the results of the producer’s experiments—“challenge” mode.

Next, I will focus on how the collective reflection-in-action spiral impacts the positions of agents in the joint field of practice as well as in other related fields.

6.4 Reflection-in-Action Spiral Effect on Field Positions

Field positions, as shown in Chapter Four, are based on distinctions. There are many distinctions, but the logic of practice in a given field operates through homologies that make certain distinctions more salient than others. In the Eserve-Pubco field the most salient distinctions (boundaries) that were objectified in the field were based on the competence in the current and emergent “use and production genres” including the competence in the IS artifact as it had evolved thus far (“product competence” and the associated “project experience” boundary) and the competence in IT consulting genres on the project as well as the possession of economic capital (“process competence” and the associated “decision-making” boundary). As such, these boundaries were shaped by collaborative practices, that is, by the enacted reflection-in-action spiral. Objects
produced through the reflection-in-action spiral shaped the product IS, which was the stake in the struggle involving the project experience boundary, and the consulting genres enacted on the project, which were the stakes in the struggle across the decision-making boundary. Each action in the collective reflection-in-action spiral redistributed certain stakes among agents in the fields, thereby shifting their relative positions.

"Ignoring" Objects with Full Genre Competence

First I will focus on the field consequences of not reflecting on objects produced by others—"ignoring." Moreover, I will consider the case in which reflecting did not require the recipient to gain special competence in the producer's genre (like learning how to use structured textual documents) outside the project field. This was the case described in the Professor Interview Story. When Pubco’s agents ignored the professor interview results, justifying this action by referring to the low response rate, they were making this decision based on their process competence: "consumer surveys with low response rate cannot be trusted over experience-based knowledge of the producer firm." However, in genre language, Pubco was rejecting the genre that was enacted by the Eserve strategist whose process competence was in "trusting any consumer interview results over producer’s opinion." By ignoring the Eserve strategist's interview results object, Pubco agents established their dominance in the decision-making dimension based on their process competence. Following or rejecting genres proposed by others on how to make decisions was a symbolic stake in the struggle in the field of power (i.e., across the social status boundary). Thus, ignoring the results of other agents’ experiments resulted in an accumulation of the "decision-making" capital, that is, in the relative improvement of agents’ position with respect to the agent who produced an object.

By ignoring the interview results, Pubco not only gained a big process stake by invalidating the Eserve approach to interviewing, but they also failed to gain a big product stake associated with competence in the use genres revealed in the professor interviews. Since the Eserve strategist, on Pubco’s insistence, was removed from further functionality decisions, the product competence that she had acquired had no impact on the product capital of the remaining field participants. This indicates the cumulative consequences of ignoring. By ignoring the Eserve strategist’s object, Pubco was actually
ignoring something they had wanted to reflect on—professors’ book adoption genres, the competence in which they were hoping to use for their competitive advantage. In this sense, all the economic capital that was spent on discussing and conducting professor interviews had no impact on the Eserve-Pubco field agents’ product competence, which they had hoped to convert into cultural and then economic capital of the web site in the academic publishing field. Appendix H summarizes the practices that comprised the Professor Interview Story and indicates how they resulted in the distribution of process and product stakes in the Eserve-Pubco field and in the field of power.

Another consequence of ignoring is that, when it becomes known that an object intended for reflection was ignored, the often hidden power dynamics ("doxa") that is involved in ignoring is revealed, and the producer learns that the recipient is dominating through such actions. This is what caused the troubles for the Eserve strategist who, due to the actions of the Eserve PM appeared to be openly ignoring Pubco’s input on how to conduct interviews. Unlike the Eserve PM who managed to hide his action of “ignoring,” the Eserve strategist had to pay the price for what appeared to be an act of an open symbolic domination, i.e., of openly ignoring Pubco’s input. When the boundary power dynamics involved in ignoring are unmasked, the genres have to be changed from relying on “symbolic mechanisms” (helping Eserve out by interviewing in a spirit of collaboration) to economic mechanisms (giving Pubco’s contact list to Eserve only if the interviewing guidelines are followed) (Bourdieu 1977).

Ignoring prior work on the project, although it was fully accessible, was a commonplace occurrence at Eserve. Eservers spent a tremendous amount of time, especially in the Plan Phase, preparing various reports and presentations. Most of the 70-hour workweeks during Plan Phase were spent in these activities. However, these presentations were hardly ever used for reflection by other Eservers in the same phase or in the Prototype Phase. In fact, in the New Hire Training Program (NHTP) a strategist teaching the class referred to the objects produced through the Plan Phase as “Slide Graveyard.” These “durable” and “portable” medium documents (“immutable mobiles”) were typically stored in Eshare, but rarely used for reflection. On the Eserve-Pubco project, a technologist produced one such document during his involvement in the business development cycle. In this document, he summarized what the client’s operating
environment and current initiatives were including their competition, initiatives they wanted to pursue with the web site, and his opinion about the value of these initiatives for the market. The document was written in the non-technical language typically used by strategists. The document was placed in Eshare with other documents, as well as printed out and given to strategists for their reflection. However, the three strategists who joined the project at the time of kick-off never reflected on the document. In interviews they said that they never found the time to reflect on documents produced in the business development phase. Had they actually reflected on the document, they would have learned what client wanted to achieve with the project and they could have used this insight to resist clients’ domination of initiative selection. When Pubco put together “the must do” directive memo described in Chapter Five, they actually motivated their action by saying that it did not appear that Eserve was listening to things they said earlier and indicated that as long as they were listened to they would welcome Eserve’s challenges.

The “Slide Graveyard” phenomenon illustrates that ignoring within Eserve results in the same outcomes as ignoring among Eservers and clients but in a different field. By ignoring what other Eservers have done, the recipient agents valued their own competence more than they valued the competence of others. In most cases that I observed, the motivation was only to do what was best for the project by drawing on what one “knew” best—one’s own competence. When the recipient had access to the producer’s object, it was rarely a simple decision to ignore what was in front of them (especially among Eservers). It was typically a painful tradeoff between learning what others had done and relying on one’s own competence. However, once an agent made such decision or tacitly ignored the object intended for his or her reflection, recipient’s action (or inaction) resulted in the recipient gaining a process stake.

In this case of ignoring, the effects were also cumulative. By ignoring the technologist’s document, the strategists ignored something produced by others (Pubco), which they did not necessarily want to ignore. Their ignoring revealed “doxa” for both Pubco agents and the Eserve technologist, which Pubco agents used to their advantage—more direct “economic” domination. Much like Pubco gaining a process stake in the Eserve-Pubco field by ignoring the interview results weakened its position in the academic publishing field (lost cultural capital gained from professor interviews),
strategists attaining a stake in Eserve field by ignoring the technologist’s document weakened Eservers’ position (lost cultural capital gained from early business development rounds) in the Eserve-Pubco field.

Agents’ inability to reflect on each other’s work and to learn from the past experiences was often referred to as “treading water” at Eserve, and was the frustration voiced by the Eserve Plan Phase PM when he sent to others the “Winnie the Poch” quote that I used as the epigraph to this chapter:

'Here is Edward Bear, coming downstairs now, bump, bump, bump, on the back of his head behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels there really is another way, if only he could stop bumping for a moment and think of it.'

—A.A. Milne, Winnie the Pooh.

Poor Bear. I know just how he feels. He must have worked on this project, too.

A New Hire Training Program (NHTP) instructor introduced this expression to explain a common dilemma on projects between “treading water” and “learning.” I was surprised at the term because people were working 70 plus hour workweeks and producing deliverables and finishing projects. This did not feel like the “lack of progress” that “treading water” refers to. However, it became apparent that the frustration that Eservers were experiencing was in the dilemma between making visible progress towards tasks specified by clients through applying competencies that they already had (e.g., putting together a presentation for tomorrow based on what one knows), or learning about the results of others’ experiments (e.g., reading the technologist’s document). The frustration was attributed to clients applying pressure for short-term economic deliverables with minimum required economic investment. While this was the case sometimes, the Eserve strategists did not recognize how ignoring the work of other Eservers also facilitated their gaining process stakes on the project and improving their position with respect to the social status boundary in the Eserve-Pubco project field, in the Eserve field, and, eventually, in the field of power. Ignoring without being punished in some way for it was a privilege of empowered clients and Eserve strategists; I did not observe technologists ignoring objects produced by clients or strategists.
"Ignoring" Objects Because of Genre Incompetence

The effect of ignoring or reflecting on agents’ positions in fields other than the project field (e.g., the field of power or the Eserve field) is different when reflecting is associated with the need to acquire competence in genres that are not “use or production genres” for the given IS artifact (i.e., not the genres that are part of the capital that the project field is set out to produce). For example, designers actually intended to learn from Use Cases to attain product stakes (“use genre competence”) that they were interested in attaining. However, learning how to follow Use Cases required making a large investment in gaining competence that they did not believe was of value in their professional field of practice.

Having designers acquire competence in Use Case genres was a stake in the professional struggles in the Eserve field (or more globally in the web development field). A good analogy for the dilemma that designers were facing is in learning or not learning the French language when traveling to France so as to be able to choose the right menu item in a restaurant. Many Americans do not learn the French language for this purpose. Learning the French language takes a long time and maybe very difficult for some people. For many Americans, knowledge of the French language will not improve their social position in the fields of practice in which they participate beyond their trip to France. Because the number of foreigners bringing tourist dollars to French is significant, every time an American converses in English in a French restaurant, they are in fact entering a struggle over whose capital is more valuable in the French tourism field. Yet for frequent business travelers to France, it may be worthwhile investing in learning French. In this sense, the establishment of communicative genres is both a stake and an instrument in the struggle that was enacted in the Eserve field. At the time of the project, designers were losing the battle in the Eserve field much like holders of artistic capital are dominated by the holders of economic capital in the overall field of power (Bourdieu 1984; 1996). The strategists on the Eserve-Pubco project commented that they did not think that designers they were dealing with were “true Eservers,” referring to designers’ attempts to transform the Eserve field by refusing to gain competence in using structured documents.
Unlike the case described in the Professor Interview story, where Pubco actually lost cultural capital in the academic publishing field by ignoring the professor interview results, in the Informing the Designers story, Pubco’s cultural capital in the academic publishing field was not lost when designers ignored Use Cases. Instead, it was objectified in the form of Wire Frames and preserved for future experiments.

To conclude, ignoring the results of prior experiments challenges the established social order in the local field and in other related fields by redistributing process stakes. In addition, however, if the result of ignoring is permanent (i.e., the experimental result reflected in the object is never reflected on again in this or other forms), then ignoring may result in project participants losing product stakes (cultural capital) in broader social fields (in the field of power). Next, I will examine whether the social order was preserved or transformed once reflection took place.

Field Consequences of Different Modes of Collaborative Experimentation

Agents’ positions in various fields were further shaped by how the past was preserved or changed through experimentation. In the execution mode of experimentation, field positions within the Eserve-Pubco field were preserved. For example, this happened in the enactment of the Wire-Frame-based communication genre. In addition, the short-term economic value of the object produced through such experimentation increased, compared to what was objectified in Wire Frames because the Mockup signified the completion of the phase and resulted in a payment to Eserve. Pubco agents could also use the Mockup to solicit more funds for the project. However, whether the finished web site actually had greater economic value than the web site that Pubco already had, depended on the cultural value objectified in the site that could be claimed by Pubco in the academic publishing field and by Eserve in the web development field (its functionality, aesthetic appeal, and technical robustness as valued by industry participants in comparison to competitors’ offerings). However, if in the collective reflection-in-action spiral agents repeat the execution mode of experimentation multiple times through the “habitual” enactment of genres, then the end product would objectify primarily the competence of old-timers and decision makers. Such experimentation-in-action spiral would result in more cultural capital in the relevant industry fields only if project old-
timers have a competence that is valued in the marketplace and which has not been objectified in existing products (sites). This was not the case on the Eserve-Pubco project because Pubco sales and marketing agents and Eserve strategists did not have competencies that were especially novel or rare.

When the recipient agent in his or her experimentation challenges the results of prior experiments, he or she challenges the project’s old-timer’s dominance and gains a product stake. As such, this agent challenges the logic of the field that favored old-timers. In addition, the challenge also decreases the short-term economic value of the field’s outcomes. Because some of the prior objectification (although possibly not everything) is undone, making progress towards the product delivery now requires more effort. However, in such a mode of experimentation, the cultural capital objectified in the final product that can be claimed by field participants can actually increase significantly compared to the capital objectified in existing products leading to potentially bigger economic returns through the conversion of cultural capital into economic capital in the larger social fields (academic publishing field and web consulting field). This cultural and economic gain may be realized if the market participants value an integrated approach and if such approach is novel (which was the case in the academic publishing field and the web consulting field). In such cases, the dominant party (strategist and decision makers) may actually choose to share some of their power with others producing a more “equitable” field with the benefit of getting a bigger return at the end—getting a smaller piece of a bigger pie. In some sense, strategists from Big 5 consulting firms entering into Eserve field were implicitly or explicitly agreeing to help produce and reproduce more equitable fields where technologists and designers would have the right (objectified in Eserve value documents) to challenge the strategists’ decisions. In a different example, when two academics co-author a paper and both feel empowered to challenge each other’s ideas, they expect not only to learn (gain new competencies) from each other in collective reflection, but also to generate a new understanding of the phenomenon (different kind of cultural capital) that they can then convert into a publication (economic capital equivalent in academic fields). While such collaboration often requires compromise (temporary subordination of one party to the other and vice versa in both task performance and content decisions), the long-term benefits of such
compromise are appreciated by the participants. The process and product stakes are intricately intertwined in practice and there are long and short-term tradeoffs involved in capturing one or the other stake in different fields.

6.5 Agents Enacting Genres: Tradeoffs and Strategies

The reflection-in-action spiral leaves a mark in the field’s history by renegotiating agents’ positions, which, in turn, shape agents’ dispositions and the establishment of new genres in the field. I have already discussed the relationship between field positions and genres in Chapter Four and the factors influencing the establishment of new genres in Chapter Five. The data from this chapter and the focus on the collective reflection-in-action in practice highlights the tradeoffs involved in agents’ attempts to transform the field by establishing new genres. These tradeoffs are based on the symbolic capital, objectified in various genres, as it is valued in different fields: the Eserve-Pubco field, the Eserve field, the Pubco field, the academic publishing field, the web development field, and the field of power. Agents in the field do not necessarily understand such tradeoffs:

While agents orient themselves towards specific interests or goals, their action is only rarely the outcome of a conscious deliberation or calculation in which the pros and cons on different strategies are carefully weighed up, their costs and benefits assessed, etc. (Bourdieu and Thompson 1991: 17).

This also implies that agents are rarely intentionally “manipulative” in gaining certain stakes, instead, that they are acting based on their competencies and their symbolic perception of what is best for everybody (much like a parent who reprimands the child does so based on everybody’s best interest). However, an outside researcher can analyze the consequences of agents’ strategies, even if they are not perceived as such by agents, through a careful analysis of practice and their results on fields’ positions (Bourdieu and Thompson 1991: 12).

