CONSTITUTING GENRE REPERTOIRES:
DELIBERATE AND EMERGENT PATTERNS OF ELECTRONIC MEDIA USE

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ABSTRACT

A study of a Japanese R&D group using a new electronic medium identified two contrasting patterns of media use: explicit structuring of community genre norms, and implicit structuring of local genre norms. These patterns provide initial explanations for how norms for using new media arise and change over time.

INTRODUCTION

In the last decade, recently introduced communication technologies such as voice mail and electronic mail (e-mail) have proliferated in the workplace, altering ways in which people in organizations communicate. A growing body of empirical research has examined the influence of electronic media on organizational communication (e.g., Rice and Associates, 1984; Trevino, Lengel and Daft, 1987; Sproull and Kiesler, 1991; Fulk, 1993; Markus, 1994). We attempt to contribute to this research by exploring how a new electronic medium was used by an R&D group over a 17-month project. This field study provides insights into how use of the new medium influenced communication patterns on the project and how project members shaped their use of the medium.

We have previously proposed the notion of genres of organizational communication to conceptualize the communication patterns that emerge over time when individuals' communicative actions interact with their social context and the media at their disposal (Yates and Orlikowski, 1992). We used this concept of genres as an analytic device to study how organizational actors used a new electronic medium (computer conferencing) within a specific social context (a Japanese R&D project) to produce certain communicative practices.

GENRE AND GENRE REPERTOIRE

A genre of organizational communication, such as the memo, meeting, or trip report, is a typified communicative action, identifiable by both a socially recognized communicative purpose and common characteristics of form (Yates and Orlikowski, 1992; Orlikowski and Yates, 1994). The *communicative purpose* of a genre is a purpose constructed and recognized by the relevant organizational community. For example, the recognized purpose of a trip report is to report on the activities and outcomes of a trip, and that of a committee meeting is to discuss, make decisions about, and delegate implementation of matters related to the committee's charge. A genre also typically has some common characteristics of form. *Form* refers to observable aspects of the communication, such as communication medium, structural features, and linguistic features. For example, trip reports are usually paper-based documents with a standard heading, some specific structured fields (e.g., dates, location, and purpose of trip), and some areas open for unstructured comments in appropriate

language, while committee meetings are typically face-to-face gatherings with a specified time, an agenda, and a chairperson.

In earlier work (Yates and Orlikowski, 1992; Orlikowski and Yates, 1994) we have argued that individuals may reinforce or change a genre through a process of structuring (Giddens, 1984). When community members draw on an existing genre to take some communicative action, they reinforce that genre. While members typically reinforce genres through their communicative action, they can also change genres, either deliberately or inadvertently. When such changes to established genres become widely shared among members of a community, genre variants or even new genres may emerge.

In an earlier study of a distributed community of professionals, we introduced the concept of *genre repertoire*, the set of genres routinely enacted by members of a particular community (Orlikowski and Yates 1994). The concept of genre repertoire may be used to reveal the shared knowledge, understandings, expectations, practices, and norms that members have about how to communicate within their community. We also defined two aspects of a community's genre repertoire: its composition, the specific set of genres making up the repertoire; and its use, the frequency with which specific genres are enacted by members of the community. The repertoire's *composition* reveals the kinds of communicative practices in which community members engage. The *use* of a repertoire, or the frequency and timing with which various genres are enacted, indicates the nature and interactive rhythms of a community.

Drawing on this work here, we use the notions of genre and genre repertoires as an analytic lens through which to view how members of a newly-formed project group used a new electronic medium. Through an investigation of the project group's genre repertoire, we examined what kinds of genres the project members enacted in the new medium, and what influenced their enactment of these genres over time.

RESEARCH STUDY

Research Setting

We studied the introduction and use of a computer conferencing system in a newly formed computer product development group within the R&D division of a large Japanese high-tech manufacturing firm. In September 1989, the Acorn (a pseudonym) group was created, with about 150 members primarily from three different labs (designated here as A, B, and C) within the R&D Division. The newly formed project group consisted of six teams: four teams for software development (SG1 through SG4), and one each for hardware development (SYS) and administration (DPS). All project members were experienced computer users

having powerful networked workstations that supported electronic communication; most already used e-mail.

A year before the Acorn project began, a computer conferencing system had been introduced into Lab A of the R&D division by four young software engineers. In college, the four software engineers had used the JU-NET news-system, a Japanese language version of the world-wide USENET news-system. Seeing the conferencing medium's potential for organizational use, these engineers created an internal lab news-system, but usage of this news-system remained confined to the four engineers and a few of their friends. The four engineers were then selected to participate in the Acorn project; on joining, they set up a similar news-system specifically for the Acorn project group. This Acorn news-system was available to all project members for the full 17 months of the project (September 1989 to February 1991).

The four engineers volunteered to help support internal communication and data exchange within the Acorn project group by administering its network. With project management's approval of this activity as part of their regular job duties, they formed the nucleus of what became known as the Network Administration Group for Acorn (NAGA). Five additional members were recruited to ensure that NAGA represented each of the six Acorn teams. As we describe below, the activities of the NAGA group were an important influence on the particular genres enacted by Acorn members.