When newcomers joined the Eserve-Pubco project they were faced with a tradeoff between learning the “use and production genres” that were the products of the existing field so far, or not learning them and enacting genres that might transform the field’s logic of practice. Learning old-timers’ genres is the topic in the research on communities of practice (Lave and Wenger 1991). When newcomers to a community of practice invest

214
effort in mastering the old-timers’ genre repertoire through “legitimate peripheral participation,” they are expecting long-term pay-offs from their investment based on the value they can claim from producing objects by applying their competence in the field of power (Lave and Wenger 1991). In communities of professional practice members typically assign design-making authority to community old-timers. For example, in the medical field, decision-making is done by attending physicians so newcomers (students and residents) are dominated in both the “experience” and “status” dimension. The subordination that apprentice relations and other “legitimate peripheral participation” modes of learning require is a worthwhile sacrifice over the long term for students of many professions. This is not necessarily the case in every field of practice. In multi-party collaboration, interest in becoming an old-timer in a given local field of practice has to be weighed against agent’s other local interests.

When the Prototype PM came onto the project, she was a newcomer with decision-making authority—the capital that she “inherited” from the Eserve field at large. In this sense, she had a dominant position at Eserve in the “decision-making” dimension and a dominated position in the Eserve-Pubco field due to her “product incompetence.” In addition, through her participation in the strategy field, she had competence in the strategists’ genres used by the old-timers on the project. The tradeoff she was facing was between ignoring the product competence gained so far, thereby attaining process, but not product stakes, or investing in an effort to learn what had already been done by the strategists, thereby attaining a product stake. She first enacted the former strategy. Motivated by her desire to use her significant competence in web-development field to achieve the best possible result for the client, she expressed constructive criticism to Eservers and was courageous enough to share her criticism with clients arguing that the Plan Phase had not been conducted well and that she believed that more time was needed to develop the product (gain better competence in current “use and production genre”). Her concerns were not well received by clients, who had stakes in preserving what has been done through their participation and dominant role in Plan Phase decision-making. While the Prototype PM tried to renegotiate her “decision-making” position and to apply her competence in web-development to the project, at the same time she was using her competence in strategic genres to successfully learn the “use and production genres”
objectified in the Plan Phase. This new competence in the “use and production genres” shifted her position in the field as she became more experienced in the project. After a few weeks, she apologized to fellow Eserve team members for panicking about the Plan Phase and scaled back her efforts to challenge Plan Phase experiments. Since the field transformation was not achieved and her strategy revealed “doxa” (that because of Eserve old-timers’ and Pubco’s domination of the Plan Phase process, many experiments from that Phase were a waste of time), she damaged her relationship with the clients. Her initial strategy worsened her position in the field.

The most prominent example of a failed strategy to achieve Eserve-Pubco field transformation was enacted by the designers. Unlike the Prototype PM, the tradeoffs that they faced in either preserving the existing order and just learning the “use and production genres” established so far or attempting to transform the field by refusing to reflect on Use Cases had bigger payoffs associated with field transformation. Had they accepted the status quo, they would have a) been dominated in both dimensions, b) needed to gain competence in an area that they had no interest in outside the project (some of them were considering returning to the “arts for arts sake” field once they had earned enough money from their currently high-paying jobs), and c) worsened their design professional position in the web development (or even just Eserve) field by accepting strategists’ genres. Much like Americans who order a wrong item in a French restaurant because they do not want to invest in learning French, designers’ strategy in enacting a local field transformation failed. When strategists were forced to adopt the graphical language of Wire Frames, the designers stood their ground in the broader social fields of web site design and Eserve. However, in the project field, the enactment of the Wire Frame-based communicative genre with designers executing strategists’ specifications was a new symbolic representation (mask) of the old order: agents’ relative positions remained the same after the enactment of this genre. The strategy adopted by designers temporarily paid-off in the web-development field (where designers ended up not investing time in learning something they did not want to know), but not in the Eserve-Pubco field. Moreover, the strategy hurt their project evaluations and their relationships with their strategy colleagues, which shifted from “symbolic” (“we are collaborating”) to “cultural” (“you do so because I know and you do not”) dominance.
One of the most significant examples of successful field transformation in the Eserve-Pubco field was mentioned in Chapter Five when a Pubco technologist used her dominant position (as part of the client core team) in the “decision making” dimension over the Eserve technologists to challenge their proposed technical architecture. This is also an interesting example because, unlike others I observed, it was not based on a refusal to reflect, and as such did not impact the process stakes. Because it was based on “challenging” experimentation it redistributed product stakes. The Pubco technologist was openly critical of not being included in early decision-making about the functionality and technical implementation of the web site and was successful in devaluing PMs’ and strategists’ (old-timers’) experiments. In fact, she was so successful as to create a work stop on the project, which was restarted three months later with a new team of Eservers (only two from the Prototype Phase remained). In this new field, Pubco clearly had an advantage in the project’s experience dimension. Unfortunately, I did not follow the next phase of the project to know if the old boundaries shaped the new field or not. What I can say is that instead of a cutting-edge, “open source” technical architecture valued by Eserve technologists, who were old-timers in the Eserve-Pubco field, a more traditional technical architecture was implemented—one based on technical platforms that were easier to maintain for Pubco technologists based on their competencies. Thus, in the “production genre” that was at stake in the field, the stake was attained by a “decision maker” and relative newcomer to the project field and by a Pubco technologist in the field of power.

This analysis highlights short-term payoffs for the individual agents involved. However, an agent who is attempting a field transformation is challenging “doxa” and as such is facilitating similar future attempts by actors who now perceive the inequity in the field. Strategists operating in their own “doxa” did not recognize the inequity of the Use Case genre that they were asking designers to enact. I must say with my own technical and management background, I was operating in the same “doxa” as were strategists. The realization made by the Prototype PM that “designers simply did not read documents” was as much of a shock to me as it was to all the Eserve strategists and technologists. By refusing to enact the Use Case genre in practice, designers created a state of “heterodoxy,” which later turned into “orthodoxy,” but not back into “doxa.”
What these examples illustrate is that the transformation strategy is always risky (Bourdieu 1996: 183-187) because when it fails, agents’ positions worsen in the local field. On one hand, they have invested effort into attaining a stake that has no value in the field that was not transformed. On the other hand, exposing “doxa” transforms the relationship between the parties from symbolic domination to one based on more direct economic or cultural capital domination. This is not a “pleasant” transformation because agents rarely want to be called “dominating” in public. However, while these agents’ own positions may be un- enviable, their challenges to the established social order and the associated movement of the system from “doxa” to “orthodoxy” may create a ground for future field transformation when agents in similar positions may find new genre alternatives, may mobilize capital from another field, or may address the issue recognized at the time of crises. In fact, Eserve’s discourse was in the state of “orthodoxy” with respect to this issue of designers’ status: most designers at Eserve knew that designers were dominated by strategists. In one notable case, a senior designer confidentially advised a young designer who was applying for a design position at Eserve during an interview “not to come here because she would be ‘crushed’.”

6.6 Tracing the Cycle and Looking for Answers

The creation of symbolic capital by Eserve in the form of institutionalized approaches to practice (institutionalized genres) was motivated by the fact that such symbolic capital can be used to create cultural and then economic profits for Eservers and their clients. Much like agents in the Eserve-Pubco field who faced tradeoffs between capturing product and process stakes, so the Eserve leadership faced such tradeoffs in trying to institutionalize certain communicative genres on Eserve projects.

When the Eserve founders and leaders made investments (training, incentives, free food, parties, open space, office meeting days, etc.) in the Eserve culture of “learning and sharing,” and gave up comfortable offices for small desks, they had in mind an ideal of academic-like collaboration (Bodker, et al. 1988). The rationale behind the “integration of disciplines” and “egalitarian culture” was that in an environment with no hierarchy there would be no incentive for hiding information, ignoring experimentation of others, or not taking ownership of the results by “disengaging” and simply following others’
lead. Instead, through the collective reframing of a phenomenon from different perspectives previously disintegrated knowledge would be “combined” or even “transformed” (Carlile 2001) into new cultural capital. This new cultural capital (knowledge) could then be exchanged for the economic capital which Eserve could sell at a premium price. For that purpose, Eserve made investments in creating fields of joint practice like the Eserve-Pubco project, which offered process and product stakes that made each party interested in collaborating.

As the field data indicated these stakes were not equally attainable to all project participants causing the “hiding,” “ignoring,” and “disengaging” behavior that Eserve was trying to avoid. Agents' positions at Eserve and in the society as a whole shaped agents’ original positions in the Eserve-Pubco project field—through the economic and cultural capital valued at Eserve and Pubco, which they brought to bear as members of the team. At the same time, the Eserve service delivery model, which relied primarily on genres from the strategic and technological genre repertoires and which excluded designers from many important site decisions, institutionalized designers' "followers" role on projects. As a result, designers were dominated in the Eserve-Pubco field through their positions in both dimensions ("decision-making" and "experience"). Although designers recognized this inequity, they were not able to transform the field from their dominated position. Genres that reproduced their domination in the field were enacted over and over again, resulting in an "execution" mode of experimentation. In the reflection-in-action spiral that resulted, joint product stakes such as the amount of navigational elements on the front page were attained by the dominant party (strategists) time after time. This resulted in a final IS product which objectified the asymmetrical boundary power dynamics determined by agents positions in the field at the end of the project.

The Eserve-Pubco field was temporary and once the Mockup was delivered, its value was translated into different constituent fields and into the overall field of power. The Mockup delivered as a result of the "execution" type reflection-in-action spiral had more functionality, that is, more value that could be claimed by agents in the IT functional analysis field (or Eserve strategy field) than it had aesthetic appeal, that is, less value that could be claimed by agents in the design field. A user could choose from seven main navigational elements on the front page, but the page was confusing to the users and
considered unattractive. On the other hand, the process stakes in the Eserve-Pubco field (as they were distributed at the end of the Prototype Phase) did change agents’ economic and symbolic capital in other fields: two Eserve strategists, who played a key role on the project were promoted; the Eserve Prototype PM successfully implemented a methodology on the project that was new to Eserve and was able to share her insights with other PMs; the Eserve strategist who conducted the professor interviews switched to a less prestigious enterprise job and soon left the company; a designer who authored the web site design did not get to claim credit for it in her portfolio because she was not staffed on the next phase; a Pubco technologist obtained funding for her staff training and a costly system upgrade that she would not have received otherwise; Pubco sales and marketing agents used the site to implement a process change within Pubco that improved editorial product consistency among different editorial departments aiding sales and marketing efforts; a low profile sales and marketing initiative got a boost through the web site; Pubco’s PM demonstrated to Pubco that she could make a difficult consultant do what Pubco wanted; users got a slightly nicer looking and slightly more integrated site (if the prototype was implemented as it was designed); and Eserve stockholders did not get the expected economic profit from the project because of the need to staff more designers in later phases and they did not get cultural profit from the web site because it was not creative enough and unlikely to win any awards.⁵

In this chapter, my aim was to show how the institutionalized communicative genres shaped the collective reflection-in-action spiral, which consisted of agents reflecting and experimenting with each others' objects. I demonstrated how ignoring other agents’ work redistributed process stakes among agents, while reflecting and experimenting with other agents’ objects redistributed product stakes among agents. The tradeoffs made by agents in attaining different kinds of stakes in different fields of practice shaped the emergent IS product. These tradeoffs were only rarely attributable to agents' recognized goals in attaining certain stakes, but were primarily motivated by agents’ competence in using and experimenting with certain objects. However, because ability and inclination are inseparable in practice (Bourdieu and Wacquant 1992), agents used their competencies and, sometimes, the power of economic capital to gain power over agents resulting in asymmetrical outcomes, which were perceived as undesirable by the very same agents.
Eserve and Pubco were looking for economic profits from integrating competencies, but on this project they were unable to use their economic and symbolic capital to institutionalize practices (genres) that would make agents interested (not just inclined, but also able) in sacrificing their local (project and professional) stakes for the sake of attaining smaller parts of larger stakes in the broader (industry and economic) fields.

In the next and final chapter, I will consider the implications of the theoretical framework developed in my thesis to the practitioners elaborating the organizational trade-offs involved and the possibilities for organizational improvement. I will also discuss contribution of my work to the organizational research and IS research fields.
Notes

1 I use the term "production" to differentiate the development practice that is the focus of the study from the development effort that would be undertaken once the system is delivered. For example, a delivery of a document management system would involve designing genres used to create, store, distribute, and check out documents in an organization and to maintain the system itself (Päivärinta 2001). Similarly, development of an ERP system involves both designing genres that would be enacted on the boundary among users distributed across organizational functions and divisions as well as genres enacted on the boundaries between future system producers (IT personnel) and users (Pawlowski, et al. 2000). The terms "developer" ("producer") and "user" get confusing especially in the web-based content rich system where organizational content providers become developers. Following the CSCW tradition (Bodker, et al. 1988), I propose to use the term "producer" for those agents whose role involves changing the technological artifact in future use, even if they are future users ("lay developers"), and the term "user" to designate those agents that use the artifact without changing it for future users (although they may change the genre). In this definition, a person providing content to the site is a "producer," and the IT professional doing site backups is a "producer," but a person transacting with the site (ordering a book) is not.

2 What I am referring to here as an "object" is simply what has been made explicit (outside the body). This is different from Bourdieu's notion of "objectification" which refers to both material and symbolic objectification. The distinction he draws is between "embodied" and "objectified" structures. "Objectification" refers to the symbolic or "modeled" world, and what is not made explicit in symbols is "embodied" (Bourdieu 1977: 87-95). Bourdieu writes that what gets objectified is a certain form of capital. Objectification then ensures "the reproduction of the structure of the distribution of the capital which, ..., reproduces the structure of the relations of domination and dependence." (Bourdieu 1977: 181). Thus, in Bourdieu's world, genres are "objectified" as I wrote in Chapter Five. However, I will use the world "object" to refer to explicating—the trace a genre leaves in the physical world, and not the whole genre which is defined by what is "socially recognized" and hence includes both explicated objects and symbols.

3 "Misrecognition" is a term used by Bourdieu to describe what happens when agents due to "doxa" misinterpret objective structures in which they practice to the advantage of the dominant group (Bourdieu 1977).

4 For example, an apprentice tailor learning to reproduce his master's work is doing so with a different piece of fabric than his master used for the product of the original garment (Lave and Wenger 1991). If an apprentice has already mastered production of one piece and is collaborating with the master to produce the whole garment, then the master and apprentice are collaborating by either adding or challenging each other's results. Depending on the material properties of the medium and modern technology, replication may require different degrees of reflection on the production object involved. If replication requires significant skill (genre competence) and objects produced through applying the skill are valued in the market, then mastering it becomes a stake in some field—a community of practice field (Lave and Wenger 1991). A significant degree of reflection is needed to master such "valuable" competencies. However, the logic of such communities of practice fields is different from product development fields. The stake in such field is not the product object itself (like resolution of a particular quadratic equation in middle school), but rather a way of producing the product object (competence in algebra). In this sense, a community of practice field has as its stakes mastering competence in genres and not producing products.

3 This refers to the web site as it was prototyped, not the web site that was actually delivered ten months later.
"Frame analysis may help practitioners to become aware of their tacit frames and thereby lead them to experience the dilemmas inherent in professional pluralism."

Chapter 7 Implications and Contributions

In this dissertation I have developed a theoretical framework for understanding the various boundaries involved in IS development, how these boundaries are produced, reproduced, and transformed in practice, and how collaboration across these boundaries shapes the IS outcomes. In this chapter I discuss the implications of the framework developed through my examination of the Eserve-Pubco project and fields. I will examine the implication of this theoretical framework for managers trying to set priorities on projects and interested in shaping IS development practice to achieve desirable outcomes. I will also consider the implications of my framework for individuals on IS projects who are facing difficult practical dilemmas in trying to apply their competencies in multi-party settings. Finally, I will discuss the contributions of my study to IS and organizational research, and examine directions for future research.

7.1 Looking back at Eserve

Understanding the Project Goals and Priorities

I started this dissertation by considering collaborative IS development practice through the lenses of innovation and organizational learning, rather than through the lens of automation. This is the lens that was used by my study participants at Eserve and Pubco, who were engaged in building consumer-facing systems with strategic impacts. My study participants attributed the strategic impact of such systems to users becoming engaged with the systems, learning about new products, deciding to adopt products, and eventually transacting with these systems. In addition, delivering such web sites quickly
had economic as well as symbolic significance—building brand equity through the first offering on the market. Thus, the expectations for the Eserve-Pubco project were to deliver an excellent outcome which offered innovative functionality, design, and business model, and which would be aligned with Pubco’s current business processes. In addition, this outcome was to be delivered in half the time of typical internal IS development projects and with the minimum expenditure of economic resources. The outcome that was delivered at the end of the Prototype Phase fell short of most of these expectations. The delivered outcome objectified the boundary power dynamics that emphasized the input of Eserve strategists, Pubco's sales and marketing departments, and Pubco's IT department on the project. Such an outcome might be exactly what is expected in some cases, but in this case most participants were expecting much more.

What Eserve and Pubco participants did not acknowledge in their stated goals for the project were the practical tradeoffs that have to be made on such projects. One fundamental tradeoff is between exploiting existing competencies and exploring new ways of combining competencies. Eserve was striving for innovative outcomes, that is, novel ways of combining existing and new competencies. Although the term has many definitions, in Bourdieu’s language, business innovation can be understood as a new type of conversion of cultural capital into economic capital. Such conversion can happen either through a new combination of existing forms of cultural capital or through a combination of new forms of cultural capital. In other words, the degree to which the results of combining existing competencies is innovative depends on whether there was an already objectified way of achieving this particular balance. For example, developing an accounting application requires some combination of competencies in accounting, technology, and business analysis, but the way of achieving such combination is so well known that it has become objectified (even “commoditized”) in the form of a reusable product—an ERP system. In its early days, Eserve was engaged in combining competencies that were being integrated for the first time in many cases. This was no longer the case at the time of my study. In fact, the notion of the Eserve service delivery model referred to the objectified way of producing certain outcomes by exploiting competencies gained through past experiences. At the time of my study, Eservers were facing a practical dilemma of how much to draw on their past experiences within Eserve
or the web-development field at large, and how much to explore new approaches. This was the struggle that was enacted in the Plan Phase, when newcomers to Eserve finally gave up on the Eserve service delivery model and drew on their own competencies, trying to combine them in a new way.

A similar struggle between how to set priorities for exploiting or exploring unfolded between Eservers and their clients. When Eserve was hired by Pubco, Eservers and Pubco's agents were hoping that in the Plan Phase Eservers would find a novel way of combining an existing publisher's product competence, consultants' web strategy competence, and users' book adoption competence. Pubco's competitors and Pubco itself already had websites that integrated all these competencies in some way. The issue was finding a different way of integrating these competencies that could be converted into economic profit. Attempting these new combinations meant transforming an existing field, and as such involved risks that Pubco and Eserve were not willing to take. It was very difficult for the Eserve-Pubco project participants to come up with an innovative strategy in six weeks of the Plan Phase, when Eserve had no deep industry expertise and felt they had to produce a bunch of standard deliverables such as decks that summarized what was going on at Pubco and reports of work progress every few days. The limited economic capital invested by both companies and the expected short-term economic outcomes (deliverables) constrained the production of new cultural capital. Pubco asked for standard deliverables from Eservers insisting on exploiting Pubco's business competence because Pubco was not willing to take the risk of letting Eserve "just do what they wanted to do." Indeed, this was a risk because at the end of the day Eserve might not have been able to find an "innovative" solution and would not have produced standard deliverables necessary to enable project participants to reproduce a known approach of developing a publisher's web site. Pubco's PM constant insistence on process control was explained by Eserve's lack of competence not only in the publishing business, but also in business process re-engineering consulting, which she perceived Eserve as undertaking. Eserve's Prototype PM tended to agree with Pubco's assessments. She said, the "Plan Phase was conducted as if it was a new product development, when, in fact, it was an existing site redesign." Despite moves away from innovation towards exploitation by agents on the project, Pubco and Eserve top management did not acknowledge the
tradeoff between producing new and reproducing old approaches, looking instead to implement them simultaneously.

I argue that there is a real dialectics at the heart of this tension. A new combination of existing cultural capital comes with risks associated with engaging in “challenge” type process experimentation. The bigger the challenge, the bigger the risks associated with not exploiting a known approach, and the potential pay-offs associated with producing something new. In other words, “challenge” type experimentation is undertaken at the expense of not undertaking “execution” experimentations in the field of power. Depending on the amount of economic resources that the client and Eserve are willing to risk for innovative outcomes, a mixture of “execution” like and “challenge” like process experimentations is desirable on the project. This tradeoff in its bare essence is the tradeoff between "efficiency" vs. "innovation," "exploitation" vs. "exploration" (March 1991), “convergence” and “divergence” (Leonard and Swap 1999), short-term gains vs. long-term gains, local vs. global focus, "reproduction" vs. "transformation,” and in Bourdieu's sense between "economic capital" and "cultural capital." The collective reflection-in-action spiral on IS projects represented a struggle between, on the one hand, "reusing" what has been done so far (at Eserve at large, at Pubco at large, by other web developers in general) and gaining some efficiency, and on the other hand, producing new forms of cultural capital.

Aside from the exploring or exploiting tension, there was another tradeoff that was also not considered by Eservers and Pubco's agents. This was the tradeoff between whose competency plays the larger or the smaller role on the project. Again, both parties were striving for “the best of all worlds” solution. However, unlike the tradeoff between exploration and exploitation, where the dialectic is part of the definition of these concepts, the tradeoff between having top-notch functionality on the web site as opposed to award-winning aesthetic appeal has to do primarily with the availability of economic capital. The question that the project faced in this case became: given the limited economic capital, which competencies should be more objectified in the web site than others or should a balance be achieved? In the case of a book marketing web site, it appeared that clients and consultants were interested in a "balanced" solution. However, the outcome with more value in terms of functionality than in terms of design could be
what is desirable in other applications and settings, especially, in intra-organizational settings where users have less power over using or not using the system, or in settings where the functionality of the system is the first of its kind on the market. For example, when the "Napster" software was first introduced, it was very difficult to use and had an unattractive user interface, yet it attracted a huge audience of users and made its founders famous. In this example, the desired compromise that users were willing to accept was towards an innovative technical solution over a pricier and more attractive product. Most first-generation web sites had a minimalist approach to design, yet attracted both users and capital due to the novelty of their functionality. On the other hand, the users of a museum site may prefer an attractive look and feel over a greater number of features. Finally, many early auction sites (e.g., www.ebay.com) or aggregated buying sites (e.g., www.mercata.com) impressed users neither with their technical capability nor with their aesthetic appeal, but rather with the business opportunity that such sites provided. Moreover, even among book publishing sites, early sites had many design flaws, yet the publishing companies which put them up first acquired the image of being a "technical innovator" (symbolic profit) by putting them up.

These examples highlight that the kind of competency to emphasize in the final product depends on many factors (capital that exists in the project field and in related fields), including existing competitive offerings, users' expectations, and available individual competencies. It is also possible that a balanced outcome is desirable. Both the specialized (asymmetrical) and balanced solution approaches to setting priorities are different from the approach that expects the best of all possible worlds under tight economic constraints. However, the tradeoffs involved in whose input gets to be bigger or smaller on the project is related but different from the tradeoff involved in combining these competencies in an established way (exploiting) or new way (exploring). While both more balanced and more innovative approaches require "challenging" the past, the former case challenge past experiments within the project field (attaining product stakes in equal or unequal proportions), while the latter case challenges past experiments outside the project field (attaining process stakes). Of course, if this particular combination of competencies has never been achieved before, the former is impossible without the latter.
Instead of expecting an outcome that is the best of all possible worlds, a more realistic approach to setting priorities on projects is to look for a compromise which is the result of negotiated tradeoffs among all parties involved rather than an artifact of a poorly understood process. In order to arrive at such compromise Eservers, their clients, and potential users need to engage in collective "meta" reflection in which they can surface the boundaries and stakes involved in their collective reflection-in-action. Unlike the "best of all worlds, most innovative results in the shortest amount of time" approach, the "negotiated compromise" approach acknowledges the tradeoffs involved. Although it does require that holders of different types of capital give up some of their power, such a compromise may be feasible based on the potential cultural and economic value produced on the project. For example, strategists on the Eserve-Pubco project were convinced by the usability test that it was necessary to have a better designed site at the expense of some front page functionality. They expressed great interest in users accepting and using the site and, if that meant allowing more input from the design team at the expense of their local control, they were willing to make that compromise. This is evident in the web site that was launched ten months after the first prototype was delivered. An issue in the Prototype Phase of the project was that the strategists did not realize that such a compromise was required. Understanding the tradeoffs involved may not only produce more desirable outcomes, but also go a long way towards easing tensions associated with "role conflicts" experienced by agents on the project. I will now discuss how the framework developed in this dissertation can be used to build an understanding necessary to achieve such compromises.

The Field Diagnostics: Meta Reflection

No IS project starts in an empty social space. Even the application of the most innovative technologies draws on the way existing technologies were applied. The communicative genre lens can be used as a diagnostic tool in organizations to understand what boundary power dynamics are objectified in current discourse. Such an understanding can then be used to assess the kinds of compromises involved in the mixture of competencies and the innovativeness of the product.
In Chapter Four, I discussed how tacit boundary power dynamics could be revealed through the analysis of communicative genres. The analysis of communicative genres has been proposed as a way of understanding organizational structures so as to enable the development of IS applications and organizational change (Tyrväinen and Päivärinta 1999; Päivärinta 2001). While it does take some observational skills, organizational agents can engage in "meta" reflection on genres within their own organizations. For example, among people in Eserve's Personnel Development and Knowledge Management functions, I heard discussions of the validity of the "discipline sub-team"-based service delivery model. Project managers would share their doubts about the ability to deliver innovative work under short-term client contracts. At the same time, Eservers on the project would often discuss the downsides of clients' insistence on "process" at the expense of trying innovative approaches. Making such reflection more systematic means going beyond the sharing of frustrations about what is not working towards getting a better understanding of why a given process is working in a certain way. For example, designers often acknowledged that Eserve did not fully incorporate designers' competence, and rated Eserve a "five out of ten" on the quality of its design competence. However, not surprisingly, Eserve agents did not openly engage in a systematic examination of what resulted in such ratings. This could be achieved by examining the boundaries and capital objectified in the Eserve service delivery model, which privileged strategists in the reliance on traditional system analysis and design methods, which were used competently only by technologists and strategists, and in the emphasis on the consulting craft genres, which were mastered best by MBAs and former management consultants. The elegance of the analysis of the communicative genres is that genres are socially recognized as well as habitually enacted by agents in the field. If one is to ask what is done at Eserve, the information conveyed in the New Hire Training Program and stored in Eshare would reveal a great deal about Eserve genres. Eserve field agents through collective reflection could combine such information with their practice-based intuition of what counts as distinctive at Eserve. As an outsider with the guarantee of confidentiality and anonymity, I was able to talk to a variety of people at Eserve to understand various dichotomous dispositions objectified in genres institutionalized at Eserve such as, for example, the distinction betweenes between Eserve old-timers and
newcomers represented in the Eserve service delivery model genre system. The Eserve Knowledge Management group as well as representatives from the consulting field with different educational, gender, and professional backgrounds can engage in such discussions to arrive at a similar understanding. They can rely on the capital objectified in the various Eserve genres, which distinguishes Eserve as open, sharing, and egalitarian to accomplish this.

A similar exercise in genre analysis can be undertaken in the various sub-fields at Eserve including the R&D group and the Eserve-Pubco project. R&D group members were remarkably self-reflective. They constantly engaged in conversations about the way things were done in the group and how these could be improved. However, in such conversations, the boundary power dynamics of the group often remained undiscussable. Had R&D group members actually engaged in reflecting on the genres enacted on the boundary between Eserve and the R&D group in such terms, they would have learned that the group distinguished itself as culturally dominating, but economically dominant. Some group members from a consulting background acknowledged this, but researchers did not. By reflecting on the genres enacted within the group, R&D group members could have realized that the weekly group meeting reproduced hierarchical boundaries in the group and objectified the interests of decision makers over those of builders. It was hardly the open forum it was portrayed to be.

On client engagements, the business development phase and early parts of projects partially reveal the genres and capital valued by clients. Similarly, clients learn about Eserve's approaches and values. However, reflection on each party's practices is typically centered entirely on the project deliverables and not on understanding the interests of the multiple groups involved. Thus, for example, I do not recall Eservers ever acknowledging the tension between the Marketing & Sales and Editorial functions that is common in the publishing industry or understanding the supporting role of the IT department and its limited budget. Similarly, I do not recall clients ever learning about the limited role of designers envisioned for the Plan Phase of the project. In addition to understanding each other's internal practices, partners in an outsourcing relationship can engage in understanding expectations of each other's roles as they are represented in genres institutionalized within each organization. Some of these expectations may
coincide. For example, both Eservers and Pubco's agents expected Eserve to contribute innovative ideas. However, these expectations often do not coincide. Thus, through the analysis of the various consulting craft genres and the strategic repertoire genres institutionalized at Eserve, one could learn that clients were depicted as the "dependent" party in need of consultants' deep insights. Whereas, in Pubco's genres of dealing with consultants, consultants were expected to listen to the client and take into account the clients' "wisdom," but to do so in a manner that was more efficient because of the consultant's economies of scale.

Clearly a great degree of trust in the relationship is necessary to learn about such distinctions and dispositions towards each other. In addition, there are interests associated with keeping such understandings tacit. However, if there is a realization that such understanding can increase the economic and cultural returns from the project, then the notions of field and genre provide a way of reflecting on the situation.

The Managerial Influence: Experimentation

Process Experimentation

While genre change is often emergent rather than deliberate, organizations as holders of economic and symbolic capital can influence the institutionalization of genres. For example, Eserve did so through the New Hire Training Program, Knowledge Management function, recruitment, staffing and promotion functions. Similarly, on the project, genres that would guide the project were discussed in the norm-setting exercise and in the post-mortem exercise for the next phase.

Before discussing the way the project can be shaped to arrive at certain results, it is first necessary to create a forum for negotiating. Business development cycle meetings and documents are a natural place for such negotiation to take place. For example, according to people involved in the negotiations of the Eserve-Pubco project, it was decided that there would be no serious branding effort or user facing efforts (e.g., focus groups) undertaken during the Plan Phase because of economic resource limitations. However, Pubco sales and marketing agents and Eserve strategists, who later "ran" the Plan Phase, were not involved in the negotiations, and the compromise reached was not clearly objectified in the documents produced from that phase. It took the project
participants about three months to finally realize that the full branding effort was "out of scope." There was a lot of disappointment associated with this realization. Had the agents who ran the Plan Phase been involved in the upfront negotiations, it is not clear if they would have accepted the compromise that was made. In addition, had they been clearly informed about the compromise, the frustration associated with unmet expectations could have been avoided or reduced. Similarly marketing to students and making new product offerings on the web was also out of scope, but Pubco composed its core team specifically to represent these interests. Thus, what had been objectified in the business development stage contradicted the expectations on the project. One way of reaching a sustainable negotiated compromise is to include different stakeholders whose capital is needed to implement the project in the business development discussions and to objectify the agreements reached in objects accessible to all project participants. It is also necessary to build opportunities for reflecting on what has been agreed upon and renegotiating beyond the agreement time. For example, at some point, it became obvious to people involved on the project that some understanding of the users' perspectives and decisions on branding were necessary to accomplish other project tasks. At that time, it was necessary to negotiate not just a one-week project extension but either a longer extension or a shift of effort from client-centered initiative prioritization to user-centered research. To summarize, while Eserve did involve representatives of all three disciplines in the business development cycle, the focus of this effort was typically to impress the clients about each discipline, as well to impress them with promises of efficient and innovative delivery, instead of trying to negotiate a feasible compromise. Clearly a great degree of openness is required to engage in such negotiation with clients. However, the economic and emotional downsides of having a disappointed client or a cost overrun in trying to fulfill client's expectations may outweigh the downsides of losing some clients who expect that they will get the best of all worlds without the required economic investment and risk taking.

Once a negotiated compromise is reached, staffing the project is the key instrument through which Eserve and Pubco can influence genre enactment and emergent change on the project. If a specialized solution is desired, then this is relatively easy to implement by staffing those agents whose input into the solution is most needed in "decision-
making” positions early on or equivalently endowing them with economic capital (control over staffing of subordinates and deadlines). If a more “balanced” solution is desired, it is much harder to achieve. To produce a more “balanced” outcome more “equitable” genres have to be enacted on the project. This can be achieved only if oldtimers’ experiments (of any discipline) are challenged successfully at some point. One way of achieving this is to enable competition between decision-making dominance and experience dominance on the project. A powerful way of accomplishing this result is by involving agents from different fields early on in the project (which Eservé tried to do but insufficiently). Another approach is to try to counterpose agents’ positions in the Eservé field or in society against their position in the project field. For example, appointing a designer, who is dominated in the Eservé field, to be an account manager or project manager. Strategists can (and will) draw on the capital that they have in the Eservé field and in the field of power to attempt to transform the field so as to incorporate their competence into the product. Similarly, agents who are dominated in the field of power, but actually dominant in the Eservé experience dimension (mostly Eservé technologists) can mobilize change in the field by drawing on their Eservé experience. Junior technologists on the Eservé-Pubco project were dominated through the genres that limited their interaction with clients and excluded their participation in early decision making, despite their early involvement in the Eservé-Pubco project. When a new technical lead came onto the project in the Prototype Phase he drew on his Eservé experience to engage in debates with the strategists over issues of common concern. In the R&D group, agents who are dominant as academically recognized researchers (such as the DL founder) can draw on their academic capital to challenge the experimentation of agents endowed with Eservé capital (oldtimers or leadership team members). Through such struggles between agents dominated in one dimension, but dominant in another (i.e., drawing on a different kind of valued capital) a more balanced outcome may be produced.

Similarly, Pubco could staff the project based on similar considerations. For example, while the IT manager was included on the project, she was not part of key decisions at the beginning—decisions which concerned her department most directly. Had she been given more authority through her participation in key project scheduling decisions, it is possible
that the time delay on the project caused by a system upgrade could have been shortened or eliminated (e.g., by starting the upgrade earlier). This manager was dominant as a client and dominated as a technologist and she made her opinion count at the end of the day by drawing on her capital in the Pubco field.

Finally, a deliberate genre change within a given field, while very difficult to achieve, is not impossible. A diagnosis of the Eserve field reveals that the service delivery model genre, for example, objectified an asymmetrical approach to project delivery despite its apparently symmetric visual depiction in Figure 4.1. Eserve could engage in reflection on the experiments undertaken on projects, which shaped outcomes in certain ways, to analyze what kinds of service delivery genres were enacted on such projects to result in more innovative outcomes or faster execution or more balanced representation of different competencies. Eserve's leadership could then use its symbolic and economic capital to institutionalize different approaches to projects that fit the negotiated compromise.

It is interesting to reflect on Eserve's history to look for examples of "successful" Eserve projects—those projects which were either innovative and/or combined competencies in a "balanced" way. There were some famous Eserve sites that attracted customers to Eserve in the first place. It turned out that Eservers produced them in two ways: 1) they gave a lot of positional authority to designers early on; and 2) they hired designers who were also practitioners in technical and/or strategy fields. However, as strategists, who were more typical holders of the instruments of reproduction than technologists (Eserve old-timers), started gaining positional authority at Eserve (recall the field picture from Chapter Four), their desire to relinquish control to designers diminished. At the same time, the few multi-competence designers that Eserve was able to find when it was young and the rewards were high (IPO and excitement of a new field of practice), were much harder to come by as the financial and intellectual attractiveness of Eserve's offers diminished. The four designers with whom I interacted on the Eserve-Pubco project were either "straight" designers or were not "deep" in any particular competence. One way that Eserve could compensate for the lack of Renaissance people on the market would be to use the precious few deep and broad designers they had in positions of high authority like that of an account manager and try to learn from their
“process” experiments. I have already mentioned that I have seen one such account manager trying an ultra-rapid prototyping approach in a three person multi-disciplinary team. First, it is harder to establish “old-timer” dominance in such fields. Second, if it does happen, the field is short-lived and new fields can have new rules. Of course, the question then is integrating products of different kinds from different teams, which could be done under the guidance of a “deep” and “broad” skilled manager. Eserve top leadership could pay special attention to projects where different competencies were combined in a balanced way to try and learn from such approaches on other projects where a “balanced” solution is desired.

Product Experimentation

So far I have concentrated on how genre change can be enacted through agents reflecting on genres from different settings and experimenting with them on the project. The goal of such process experiments is to objectify certain ways of conducting product experiments. In Chapter Six I examined how product experimentation shapes different collaborative outcomes. The key focus in such experimentation is on producing objects of different types, reflecting on such objects, and either challenging or adding to them in future experiments.

In Chapter Six I highlighted how a great degree of frustration shared by clients and consultants alike was associated with the lack of reflection on experiments produced by others. Project participants spent the greater part of their long working days producing various objects and trying to communicate using them. "Death by PowerPoint" was a familiar expression at Eserve. Given the resources invested in creating objects for collective reflection and in having settings to share these objects, such as an open space, an intranet system, and various face-to-face meetings with clients, it is worthwhile understanding what are the obstacles precluding agents from reflecting on objects. I have emphasized three such obstacles: a) limitations of the medium in which the object was produced; b) misrecognition of the role of agents in sharing objects; and c) genre incompetence. It is up to practitioners interested in improving communication to reflect on their practices in terms of how these obstacles are dealt with on the project. It was only after such reflection was undertaken by the Eserve Prototype PM that she was able
to figure out why designers were struggling to move forward based on the Use Cases passed to them by strategists.

Individual agents on projects should try to understand and follow a negotiated compromise between how much "challenge-type" experimentation and how much "execution-type" experimentation to undertake for a given phase of the project so as to objectify certain competencies in the outcome. If there is an interest in applying the later movers' (participants') competencies to the product, then later movers should be allowed to challenge (undo) some of the work that has been objectified in the product so far.

Also, collective reflection and experimentation rely on different properties of media. It is important to continue reflecting on which medium facilitates better achievement of the purposes of a given genre in its enactment. This is where new computer-based technologies that allow for longer storage, wider reach, better reproduction, and easier manipulation of objects at lower costs can play a critical role.

Finally, this analysis should not facilitate a somewhat simplistic conclusion: always reflect on what others have produced and then challenge, as long as economic resources allow for such challenges. This is quite simplistic because such an approach misses the tradeoffs involved in enacting established genres or introducing new genres on the project. For example, a lot of time and effort could have been spent in having the Eservé designers learn Use Cases. It was only when designers ignored these Use Cases that a process innovation (the introduction of Wire Frames) based on the project manager's process reflection occurred. On the other hand, this simplistic conclusion ignores the tradeoff between applying different frames that an individual has already acquired through his or her lifetime as an agent in multiple fields, and applying different frames offered by other agents (integrating within an individual vs. integrating on the project). The latter tradeoff was not considered in my dissertation because I focused on how people collaborated at the expense of understanding individual reflection-in-action. An individual with diverse and deep enough background may conduct innovative experiments that, if preserved until the end, can result in valuable cultural capital. While Eservé was trying to hire “top talent,” their sustainable competitive strategy was in finding methods of integrating available talent (which their competitors also had access
to) in new ways. Such integration relied on frequent reflection on what others had produced at the expense of individual reflection.

There are no "cook book" answers to the questions of which tradeoffs to make. My only certain recommendation is to engage in collective reflection-in-action about the phenomenon of joint concern, which involves understanding and experimenting with the genres of IS practice. Such understanding would center on the analysis of the boundaries, genres, and outcomes involved. It would have to be followed by agents challenging the "doxa" to arrive at an explicit compromise. My dissertation provides approaches for undertaking such reflection-in-action.

7.2 Contributions to IS Research

This research contributes to our understanding of IS development by focusing on boundaries involved in collaboration on IS projects. Collaboration in multi-party IS development efforts is an important topic in IS research (Kumar, et al. 1998; Wastell 1999). My study investigated the collaboration practices of a wide group of developers, system owners, and users, working in a novel E-commerce arena. Research in the CSCW community has focused primarily on improving the collaboration of two groups, developers and users, and on understanding conflicts among workers with different hierarchical status (managers and workers). My research here contributes to our understanding of conflicts involved in the collaboration of different types of developers and different types of users, and provides insights into how to improve practice through better resolution of these conflicts.

By using the genre lens, I shed light on the role of formal system representations and approaches in the communicative practices of IS project team members. This analysis adds to the recent work of Agarwal and colleagues, who looked at the role of representations for communication among novices and experts on a team (Agarwal, et al. 2000). Understanding the challenges involved in using modern and traditional system analysis and design techniques on IS projects has implications for the development of software engineering methodologies aimed at representing diverse knowledge in systems design. For example, object-oriented analysis methods such as Use Case Modeling propose that business customers and strategists communicate with technologists by
describing the behavior of users through key business objects (Jacobson 1993). My observations indicate in contrast that a) many non-technical practitioners in the web-development field (Eserve counted several hundred people from different backgrounds who had experience in other organizations before joining Eserve) are hardly competent in using these methods, and without such competence are likely to use the new labels and representations in an old way; and b) acquiring competence in such methods may not be of interest to non-technical professionals. It may be worthwhile to reflect on how new modeling tools could be constructed that are based on the competence of different types of project participants (e.g., as in Boland and Goraya 2001). One such tool that was used on the Eserve-Pubco project was based on designers' and functional analysts' competencies (Wire Frames). At the same time, such use of Wire Frames indicated that constructing objects to be used in genres from different professional fields (strategy and design) addresses only part of the problem. If the methodology is aimed at incorporating competencies of different participants, it is also necessary to build into the methodology the “challenge” type experimentation.

The contribution of this dissertation is particularly important in an IS outsourcing environment. There is a lack of investigation of vendor’s practices in the IS outsourcing literature (Levina and Ross 2001). At the same time it has been found that understanding other’s expectations about the engagement and sharing knowledge was a key contributor to the perceived success of outsourcing contracts (Koh, et al. 1999). The understanding of expectations requires an examination of both vendors’ and clients’ perspectives, which I was able to do in this study. In this dissertation, I advocate that the business development cycle be used as a forum for negotiating a compromise about the desired innovativeness of the IS product as well as the relative importance of various competencies to be applied to it. Traditional studies of IS outsourcing contracts have either analyzed these contracts in pure economic terms through a transaction-cost-economics lens (Whang 1992; Lacity, et al. 1995; Elitzur and Wensley 1997; Lacity and Willcocks 1998) or analyzed how the contract structure can be used to build trust in the relationship (Kern 1997; Sabherwal 1999). Existing studies do not look at the competencies that each party brings to the table and different ways of combining them on projects. Using the practice theory perspective
developed here, I have shown that it is possible to get a deeper understanding of how the business development cycle and the contract documents shape project results.

This study also contributes to research in the CSCW field by showing the adequacies and inadequacies of current process technologies (such as calendaring systems, Computer Supported Software Engineering tools, document management systems, etc.) in supporting collaboration on IS project. The technology for the support of collaborative work has been viewed through the lens of boundary objects (Star 1989; Boland and Tenkasi 1995; Ackerman and Halverson 1999). However, this study shows that a focus on the object itself without understanding the use of such object in the enactment of the genre is inadequate. The communicative genre lens has been used to understand technology support for collaborative work (Crowston and Williams 1997; Yates, et al. 1997; Crowston and Williams 1999; Tyrväinen and Päivärinta 1999; Crowston and Williams 2000; Kwasnik, et al. 2000; Päivärinta 2001). What this study adds is an understanding of how genres are used to objectify certain boundary power dynamics in the field. If the enactment of these genres does not lead to the desirable negotiated compromise, then building technology that supports such genres may not be beneficial for the individuals and organizations involved. At the same time, building technology as a platform for producing objects in media that are durable and easy to transport, reproduce, and manipulate may actually facilitate fruitful experimentation with genres. For example, the Microsoft Visio tool had been used to build Wire Frames and it met all these characteristics. While the use of Wire Frames had significant limitations, the technological platform was well suited for enabling experimentation.

7.3 Contributions to Organizational Research

The main contribution of my dissertation to organizational research is in clarifying the notion of boundaries and addressing the question of salience of boundaries. The sociocultural lens has been prevalent in sorting out distinctions among organizational cultures in organizations. However, its focus on unity and shared assumptions rather than on practice has proven inadequate in addressing the question of how organizational actors sort out which sub-cultures are most salient in which circumstances and what facilitates the reproduction of distinct cultures. At the same time, the social identity and social
distance research has focused on the distinctions that help agents sort out the social world around them, but these perspectives have been limited to mental models as representations of such distinctions, and have not focused on practice. Without having tools for understanding the context in which various mental models are applied, social identity and social distance researchers are also unable to address the question of salience of boundaries. The practice theory approach to boundaries developed in my research focuses on the notion of boundaries that exist in individual minds as well as objectified in practice in documents, rituals, titles, and material possessions. Through the notion of field, the understanding of which boundaries are most salient in the given logic of practice and how other boundaries are sorted out with respect to these main distinctions becomes possible. Furthermore, drawing on the lens of communicative genre it becomes possible to analyze what the boundaries were, as well as how they were produced, reproduced, and, transformed in practice.

My work also contributes to the study of organizational communication by extending the notion of communicative genres, which was previously applied to understand how agents are united, to also understand how they are, at the same time, differentiated through the enactment of genres. The focus on boundaries that are produced and reproduced through genre enactment also provides an understanding of the conflicts which are part of everyday practice. Understanding conflicts and the representation of these conflicts in discourse leads to insights about the establishment of genres in new settings and their evolution. Building on and extending the work begun by Orlikowski and Yates (1994), this analysis provides a deeper understanding of the mechanisms and timing involved in genre evolution and transformation.

My research has begun to develop an integrative perspective on many issues that fall under the umbrella of collaboration in heterogeneous environments. Similar issues appear in studies of virtual, cross-functional, multi-organizational, and culturally diverse work settings. Some studies tend to focus on knowledge sharing across professional groups (e.g., Carlile 1997; Bechky 1999; Sitkin and Brown 1999). Work on outsourcing and innovation addresses issues of collaborating across organizational boundaries (e.g., von Hippel 1988; Koh, et al. 1999). Others study the role of national culture in communication (Suzuki 1998). Yet others focus on organizational unit boundaries (e.g.,
Szulanski 1995; Dixon 2000). A useful cross-pollination of ideas occurs when these diverse organizational research streams are drawn under the lens of collaboration across boundaries. Using the genre lens and the notion of boundaries (not tied to predefined functional or organization distinctions), it is possible to view different concepts including boundary objects (Star 1989; Star and Griesemer 1989; Henderson 1991; Carlile 1997; Bødker 1998; Ackerman and Halverson 1999; Bechky 1999; Pawlowski, et al. 2000; Briers and Chua 2001), shared stories (Brown and Duguid 1991; Orr 1996), common language (Bradbury 1998; Bechky 1999; Lant 1999; Sitkin and Brown 1999), and prototypes (Carlile 1997; Bechky 1999; Schrage 2000) under a single umbrella. My investigation reveals that these notions are ways of describing different aspects involved in genre competence. I argue that none of these concepts is sufficient on its own to describe the practice in which reflection takes place. Each concept highlights an important objectification of the communicative action, but the focus on the use of objects in practice afforded by the genre lens is necessary to explain whether a given object is used by actors or not, and with what consequences.

While my research has not fully elaborated the notion of boundary spanners (reviewed in Friedman and Podolny 1992)—agents who have special roles in facilitating cross-boundary collaboration—it sheds some light on the role of such agents in practice. First, it shows that relying on boundary spanners as a mechanism for object sharing misses the agency of intermediaries receiving and acting with objects. Second, my data indicate that agents with competence in multiple domains were indeed very valuable. Such agents, however, were rare. As organizations grow they may need to leverage the value offered by such individuals by placing them in roles of authority on projects and learning from their experimentation. Finally, there is another type of boundary spanning activity, which I observed. It involved agents who were dominant in one aspect in the field, but dominating in the other aspect, negotiating on the behalf of the dominated group. For example, an Eserv old-timer, who was a technologists, negotiated on the behalf of other technologists with strategists on the project convincing strategists to include his sub-team members into critical decision-making. While such activity is related to having competencies in multiple domains, it primarily has to do with having accumulated
different types of capital through practice and using one type of capital to increase the value of the other.

Finally, this study contributes to the understanding of innovation in organizations by distinguishing not only the tradeoffs involved in the exploration vs. exploitation of competencies, but also in working towards more balanced vs. more specialized outcomes. In the past decade, the knowledge-based theory of the firm has spawned a stream on research on the economic benefits from integrating previously disparate competencies (Kogut and Zander 1992; Grant 1996b). Early work in this area has been criticized for not paying enough attention to the interests involved in such integration (Foss 1996b; a). Later work has compensated by looking at interests, but at the expense of understanding competencies (Conner and Prahalad 1996). My work builds on the work done by Carlile (1997), who provided insights into both the nature of competencies (knowledge) involved in building products and the negotiation of interests that necessarily accompanies competencies. My research also views competencies and interests as intricately linked in practice and extends Carlile’s work, which focused on functional boundaries, to take into account different types of boundaries that exist in collaborative settings. Most importantly, the fields of practice perspective developed here allows me to understand the boundary that differentiated field old-timers from field newcomers. Communities of practice researchers concentrate on understanding this boundary, but in conditions when agents have interests in becoming similar—that is, acquiring a common identity (Lave and Wenger 1991; Wenger 1998). My study, on the other hand, looked at the old-timer vs. newcomer boundary in situations when becoming similar in a given field often compromises agents’ position in another field (e.g., in the professional field or another organizational field). Such analysis exposes tradeoffs involved in exploiting existing competencies on the project (accepting old-timers’ dominance) vs. bringing new competencies into the project (allowing newcomers’ to challenge). Considering together the experience-based boundaries in a given field and the social status boundaries that come from distinctions in other fields allows a better understanding of challenges and tradeoffs involved in innovating in multi-party settings.
7.4 Limitations and Future Directions

There are several avenues for future research based on the findings of this dissertation. Eserv was a unique setting in many respects and it would be fruitful to continue building the theory developed in this study based on data from other web-development settings, IS consulting settings, and internal IT development settings. A limitation of the method I adopted here was the intensive focus on a given field at the expense of getting more data on the broader fields in which a given field was situated. Looking at industry level data and data from other settings may help overcome this limitation and provide new insights. Similarly, such an examination may reveal what happens on projects where all participants start the project together and continue until the end.

I attempted to build a theory that does not tie the notion of boundary to a specific product setting (IS development or engineering product development). However, I was only able to explore one particular functional setting of web development. The data that I have collected highlight the role of organizational, age, gender, and extended reputation boundaries. It would be interesting to investigate settings where other kinds of boundaries matter, as well as settings in which, for example, age or gender boundaries play a bigger role than they did at Eserv.

My thesis has only begun to explore the implications of my analysis and findings for the design of collaborative technology. It will be useful to build on the sociological framework developed here to better understand how the technical properties of artefacts can be used to facilitate collaboration. Similarly, I have not specifically linked my findings to the current concepts developed by researchers of software engineering methodologies and there may be fruitful connections there.

Finally, my work may be used as a platform for investigating a new domain of evolutionary strategy development (Eisenhardt and Brown 1999; Hargadon and Sutton 2000; Ross, et al. 2000). The notion of collective reflection-in-action developed here focuses primarily on project-level experimentation and to some degree on organizations trying to experiment with internal genres. These concepts may be developed at industry levels and they may be able to shed light on the reflection and experimentation occurring at the level of the market, and the formation of strategic alliances that may enable such broader experimentation.
Closing Thoughts

My dissertation has focused on the distinctions and boundaries that exist in organizations, the way they are produced, reproduced, and transformed by agents in their communicative practices, and the tradeoffs involved in such practices. It must be acknowledged that a different picture of organizational practice would have emerged if I had focused on the understanding of unity within organizational communities of practice or on project teams. However, researchers of modern organizations are learning that differences in agents’ backgrounds are becoming more prominent in practitioners’ minds as they try to work together to achieve benefits from previously hidden connections. Understanding differences among agents based on the diversity of past experiences necessarily means understanding differences in interests that are shaped by agents’ pasts. In this dissertation I have shown how differences in interests and competencies shaped communicative practices on IS projects, which, in turn, shaped the IS outcomes. Revisiting my own past experience in IS consulting described in the introduction, I see how the framework developed here helps me understand which boundaries mattered in my own practice and why I compromised and agreed to certain tradeoffs. I was frustrated by the compromises I had to make, as were the Eserve and Pubco practitioners who faced such compromises every day. I hope that my research will help practitioners make more informed compromises that benefit them and others over the long term, while also easing the emotional tension that has to do with striving and failing to achieve the best of all possible worlds given limited resources. Such an approach to practice has become a common way to motivate workers in organizations including Eserve and Pubco. While this has emotional upsides when everybody still believes they are “shooting for the stars,” it often has bigger emotional and economic downsides, when instead of “landing on the moon” they land back on Earth.
Eserve Organizational Chart (approximate)

CEO

Chief Financial Officer
Chief HR Officer
Chief Knowledge Officer
Chief Marketing Officer
Chief Operating Officer
Chief Strategy Officer
Chief Technology Officer

R&D Group Director
VP of Business Development
VP of New Business Development

Personnel Officer
Regional Design Officer
Regional Strategy Officer
Regional Technology Officer
Local Office Manager

R&D Team Lead
Office Sales Lead

Project Manager

Strategy Lead
Design Lead
Technology Lead

Senior Strategist
Strategist
Senior Designer
Designer
Senior Technologist
Technologist
**Appendix B: Eserve Consultants Instructing in NHTP**

<table>
<thead>
<tr>
<th>Strategists (2)</th>
<th>Technologists (2)</th>
<th>Designers/Marketing (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Who:</strong> Women between 30-40 with no children</td>
<td><strong>Who:</strong> Men around 30</td>
<td><strong>Who:</strong> 2 regional leader (man and woman of 40), 1 office leader (man of 30), 2 R&amp;D group members (man of 30 and man of 40)</td>
</tr>
<tr>
<td><strong>Education:</strong> MBAs from top business schools</td>
<td><strong>Education:</strong> BS or MS in Computer Science</td>
<td></td>
</tr>
<tr>
<td><strong>Primary role:</strong> Client Account Managers</td>
<td><strong>Primary role:</strong> Senior and Lead Technologists</td>
<td></td>
</tr>
<tr>
<td><strong>Previous work:</strong> 5+ years of management consulting experience with some web projects. Led key projects that started Eserve offices in new locations.</td>
<td><strong>Previous work:</strong> Background in tech development and consulting.</td>
<td><strong>Education:</strong> Either undergraduate or graduate degree in arts and design. One person in marketing. One person with technical background as well as arts.</td>
</tr>
<tr>
<td><strong>Eserve Experience:</strong> approx. 3 years</td>
<td><strong>Eserve Experience:</strong> 2 - 3 years</td>
<td><strong>Primary role:</strong> (as above)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Previous work:</strong> All had distinguished backgrounds and were recognized in either arts community as artists or in the marketing community as brand specialists.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Eserve Experience:</strong> 1.5 to 2 years</td>
</tr>
</tbody>
</table>
## Appendix C: Eserve Field Genre Repertoire

<table>
<thead>
<tr>
<th>Genre/Genome System</th>
<th>Socially Recognized Purpose(s)</th>
<th>Form(s)</th>
<th>Eserver vs. outsider consultant vs. client</th>
<th>Strategy/technology/design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment genre system</td>
<td>- For Eserve, find suitable (skills and cultural fit) candidates for open positions - For candidates, learn about Eserve and seek employment.</td>
<td>Includes an online job application, employee referral, or campus recruitment genres followed by the interviewing genre system.</td>
<td>See specific genres comprising the system</td>
<td>See specific genres comprising the system</td>
</tr>
<tr>
<td>Online job application genre</td>
<td>same as for the recruitment genre system</td>
<td>Job Seekers view online position postings with a description of the skills and &quot;cultural&quot; values sought at Eserve. Job candidates express interest by filling in answers to questions in the online job application form and writing an open-ended statement. Position postings and online forms vary by discipline. <em>Artifacts</em>: Eserve web site, online job posting, online job application</td>
<td>- modern vs. traditional - fun vs. (boring) - open vs. (reserved) - team players vs. (individualists) - web experienced vs. new to the web space - leader vs. (follower)s - eager to learn vs. (reluctant to learn) - sharp vs. (mediocre) - unrestricted in schedule and travel vs. (restricted by family and school commitments)</td>
<td>(comprehensible professional language/obscure professional language/(comprehensible language) - (unknown outside)/(unknown outside)/well-known outside MBA/no MBA/no MBA - experienced in management consulting/new to management consulting/new to management consulting - understands the web space/does not understand the web space</td>
</tr>
<tr>
<td>Employee referral genre</td>
<td>same as for the recruitment genre system</td>
<td>Current Eserve employees identify potential new Eserve members and submit their information to HR. <em>Artifacts</em>: Computerized referral form</td>
<td>- committed to Eserve vs. (indifferent)</td>
<td></td>
</tr>
<tr>
<td>Campus recruitment</td>
<td>same as for the recruitment</td>
<td>Several Eservers go on campus to recruit young candidates into</td>
<td>- young vs. (old)</td>
<td>MBA/no MBA/no MBA - top-ranked school/(non-top-ranked)</td>
</tr>
<tr>
<td>Role</td>
<td>Genre System</td>
<td>Description</td>
<td>Artifacts</td>
<td>See Specific Genres Comprising the System</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Interviewing Genres</td>
<td>same as for the recruitment genre system</td>
<td>Includes office tour, individual interviews, and interview wrap-up genres.</td>
<td>Application Form</td>
<td>See specific genres comprising the system</td>
</tr>
<tr>
<td>Office Tour</td>
<td>same as for the recruitment genre system</td>
<td>A newcomer to the office is given a tour of the office space.</td>
<td>Eserve office space, &quot;Eserve Values&quot; poster, Employee photographs</td>
<td>none</td>
</tr>
<tr>
<td>Individual Interviews and Interview Wrap-Up</td>
<td>same as for the recruitment genre system</td>
<td>Up to three rounds of one-on-one interviews in the Eserve office space conducted by HR personnel and individual consultants, who take time off projects to participate.</td>
<td>Interviewing Guides distributed by HR; Interviewing Notes.</td>
<td>(comprehensible professional language/obscure professional language/comprehensible language)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• R&amp;D group vs. consultants</td>
<td></td>
<td>(unknown outside)/ (unknown outside)/well-known outside</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Enterprise vs. consultants</td>
<td></td>
<td>MBA/ no MBA/ no MBA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• open vs. (reserved)</td>
<td></td>
<td>experienced in management consulting/new to management consulting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• sharing vs. (selfish)</td>
<td></td>
<td>understands the web space/ does not understand the web space/ does not understand the web space</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• modern vs. traditional</td>
<td></td>
<td>articulate / (inarticulate) / (inarticulate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• egalitarian vs. (authoritarian)</td>
<td></td>
<td>leader / (follower) / (follower)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• high-tech vs. (low-tech)</td>
<td></td>
<td>thinking on your feet / thinking on your feet (slow in analysis)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• well designed vs. (utilitarian)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• young vs. (old)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• merit-oriented vs. politics-oriented</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• committed to Eserve vs. (indifferent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• open vs. (reserved)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• egalitarian vs. (authoritarian)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• team player vs. (individualist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• eager to learn vs. (reluctant to learn)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• leader vs. (follower)s</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• good consultant vs. poor consultant</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• independent vs. (dependent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• articulate vs. (inarticulate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• thinking on the feet vs. (slow in analysis)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• sharp vs. (mediocre)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• flexible vs. rigid</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• working well under pressure vs. not coping well with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Hire Training Program genre system</td>
<td>- For Eserve, introduce new hires to Eserve culture, Eserve service delivery methodology, and administrative procedures (&quot;Eserve way&quot; of practicing). Teach new hires basic consulting skills. - For Strategists, learn about &quot;Eserve way&quot; of practicing.</td>
<td>Three week &quot;boot-camp&quot; training program including training classes, a team project, and many social activities. Classes are taught by Eserve leader, distinguished consultants, support (enterprise) personnel, or hired instructors. Introduces and involves practicing most genres in the Eserve repertoire. <em>Artifacts</em>: Most teaching materials stored on the intranet (&quot;EShare&quot;)</td>
<td>See specific genres comprising the system. In addition, the training program's form reproduced the following distinctions: - unrestricted in schedule and travel vs. (restricted by family or school commitments) - leader vs. (follower) - working long hours vs. (working 9-5)</td>
<td>- good consultant / good consultant / poor consultant</td>
</tr>
<tr>
<td>Inspirational speech genre</td>
<td>Express love for Eserve, state Eserve values, and convince others that Eserve is a great organization to be a part of.</td>
<td>A speech addressing either a small group of people (e.g. a team) or a large group (Eserve training class, the whole office, the company, or the industry seminar) given by a person in a face-to-face setting (or teleconference). <em>Artifacts</em>: none</td>
<td>- committed to Eserve vs. (indifferent) - articulate vs. (inarticulate) - leader vs. (follower) - passionate vs. (neutral)</td>
<td>- leader / (follower) / (follower)</td>
</tr>
<tr>
<td>Partying</td>
<td>Establish social</td>
<td>Includes after-hours parties, going</td>
<td>- outgoing vs. (reclusive)</td>
<td>- fashionably dressed / (plainly)</td>
</tr>
</tbody>
</table>
| genre | connections based on acquaintances and friendship among Eservers and “to have fun.” | out for drinks, pool playing, sports games, lunches, etc. *Artifacts: none* | • young vs. (old)  
• unrestricted in schedule and travel vs. (restricted by family or school commitments)  
• modern vs. traditional  
• fun vs. (boring)  
• interesting vs. (unremarkable)  
• fashionably dressed vs. (plainly dressed) | dressed) / fashionably dressed |
|---|---|---|---|---|
| Teaming exercise genre system | Help Eservers “gel” as a team. | A face-to-face meeting conducted by a facilitator, who is usually a project manager or class instructor, with a specific agenda posted on flip charts. A “scribe” is designated to take notes. The meeting includes group discussion and individual statements. Notes are summarized and distributed to participants using email, printouts, and/or shared system “EShare.” The system includes introduction, expectations-solicitation and norm-setting exercise genres. *Artifacts: none* | • leader vs. (follower)  
• egalitarian vs. (authoritarian)  
• participatory vs. (autocratic)  
• team player vs. (individualist) | leader / (follower) / (follower) |
| Introduction genre | Learn the backgrounds of fellow Eservers. | An individual states his or her name, discipline, home office, primary role, length of time at Eserve (either through NHTP class, date of hire, or employee number). Typically, but optionally, includes prior projects at Eserve, education (required in written form), prior work background, and an interesting facts about a person. If not done in person includes a picture. For designers includes mention of professional awards | • young vs. (old)  
• male vs. female  
• leader vs. (follower)  
• worked for the CEO’s OldCo vs. did not work for the CEO’s OldCo  
• (no Masters degree) vs. Masters degree  
• experienced in management consulting vs. new to management consulting  
• Renaissance person vs. (narrowly focused) | MBA / no MBA / no MBA  
• top-ranked school / (non-top-ranked school) / (non-top-ranked school)  
• social science/humanities education / technology/science education / design education  
• experienced in management consulting / new to management consulting / new to management consulting  
• articulate / (inarticulate) / (inarticulate) |
| Expectations solicitation genre | Understand what each participant expects to achieve through participating in a given task. | A facilitator asks all participants to state their expectations for the task and for each other during the execution of the task. Sometimes everybody is polled and other times people volunteer to speak. *Artifacts:* Notes written by the scribe and distributed to the team or notes written on the flip chart when people speak and later posted on the wall. | • **committed to Eserve vs. (indifferent)**  
• merit-oriented vs. politics-oriented  
• open vs. (reserved)  
• team player vs. (individualist)  
• fun vs. (boring) | none |
| Norm-setting genre | Agree on how to work together by taking into account individual working styles. | A facilitator asks all participants to state their HBDI profiles. This is intermingled with the group dialogue on team working hours, communication medium, meeting frequency, socialization activities, and work interruption rules. *Artifacts:* Notes written by the scribe and distributed to the team or notes written on the flip chart when people speak and later posted on the wall. | • team player vs. (individualist)  
• articulate vs. (inarticulate)  
• leader vs. (follower)  
• unrestricted in schedule and travel vs. (restricted by family or school commitments)  
• open vs. (reserved)  
• working collaboratively vs. (working in solitude) | • oral and visual communication / email communication / visual and oral communication  
• working collaboratively / working in solitude / working in solitude  
• leader / (follower) / (follower) |
| The Herrmann Brain Dominance Instrument (HBDI) profile sharing | Learn how task participants' thinking differs and how they approach work. | Each task participant shares their HBDI profile or describes their "thinking" style using HBDI vocabulary. Often the profile is qualified with an explanation aimed at avoiding stereotypes about professional groups. *Artifact:* Individual HBDI profiles | • well-organized vs. (haphazard)  
• logical vs. intuitive  
• passionate vs. (neutral)  
• sensitive vs. (insensitive)  
• male vs. female | • logical / logical / intuitive  
• quantitative / quantitative / qualitative  
• well-organized / well-organized / (haphazard)  
• male and female / male / female and male |
| genre                        | sheets, team profile hanged on the wall by overlaying individual profiles printed on transparent sheets.                                                                 | • committed to Eserve vs. (indifferent)  
• open vs. (reserved)  
• merit-oriented vs. politics-oriented  
• leader vs. (follower)  
• articulate vs. (inarticulate)                                                                 | • articulate / (inarticulate) /  
(inarticulate)  
• leader / (follower) / (follower) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-mortem exercise genre</td>
<td>Reflect on the project to understand what went well and what went poorly, and share some learning with the participant on the next phase of the project (if any), and the rest of the organization. A facilitator, who is outside on the team, conducts a face-to-face meeting (sometimes with Video Conferencing). Project leader provide contextual background. Each individual is then asked to brainstorm on positives and negatives for each topic including adherence to Eserve Values and Culture; client interaction, project management, team communication; methodology use, staffing, and individual learning. The notes are summarized in a document or spreadsheet for sharing with others. Artifacts: Flip charts with agenda, flip charts with post-it notes for posting individual statements according to the topic, summary notes distributed electronically.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career development genre</td>
<td>Help Eservers grow their careers at Eserve. Includes mentoring, growth and performance evaluation, and staffing genre systems. Artifacts: none.</td>
<td>See specific genres comprising the system.</td>
<td>See specific genres comprising the system.</td>
</tr>
<tr>
<td>system</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Mentoring genre system      | Provide Eservers with guidance on career growth and evaluation. Includes mentorship training program genre system, mentor assignment, one-on-one meetings with mentors to discuss concerns Artifacts: Eserve Employee Database, which reflected the mentorship assignment; mentorship calendar, mentorship. | • committed to Eserve vs. (indifferent)  
• egalitarian vs. (authoritarian)  
• participatory vs. (autocratic)  
• leader vs. (follower)  
• sensitive vs. (insensitive)  
• working long hours vs. (working 9-5)                                                                                                                                  | None                                                                                                                                                                                                                                                             |
|                            |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                  |
| Growth evaluation system | Evaluate employee growth on the basis of Eserve-valued skills. | Starts with mentors helping an employee to write a base skills profile for each area including consulting craft, client and project management, building Eserve, and skills in each disciplines as well as a growth plan. Continues with the update of the profile after each project and culminates with an annual evaluation in a meeting between the office leadership and the mentor, which results in salary changes. *Artifacts:* Spreadsheet with the skills profile, written evaluation by the mentor. | **committed to Eserve vs. (indifferent)**  
- merit-oriented vs. politics-oriented  
- good consultant vs. poor consultant  
- leader vs. (follower)  
- Renaissance person vs. (narrowly focused)  
- eager to learn vs. (reluctant to learn)  
- independent vs. (dependent) | good consultant / poor consultant / poor consultant |
| Performance evaluation system | Evaluate employee performance on projects. | Starts with project managers setting expectations for each individual on a project. Involves 360 degree evaluation from 3 other project participants to report on employee effort and dedication to the project. 360 degree evaluations are summarized in a report by the project manager, concludes with an annual performance review that involves a mentor and an office leader and results in a financial bonus. *Artifacts:* 360 degree evaluation reports, project performance report, and annual performance report | **committed to Eserve vs. (indifferent)**  
- participatory vs. (autocratic)  
- egalitarian vs. (authoritarian)  
- flat organization vs. (hierarchical organization)  
- leader vs. (follower)  
- team player vs. (individualist)  
- working long hours vs. working 9-5  
- good consultant vs. poor consultant  
- open vs. (reserved)  
- sharing vs. (selfish)  
- unrestricted in schedule and travel vs. (restricted by family or school commitments) | good consultant / poor consultant / poor consultant |
| Staffing | Assign | Eservers express their staffing | **participatory vs. (autocratic)** | none |
| Genre System | Consultants to projects. | Preferences to their mentors and/or staffing consultants. Projects that are in the business development stages are entered into the Eserve Employee Database, where Eservers can look at them to express interest. Once the project needs to be staffed, the staffing consultant, with the input from employees and mentors, participates with HR leadership in a staffing meeting where potential assignments are made. The assignments are indicated in Eserve Employee Database and reported to consultants. Consultants can express their concerns or support for the assignment through mentors or staffing consultants. *Artifacts:* Eserve Employee Database. | - egalitarian vs. (authoritarian)  
- flat organization vs. (hierarchical organization)  
- accessible vs. (inaccessible)  
- leader vs. (follower)  
- hardworking vs. (slacker)  
- working long hours vs. working 9-5 |
|---|---|---|---|
| Knowledge Management Genres | Support Eserve projects by sharing knowledge across Eserve projects. | Includes knowledge brokering, document sharing, discipline community events, newsletter, project jump start assistance, and project leadership meeting genres. Community events such as brown bag lunches were most established among technologists. *Artifacts:* EShare document management system, newsletter, deliverable from a project (asset), discipline community web site, project summary sheet. | - committed to Eserve vs. (indifferent)  
- open vs. (reserved)  
- sharing vs. (selfish)  
- team player vs. (individualist)  
- leader vs. (follower)  
- eager to learn vs. (reluctant to learn)  
- working collaboratively vs. working in solitude  
- flexible vs. rigid |
<p>| Consulting Craft Genre | Resolve clients' problems by | Includes problem solving, facilitation, and presentation | - good consultant vs. poor consultant |</p>
<table>
<thead>
<tr>
<th>Articulation</th>
<th>Manner of listening</th>
<th>Thinking style</th>
<th>Activity style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced in management consulting vs. inexperienced in management consulting</td>
<td>Leader vs. (follower)</td>
<td>Independent vs. (dependent)</td>
<td>Teacher vs. (student)</td>
</tr>
<tr>
<td>Articulate vs. (inarticulate)</td>
<td>Well-organized vs. (haphazard)</td>
<td>Thoughtful vs. (impulsive)</td>
<td>Independent vs. (dependent)</td>
</tr>
</tbody>
</table>

**Genres:**
- Microsoft PowerPoint-based slide presentations
- Microsoft Excel spreadsheets
- Microsoft Access databases
- Decision tree diagrams
- Pop charts
- Sticky notes

**Presentation and delivery:**
- Articulate:
  - Well-organized
  - Independent
- Inarticulate:
  - Haphazard
  - Dependent

**Incorporating feedback and providing polished presentation:**
- Client provides feedback
-firstname.lastname@company.com
- Client seeks polished presentation
- Client approves final draft
- Client requests revisions

**Service delivery model genre:**
- Articulate:
  - Well-organized
  - Independent
- Inarticulate:
  - Haphazard
  - Dependent

**Specify major phases, tasks, and deliverables on server:**
- Plan:
  - Strategy
  - Prominent
- Design:
  - Prominent
- Execute:
  - Technology
  - Prominent

**Presentation:**
- Three-phase model explained
- Side-by-side delivery drawings
- Explanation of methodology

**Additional notes:**
- Articulate:
  - Independent
  - Well-moving
- Inarticulate:
  - Dependent
  - Slow-moving
| **Discipline genre repertoire** | **Fulfill a given role and produce specific deliverables in the service delivery model.** | **Strategy Genre Repertoire:**
- competitive analysis, initiative generation, market profiling, economic analysis, risk analysis, defining prioritization criteria, initiative prioritization genres, client meetings.
- Design Genre Repertoire: brand audit, brand identity development, creative brief, usability testing, feedback on drawings, focus groups.
- Technology Genre Repertoire: code review meeting, Use-Case analysis, object modeling, data modeling, technical architecture development.
  *Artifacts:* (as mentioned) | none |
|---|---|---|---|
| **Town-hall meeting genre system** | **Inform ESEverS about happenings in the company, celebrate Eserve values, and socialize.** | **A regularly occurring meeting that would last the whole day involving activities performed for a local office (Face to Face) and company wide (teleconferenced). Includes inspirational speech, project recognition, individual awards and mentions, outside speakers, performance reporting, partying, and important announcements genres.** | **Commit**
- **committed to Eserve vs. (indifferent)**
- open vs. (reserved)
- participatory vs. (autocratic)
- egalitarian vs. (authoritarian)
- accessible vs. (inaccessible)
- flat organization vs. (hierarchical organization)
- leader vs. (follower)
- passionate vs. (neutral) | none |
| Leadership Committee Meeting | Make executive decision on a given issue such as a new strategic initiative proposal or an issue from regular firm operations. | A committee that would meet on regular basis often off-site and would include majority of people from the top management and office leadership positions and a few prominent consultants from the field. *Artifacts:* (same as in Consulting Craft genres) | • leader vs. (follower)  
• participatory vs. (autocratic)  
• male vs. female  
none |

**Table Note:**
- Items in parenthesis indicate that the label is based on my interpretation and was not habitually used by study participants.
- Boldfaced distinctions are specific to members of the Eserve field and do not distinguish agents outside its boundaries.
- Rows in with a gray background describe genre systems or genre repertoires
## Appendix D: R&D Field Genre Repertoire

<table>
<thead>
<tr>
<th>Genre/Genre System</th>
<th>Socially Recognized Purpose(s)</th>
<th>Form(s)</th>
<th>R&amp;D Group vs. Eserve Consultant Academically Recognized vs. Academically not Recognized</th>
<th>Eserve High / Mid / Low Status Eserve Decision Maker/Builder</th>
</tr>
</thead>
</table>
| "Using self as a user" conversational genre | Generate research ideas        | Conversational genre that made reference to self as a potential user of B2C applications | • pursuing an open-ended agenda vs. working for a client/boss  
• user-centered vs. client-centered  
• (slow moving) vs. fast moving  
• interesting vs. (unremarkable)  
• Elite Coastal School vs. non-Elite Coastal School | none |
| Conference reporting genre system  | Learn about interesting new trends in the industry and technology and market Eserve | Individuals interested in travel needed to put their interest onto the conference travel list for approval. They would go to the conference and occasionally present a paper. Individuals would write a conference reports and distribute it to other Eservers. **Artifacts:** EShare, Newsletter, Conference Report, office-wide email | • interesting vs. (unremarkable)  
• well connected vs. limited network  
• flexible in location vs. tied to an office  
• resource unconstrained vs. (resource constrained)  
• well-known outside vs. (unknown outside)  
• research vs. industry  
• educator vs. student | none |
| External Meeting Genre             | Present group's research and individual's ideas to potential clients, industry analysts, press, and to other researchers. | Individuals would meet outside the Eserve office with various constituents. Meetings would often go unannounced to the group ahead of time. | • flexible in location vs. tied to an office  
• well connected vs. limited network  
• well-known outside vs. (unknown outside)  
• accountable to oneself vs. accountable to the team | • facing outside the group / facing outside the group / facing inside the group |
| Weekly Status Report Genre         | Update group members about your work, raise issues, and help the group | An HTML form that asked each group member about their prior week activities including external meetings, conference reporting, future plans, and issues. Remote | • experienced in management consulting vs. inexperienced in management consulting  
• well connected vs. limited network | • facing outside the group / facing outside the group / facing inside the group  
• Eserve Executive Leadership / Eserve management / Eserve |
<table>
<thead>
<tr>
<th>Day and Event</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsletter Genre</td>
<td>Educate consultants on what has been going on the R&amp;D group and show tangible outputs of work. A newsletter put in EShare and announced in company wide email. <em>Artifacts</em>: EShare, Newsletter, conference reports, project reports, thought pieces, email announcement.</td>
</tr>
<tr>
<td>New Hire Training Program Teaching Participation Genre</td>
<td>Educate consultants about building cutting edge applications. R&amp;D group members teach &quot;design&quot; classes in New Hire Training Program on building well-designed sites focusing on user experiences. There would also be an R&amp;D group space tour and Demos of R&amp;D projects for students. <em>Artifacts</em>: R&amp;D group space, (others from Demo genre).</td>
</tr>
<tr>
<td>Demonstration Genre (Demo)</td>
<td>Demonstrate research to others through tangible assets. A senior member of the Design Lab would give a presentation that was explaining various virtual (posters, slide shows, movies) and physical (new technical applications) prototypes produced by research projects by talking about DILO (Day In the Life Of) scenarios. <em>Artifacts</em>: Technology, papers, presentations components presented on walls, posters, or projects and stored in EShare as &quot;assets.&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes (network)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>accountable to oneself vs. accountable to the team.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes (Eserve)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>fast moving / fast moving / slow moving</td>
<td></td>
</tr>
<tr>
<td>Design Lab location / Design Lab and Remote location / Design Lab and Remote location</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes (articulate)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>articulate / articulate / (inarticulate)</td>
<td></td>
</tr>
<tr>
<td>leader / leader / (follower)</td>
<td></td>
</tr>
<tr>
<td>Design Lab location / Design Lab and Remote location / Design Lab and Remote location</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes (facing)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>facing outside the group / facing outside the group / facing inside the group</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes (well designed)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>well designed vs. (utilitarian)</td>
<td></td>
</tr>
<tr>
<td>tangible value vs. intangible value</td>
<td></td>
</tr>
<tr>
<td>facing outside of the group vs. facing inside the group</td>
<td></td>
</tr>
<tr>
<td>marketing vs. service delivery</td>
<td></td>
</tr>
<tr>
<td>big idea vs. detailed implementation</td>
<td></td>
</tr>
<tr>
<td>educator vs. student</td>
<td></td>
</tr>
<tr>
<td>research vs. industry</td>
<td></td>
</tr>
<tr>
<td>Eserve designers vs. Eserve technologists and strategists</td>
<td></td>
</tr>
</tbody>
</table>
| Weekly Status Meetings Genre System | Get an update on what everybody is doing, discuss and resolve issues, get update about outside happenings from group leadership. | Includes weekly project team, project leads, and whole group meeting genres. In the whole group meeting (conducted face-to-face and through audio conferencing), the program manager would go through agenda items asking individuals to report on their progress and issues. The group director and the program manager would update the group on Eserve wide leadership directions. Female managers would make process suggestions for issue resolutions. The group director would give directives or make proposals for issue resolution. Others would make replies or ask for clarifications. Artifacts: Meeting agenda an meeting notes stored in EShare | Design Lab vs. new to the group | • Eserve newcomer vs. Eserve old-timer  
• (individualist) vs. team player  
• hierarchical organization vs. flat organization | • Eserve executive leadership / Eserve management / Eserve regular employee  
• leader / leader / (follower)  
• articulate / articulate / inarticulate  
• meet deadlines / meet deadlines / extend deadlines  
• fast moving / fast moving / (slow moving)  
• facing outside the group / facing outside the group / facing inside the group  
• Design Lab location / Design Lab and Remote location / Design Lab and Remote location  
• male / female and male / male  
• resolve issues / define resolution process / follow resolutions  
• (gender-improper language) / (gender proper language) / (gender proper language)  
• ask questions vs. respond |

| Off-site Meeting Genre System | Discuss longer term group issues, demonstrate project outcomes, generate new ideas, and build outside relationships | A day and a half meeting conducted outside Eserve’s Design Lab group location (often arranged through connections) either at another office or at an academic institution including the status meeting, brainstorming session, roadshow, and outside speaker genres. The main focus was on choosing projects. Project presentations and selection "lead" by one of group managers. Remote | | • well connected vs. (limited network)  
• research vs. industry  
• privileged vs. (not privileged)  
• resource unconstrained vs. (resource constrained)  
• pursuing open-ended agenda vs. working for a client/boss | • Eserve executive leadership / Eserve management / Eserve regular employee  
• leader / leader / (follower)  
• articulate / articulate / inarticulate  
• meet deadlines / meet deadlines / extend deadlines  
• Design Lab location / Design Lab and Remote location / Design Lab and Remote location  
• male / female and male / male  
• resolve issues / define resolution process / follow resolutions
| Roadshow | Show group work to outside local office and get feedback and ideas | Set of demos shown to other Eserve offices with questions and small brainstorming sessions at the end. Artifacts: (same as in Demo genre) | • tangible value vs. intangible value  
• educator vs. student  
• research vs. industry  
See Demo genre for other distinctions | • leader / leader / (follower)  
• articulate / articulate / inarticulate  
See Demo genre for other distinctions |

**Table Note:**
- Items in parenthesis indicate that the label is based on my interpretation and was not habitually used by study participants.
- Rows in with a gray background describe genre systems.
<table>
<thead>
<tr>
<th>Project Old-timer vs. Project Newcomer</th>
<th>Form</th>
<th>Socially Recognized Purposes</th>
<th>Genre/Genre System</th>
<th>Client Status Meeting Genre System*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esrve vs. Pubco Top Management vs. Pubco Middle Management</td>
<td>A face-to-face weekly meeting among Esrve’s project manager and VP and Pubco’s project manager (PM) was usually taking place at Pubco. Followed by a debrief meeting with each team. Each meeting is dependent on prior meetings’ discussions. Project plan, project schedule notes, and minutes are stored in ESshare and Esrve team members and Pubco’s meeting participants.</td>
<td>To review activities and deliverables. Confirm plans for the following week, discuss what was learned, raise and resolve issues, allocate resources, and more. Reallocate resources.</td>
<td>Weekly</td>
<td>Get an update on what team members are doing. Discuss and resolve issues. Get updates about project staff and client requests.</td>
</tr>
<tr>
<td>Esrve PM vs. Esrve PM vs. Esrve Project Manager</td>
<td>A face-to-face weekly meeting among team members where the PM and Esrve team members face the group and ask resources for each team member or sub-team leader. Issues would be raised and discussed.</td>
<td>Get an update on what team members are doing. Discuss and resolve issues. Get updates about project staff and client requests.</td>
<td>Weekly</td>
<td>Get an update on what team members are doing. Discuss and resolve issues. Get updates about project staff and client requests.</td>
</tr>
<tr>
<td>Esrve AM and PM vs. Esrve regular team members</td>
<td>A face-to-face weekly meeting among team members where the PM and Esrve team members face the group and ask resources for each team member or sub-team leader. Issues would be raised and discussed.</td>
<td>Get an update on what team members are doing. Discuss and resolve issues. Get updates about project staff and client requests.</td>
<td>Weekly</td>
<td>Get an update on what team members are doing. Discuss and resolve issues. Get updates about project staff and client requests.</td>
</tr>
<tr>
<td>Esrve AM vs. the Esrve PM</td>
<td>A face-to-face weekly meeting among team members where the PM and Esrve team members face the group and ask resources for each team member or sub-team leader. Issues would be raised and discussed.</td>
<td>Get an update on what team members are doing. Discuss and resolve issues. Get updates about project staff and client requests.</td>
<td>Weekly</td>
<td>Get an update on what team members are doing. Discuss and resolve issues. Get updates about project staff and client requests.</td>
</tr>
</tbody>
</table>

*Note: The table is partially cut off, and the full content is not visible.
| **Pubco weekly status meeting*** | For Pubco core team members, share their concerns and issues with the Pubco PM and hear about updates from Eserve. | Was only enacted in the Prototype Phase. A face-to-face meeting at Pubco where regular core team members would share their concerns with the project management and will hear about updates from Eserve. | • Plan Phase / Prototype Phase  
• Eserve Plan Phase PM vs. Eserve Prototype Phase PM  
• The Eserve strategists and technologists vs. Eserve designers | • Pubco vs. Eserve  
• Pubco Top Management vs. Pubco Middle Management  
• leader vs. (follower)  
• facing outside the group vs. facing inside the group |
| **Eserve sub-team meeting genre*** | Update other sub-team members and lead about your work, raise issues, and help the lead to prepare for the team status meeting. | Part of the prototype phase, was enacted primarily by strategists and technologies, and only on occasion by designers. Each meeting is dependent on prior meetings' discussions. | • Plan Phase / Prototype Phase  
• The Eserve strategists and technologists vs. Eserve designers | • The Eserve strategists and technologists vs. Eserve designers  
• well-organized vs. (haphazard)  
• leader vs. (follower)  
• allocate resources vs. ask for resources  
• approve vs. propose  
• direct vs. suggest  
• comment vs. report |
| **Eserve sub-team status report genre*** | Update the team members about sub-team's work and help prepare for the client meeting. | Sub-Team Lead would prepare a report and place in EShare and emailed to the project manager. Was enacted occasionally and was never enacted by the design sub-team. | • Plan Phase / Prototype Phase | • The Eserve strategists and technologists vs. Eserve designers  
• well-organized vs. (haphazard)  
• leader vs. (follower)  
• allocate resources vs. ask for resources  
• approve vs. propose  
• direct vs. suggest  
• comment vs. report  
• ask questions vs. respond to questions |
| **Eserve presentation** | Present results of work to Pubco | Happening several times a week during the Plan Phase, then replaced by sub- | • Plan Phase / Prototype Phase | • Pubco vs. Eserve  
• Pubco Top Management vs. Pubco Middle Management |
| to Pubco core-team* | core team members and get their feedback. | team Eserve-Pubco workshops. A face-to-face meeting take place either at Eserve or Pubco. Includes discussions of what to present to the steering committee and how it will react. All meetings led by the Eserve strategists. Eserver always prepare materials for the meeting. Artifacts: Slide Presentations, parts of future deliverables (e.g. Use-Cases) | - The Eserve strategists and technologists vs. Eserve designers | Management  
- hierarchical organization vs. flat organization  
- (autocratic) vs. participatory  
- leader vs. (follower)  
- approve vs. propose  
- direct vs. suggest  
- comment vs. report  
- ask questions vs. respond to questions  
- The Eserve strategists vs. Eserve technologists and designers  
- articulate vs. (inarticulate) |
| Eserve presentation to Pubco's steering committee* | Present results of Eserve and Pubco's work to the steering committee | Scheduled face-to-face meetings occurring at the beginning, midpoint, and end of the project. the Eserve PM or AM would give a presentation and respond to questions. Pubco core team members would comment. Steering committee members would make decisions. At the end of the phase includes deliverables hand-off. Takes place at Pubco. Artifacts: Slide Presentation, Project Deliverables. | - Business Development Phase/ Plan Phase / Prototype Phase  
- The Eserve strategists and technologists vs. Eserve designers  
- Eserve AM vs. Eserve team members | Pubco vs. Eserve  
- Pubco Top Management vs. Pubco Middle Management  
- hierarchical organization vs. flat organization  
- (autocratic) vs. participatory  
- leader vs. (follower)  
- meet deadlines vs. extend deadlines  
- allocate resources vs. ask for resources  
- approve vs. propose  
- direct vs. suggest  
- comment vs. report  
- ask questions vs. respond to questions |
| Eserve-Pubco workshop* | To jointly brainstorm ideas, discuss, prioritize, or decide on issues | Includes Eservers and Pubco core team members in Plan Phase, but conducted on a sub-team level in the Prototype Phase. Eserver would prepare materials for the meeting. Images would be projected on the wall or given out to all member. Eserve Prototype Phase PM would take down meeting notes and attend most workshops. Eserve AM will not attend any meetings. Pubco would often debate | - Plan Phase / Prototype Phase  
- The Eserve strategists and technologists vs. Eserve designers  
- Eserve Plan Phase PM vs. Eserve Prototype Phase PM | Pubco vs. Eserve  
- comment vs. report  
- approve vs. propose  
- consensus driven vs. (conflict driven)  
- The Eserve PM vs. Eserve regular team members  
- facing outside the group vs. facing inside the group  
- Eserve AM vs. the Eserve PM  
- The Eserve strategists and Pubco Sales, Marketing, and Editorial vs. Eserve |
| Eserve presentation planning meeting genre system* | Prepare for client workshop or presentation | Deliverables are prepared to show or hand over to clients. A meeting happens a day before the client presentation or workshop. Involves discussion of agenda and deliverables for the meeting. Eserve old-timers guide Eserve newcomers on the approach. Often refers to what clients will like and what adds credibility to consultants (e.g. tangibles, methodology, quantitative data). Occasionally includes client bashing. the slide presentation would be sent to Eservers before the meeting for comments. Giving the presentation is assigned to strategists who can deliver it articulately to the client. these meetings become less frequent as the project progresses. Artifacts: Agenda, deliverables, slide presentation. | Marketing, and Editorial vs. Eserve technologists and designers and Pubco technologists and Marketing  
- leader vs. (follower)  
- articulate vs. (inarticulate)  
- Plan Phase / Prototype Phase  
- The Eserve strategists and technologists vs. Eserve designers  
- Eserve AM vs. Eserve other team members  
- The Eserve strategists vs. Eserve technologists and designers.  
- leader vs. (follower)  
- articulate vs. (inarticulate)  
- Pubco vs. Eserve |

| Pubco expert interview* | Learn about Pubco's business | Takes place primarily at the beginning of the Plan Phase. Some interviews are conducted at the end of the Plan Phase. Usually associated with documents given to Eserve to keep and give to others. Most interviews conducted by strategists. Technologists interview Pubco's technologists. Designers do not | Plan Phase / Prototype Phase  
- The Eserve strategists and technologists vs. Eserve designers  
- Pubco vs. Eserve  
- The Eserve strategists vs. Eserve technologists and designers  
- facing outside the group vs. facing inside the group  
- direct vs. suggestion  
- The Eserve strategists and Technologists vs. Eserve designers |
<table>
<thead>
<tr>
<th>User data collection genre</th>
<th>Learn about user behavior</th>
<th>Plan Phase / Prototype Phase</th>
<th>Plan Phase / Prototype Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In the Plan Phase, included an the Eserv strategists calling and interviewing some users. In the Prototype Phase included two Eservers interviewing , and videotaping several local users as well as Pubco core team member conducting a survey of current site users. After the Prototype Phase included a usability test conducted by an outside expert. Artifacts: the existing web site, the sampling guidelines, the interview guide, data analysis report, the web site prototype, usability test guide.</td>
<td>The Eserv strategists and technologists vs. Eserv designers</td>
<td>The Eserv strategists vs. Eserv technologists and designers</td>
</tr>
<tr>
<td>Eserve &quot;knowledge dump&quot; and Eserve Information Architecture meeting genre</td>
<td>Design the top and second level navigation of the site and produce the front page design.</td>
<td><strong>client-centered vs. user-centered</strong></td>
<td><strong>Pubco vs. Eserv</strong></td>
</tr>
<tr>
<td></td>
<td>Enacted first when Prototype Phase newcomers join the project. then enacted starting in the 5th week of the Prototype Phase, when a Eserve Information Architect joined the team. Takes place at Eserve every two days and lasts several hours each. the Eserve strategists explain to Eserve designers about Pubco organization, terminology, current web site, and user behavior. Eserve designers asks questions. Information Architect (Eserve designer) proposes design solutions. Prototype Phase PM (also newcomer to the project) soon starts answering questions. Artifacts: Day in the Life Of Scenario (DILO), Site Map, Flip Chart</td>
<td>client-centered vs. user-centered</td>
<td>traditional vs. modern</td>
</tr>
<tr>
<td></td>
<td></td>
<td>conventional vs. innovative</td>
<td>rigid vs. flexible</td>
</tr>
</tbody>
</table>
| Eserve ad-hoc issue discussion genre* | Discuss and resolve an unexpected issue | In a face-to-face ad-hoc meeting, an email, or a phone call usually involving a document that has been produced or is being produced. Happening frequently every day. Takes place in the team workspace and often draws in more and more and group members. Among strategists often takes place in a meeting room, in which case, it excludes design and technology group members. Artifacts: any of the project deliverables, project plan, project schedule, deliverables from other Eserve projects used for reference. | • Plan Phase / Prototype Phase  
• The Eserve strategists and technologists vs. Eserve designers | • The Eserve strategists vs. Eserve technologists and designers  
• rigid vs. flexible  
• working collaborative vs. working in solitude |
| Joint artifact production genre* | To work collaboratively to produce a deliverable. | Mostly involves producing documents (textual, tables, presentations) by strategists looking together at the computer screen and commenting on each other's suggestions. Artifacts: requirement documents, slide presentations, Use-Cases. | • Plan Phase / Prototype Phase | • The Eserve strategists vs. Eserve technologists and designers  
• eager to learn vs. reluctant to learn  
• working collaborative vs. working in solitude |
| Eserve's work artifact peer review genre* | To give a colleague feedback on his or her output. | A producer of an artifacts asks a colleague for a feedback or sends the artifact to the whole group in email for a feedback. Technologists enact this genre with other technologists. Strategists and Designers send their outputs to everybody, but designers never give feedback to strategists on the content. Artifacts: Documents (textual, tables, presentation), code, technical diagrams, images, site map. | • Plan Phase / Prototype Phase  
• The Eserve strategists and technologists vs. Eserve designers | • The Eserve strategists vs. Eserve designers  
• The Eserve strategists and designers vs. Eserve technologists  
• comprehensible language vs. obscure language. |
| Eserve client | Share frustration | Occurred in informal outside settings | • Plan Phase / | • Pubco vs. Eserve |
| bashing genre* | about the client and to build the team | (bar and dinner gatherings), in ad-hoc meetings, reports from client status meeting, and during post-mortem reviews. the genre was enacted much less frequently as the project evolved and the PM changed. | Prototype Phase - Plan Phase PM vs. Prototype Phase PM | - conventional vs. innovative  
- hierarchical organization vs. flat organization  
- politics-oriented vs. merit-oriented  
- (mediocre) vs. sharp  
- (slow in analysis) vs. thinking on your feet |

**Table Notes:**
- Items in parenthesis indicate that the label is based on my interpretation and was not habitually used by study participants.
- Rows in with a gray background describe genre systems.
- It was stated in the kick-off meeting that Pubco employees would be given tasks to work at Eserve. This was hardly realized. On one hand, Eserve had no space in the office, and, on the other hand, as the relationship was not working out well initially, Eservers did not want to be “policing” by Pubco. Pubco’s project manager came to work at Eserve a couple of times on Eserve’s invitation, but soon stopped. Pubco was given access to the EShare system, but with restricted user privileges. there were “Eserve Internal” areas for working documents and business development materials. In addition, almost none of the Pubco team members ended up using EShare due to technical difficulties.
- *The enactment of each genre increasingly refers to discussions from prior interactions (meetings, interviews, etc.) as well as on the web site design and functionality already agreed upon and recorded in documents or implemented in the Mockup or Prototype.
Appendix F: “Use Case” Example

(identifyng characteristics of the participant organizations are removed)

Description
The Catalog offers comprehensive information on Pubco products. Search Catalog describes the system interactions that allow a user to search for products according to inputted search strings.

Workflow
1. User will input search string(s).
2. User will submit the search query.
3. System will execute search on string(s) within product database.
   a. System will verify strings.
      i. System will recognize characters within quotes as a single search string.
      ii. System will recognize commas as delimiters.
      iii. System will ignore strings in the ignore list.
         1. a, an, and, the, this, there, that, of, in, at, as, for
      iv. If no valid search strings inputted, system returns no results.
   b. System will query "[Pubco's term1]."
      i. If system matches [Pubco's term1], system will return list of products within [Pubco’s term1] and end query.
   c. System will search for strings in the data fields of the Pubco products database.
      [described was a list of 11 terms used at Pubco to search for products].
      i. [...]  
      ii. [...]  
      iii. [...]  
      iv. [...]  
      v. [...]  
      vi. [...]  
      vii. [...]  
      viii. [...]  
      ix. [...]  
      x. [...]  
      xi. [...]  
4. System will determine relevance of product matches.
   a. Distributed weighting of matched fields will determine relevance.
   b. Primary fields will effect greatest relevance. [below was a sublist with terms from 3c]
      i. [...]  
      ii. [...]  
      iii. [...]  
   c. Secondary fields will effect secondary relevance. [below was a sublist with terms from 3c]
      i. [...]  
      ii. [...]  
      iii. [...]  
      iv. [...]  
   d. Tertiary fields will effect tertiary relevance. [below was a sublist with terms from 3c]
      i. [...]  
      ii. [...]  
      iii. [...]  
      iv. [...]  
5. System will generate a list of product matches.
   a. System will ignore duplicate results.
   See <Search Catalog : Step 8>) [below was a list of 5 categories of products]
   a. […]
   b. […]
   c. […]
   d. […]
   e. […]

7. System will detect “exceptions”.
   a. If results=0, system will display no results and request new input.
   b. If results> [limit], system will warn user before continuing search. [requires testing]
      i. User will be able to cancel.
      ii. User will be able to modify search strings.

8. System will display promotion for and link to [A new site tool] for search in a [Pubco product categorization].

9. System will display results.
   a. System will display search strings.
   b. System will display number of product matches.
   c. System will display a brief description of each product.
      i. Product thumbnail image
      ii. Title
      iii. [Pubco Term]
      iv. Brief description of product (first 30 words from detailed description)
         [requires testing]
      v. Formats
      vi. If the product is standalone, link to product information page. <View Product Information>
      vii. If the result is an [Pubco Term]
          1. Display affiliated program core products.
          2. Link to core product information pages.
      viii. Link to [Pubco product term] site if available
   d. System will display results according to relevance.
      i. Results with similar relevance will be sorted by
         1. [Pubco term 1]
         2. [Pubco term 2]

10. User will be able to modify the search strings and resubmit the search.
   a. System will retain and display initial search parameters.

11. User will be able to request to sort results by [Pubco term 1].
   a. System will sort results by [Pubco term 1].
   b. System will redisplay results.

12. User will be able to request to sort results by [Pubco term 2].
   a. System will sort results by [Pubco term 2].
   b. System will redisplay results.

13. User will be able to email results. <Email Results>

14. User will be able to request printer-friendly version. <Display Printer-Friendly Version>
Appendix G: "Wire Frame" Example
Appendix H: Professor Interview Story Stakes Attainment

**Process Stakes** in the Eserve-Pubco project field involve defining communicative genres and gaining economic capital in the consulting field (experience boundary in the Eserve-Pubco field)

**Product Stakes** in the Eserve-Pubco project field involve defining communicative genres and gaining cultural capital in the academic publishing field (social status boundary in the Eserve-Pubco field)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Pubco PM gives the interviewing guidelines document to the Eserve PM to give to an Eserver who would be doing interviews (The Eserve strategist)</td>
<td>The Pubco PM passes an object to the Eserve PM to pass it on to the Eserve strategist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM ignores the interviewing guidelines document and files it away</td>
<td>The Eserve PM receives an object and ignores it. The Eserve PM does not pass an object on to the Eserve strategist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve strategist conducts three interviews with professors in ad-hoc fashion</td>
<td>The Eserve strategist reflects on professors’ objects (words)</td>
<td>The Eserve strategist attains a product stake</td>
<td>Eserve attains a process stake Pubco loses a process stake</td>
</tr>
<tr>
<td>The Eserve strategist emails the Pubco PM specifying her interview process</td>
<td>The Eserve strategist informs the Pubco PM about an object that she has produced</td>
<td></td>
<td>(Doxa revealed)</td>
</tr>
<tr>
<td>The Eserve strategist asks the Pubco PM for Pubco’s contact list of professors (a valuable document)</td>
<td>The Eserve strategist asks the Pubco PM for Pubco’s economic capital in a form of an object.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Pubco PM points the Eserve strategist to the interviewing guidelines document she had given to the Eserve PM</td>
<td>The Pubco PM sends a new object to the Eserve strategist pointing to the object already passed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve strategist reads the interviewing guidelines, which contain audience segmentation</td>
<td>The Eserve strategist reflects on the object from the Pubco PM</td>
<td>The Eserve strategist attains a product stake</td>
<td></td>
</tr>
<tr>
<td>The Eserve strategist gets Pubco contact list from the Pubco PM</td>
<td>Pubco gives Eserve some economic capital in a form of an object</td>
<td></td>
<td>Eserve gains economic capital Pubco loses economic capital</td>
</tr>
<tr>
<td>The Eserve strategist contacts professors according to guidelines</td>
<td>The Eserve strategist sends objects to professors</td>
<td></td>
<td>Pubco gains a process stake Eserve loses a process stake</td>
</tr>
<tr>
<td>The Eserve strategist requests Pubco’s help in conducting interviews</td>
<td>The Eserve strategist asks for economic resources from the Pubco PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Pubco PM tells the Eserve PM that Pubco will not help in interviewing</td>
<td>The Pubco PM replies to economic resource request by the Eserve strategist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Pubco PM suggest to the Eserve PM to extend the project</td>
<td>The Pubco PM makes an economic resource request to the Eserve PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM relays to the Eserve strategist that Pubco will not help in interviewing</td>
<td>The Eserve PM chooses to relay some of the meeting information to the Eserve strategist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM does not relay to the Eserve strategist the Pubco PM’s suggestion to extend the project, instead saying that Pubco is worried about interviewer variability</td>
<td>The Eserve PM tells the Eserve strategist his thoughts (object) about interviewing instead of those of the Pubco PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM tells the Pubco PM that the Eserve strategist will only do a small number of interviews (revealing her ignorance of the Pubco PM’s new suggestions).</td>
<td>The Eserve PM informs the Pubco PM about Eserve approach.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM attains a process stake</td>
<td>The Eserve strategist loses a process stake</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Pubco PM again suggests to the Eserve PM to extend the project</td>
<td>The Pubco PM asks the Eserve PM to expand economic capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM (upon approval) extends the project</td>
<td>The Eserve PM agrees to expand economic capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eserve loses economic capital</td>
<td>Pubco gains economic capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM does not tell to the Eserve strategist about the extension</td>
<td>The Eserve PM chooses which objects not to pass to the Eserve strategist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve PM gains a process stake</td>
<td>The Eserve strategist loses a process stake</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve strategist does interviews with professors on a small scale and produces a report</td>
<td>The Eserve strategist reflects on objects produced by professors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve strategist gains a product stake</td>
<td>Pubco loses a process stake</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eserve gains a process stake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Pubco PM (and others) ignore the report produced by the Eserve strategist, thereby ignoring professors’ opinion about the initiatives.</td>
<td>The Pubco PM ignores objects produced by the Eserve strategist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Pubco loses an opportunity to gain cultural capital in the academic publishing field)</td>
<td>Pubco gains a process stake</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eserve loses a process stake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professors lose a process stake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve strategist is reprimanded by the Eserve PM in a form of a poor performance evaluation given to the Eserve top management with likely salary implications.</td>
<td>The Eserve PM passes an object to the Eserve top management about the Eserve strategist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Eserve strategist loses economic capital</td>
<td>Eserve gains economic capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>273</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Results</td>
<td>The Eserve strategists gained cultural capital</td>
<td>The Eserve strategists lost economic capital Pubco lost economic capital Eserve lost economic capital The Eserve PM gained process stake The Pubco PM gained process stakes Pubco gained process stakes over Eserve</td>
<td></td>
</tr>
</tbody>
</table>
References


285