Data Collection and Analysis

The primary data for the genre analysis of news-system messages consist of 9302 messages posted on the news-system during 15 months of the Acorn project for which news-system archives exist. Many of these messages were analyzed both qualitatively and quantitatively by a research team including one Japanese researcher, two American researchers, and two research assistants fluent in Japanese. Qualitative textual analysis provided the grounding for a coding scheme which the two Japanese-speaking research assistants used to content analyze a subset (2028) of the messages. The coding scheme was based on the two dimensions constituting the definition of genre: *purpose* and *form*:

Purpose Categories refer to the socially recognizable purposes of a message. We coded for two aspects of social purpose: topic area (e.g., technical vs. administrative) and specific communicative purpose (e.g., announcement, response, recreation).

Form Categories refer to a message's formatting features (e.g., list, embedded message) and linguistic characteristics (e.g., type of dialect, informal language).

This primary data was supplemented by interviews of Acorn participants (a series of unstructured discussions with a key informant and structured interviews with six other project members) and a qualitative analysis of 233 e-mail messages exchanged among the NAGA members in their activities of promoting and maintaining the news-system (Fujimoto, 1994; Orlikowski et al, forthcoming). We examined the presence of different genres in the Acorn repertoire in two ways. First, we examined each newsgroup and any NAGA discussion of it and usage rules announced for it to determine whether its messages constituted instances of a specific genre. Second, we sought genres that may have emerged in the newsgroups that had been created for each of the six

teams within the project group. We had coded all the messages in two of these so-called *local* newsgroups for two of the teams (the *local* newsgroup for the SG4 team with 403 messages, and that for the SYS team with 788 messages), and we searched for the presence of genres in the messages of each of these two newsgroups (See Yates et al, 1995 for further description of the genre analysis).

RESULTS

Our analysis of the Acorn project group's genre repertoire revealed two contrasting patterns of news-system use: a *deliberate* pattern that reflects the explicit structuring by NAGA members of particular genre norms for the entire project group, and an *emergent* pattern that reflects the implicit structuring of genre norms by members of the local teams within the larger project group.

Deliberate Pattern of Media Use

Previous stages of this study (Okamura et al, 1994; Orlikowski et al, forthcoming) revealed the extremely important role played by NAGA in proactively shaping use of the news-system medium. The activities of NAGA constituted deliberate, organizationally sanctioned and ongoing mediation of Acorn project members' use of the news-system over time. Further analysis also revealed the importance of NAGA's influence in shaping the genres enacted by members of the Acorn project group at its introduction and in its ongoing use of the news-system over the course of the project.

NAGA's Introduction of the News-System

While NAGA had initially justified its activities in terms of technical support of the network, in the early weeks of the project NAGA announced in a news-system posting that: "Our goal is not only to achieve trouble-free use of the network, but also to increase the productivity of the project by improving communication among members." Indeed, after handling initial network infrastructure issues, NAGA turned its attention to the news-system's potential to facilitate more effective communication and coordination within the project group.

NAGA considered whether the news-system should be used for official, as well as other, communication on the project, and how this new medium should be positioned with regard to existing communication mechanisms, including daily lunch-time meetings (required by company policy in each division or group, and used for official announcements and ceremonial matters), bulletin boards (used for posting general announcements), and e-mail (used for one-to-one communication and team distribution lists). NAGA attempted to promote use of the news-system by allocating most existing Acorn project communication, including all official announcements, to the news-system. In addressing these issues, NAGA members solicited the opinions of others, building broad support among the project members as well as with project managers.

NAGA persuaded the six team leaders and the project group manager that project members should be required to access the news-system daily. Thus, in the daily meeting on January 30, 1990, the project manager announced the new policy requiring all project members to access two specific newsgroups each day, *general* and

announce, for all the project's official announcements. To encourage usage, NAGA also held training sessions and added new newsgroups such as *chat* and *local* to the news-system. The *local* newsgroups, one for each of the six teams within the project, replaced the team's existing e-mail distribution lists. The policy change and NAGA's other activities resulted in a dramatic increase in the number of messages posted to the news-system, rising from about 20 messages a week to around 200 messages per week and remaining around that level until the end of the project was announced in February 1991.

While NAGA did not use the term *genre*, it clearly had at least an intuitive understanding of this concept. For example, in posting guidelines for using e-mail and the news-system, NAGA invoked examples of two genres—the traditional bulletin board posting and the letter—to illustrate appropriate genres for use within the news-system and e-mail media, respectively. The genre implications of introduction of the news-system to the Acorn project were significant, especially for the official announcement genre, previously realized orally in daily meetings or on paper in bulletin board postings. NAGA's efforts created a new set of institutional guidelines around what constituted official announcements: electronic messages in one of two specific newsgroups. NAGA defined the newsgroups in a way that attempted to embody the purpose of the official announcement genre. NAGA further shaped the official announcement genre by its own use of the news-system. Its early messages on this newsgroup were relatively formal announcements of news-system policy, clearly organized, and formatted with devices such as lists. In spite of such models, the official announcement genre was not understood by all in the same way, a problem addressed later.

Although most newsgroups were distinguished primarily by subject matter (e.g., *computers*), another newsgroup initially established by NAGA clearly embodied a specific genre: the *reports* newsgroup used for trip reports. When Acorn members returned from meetings and seminars, they reported on these events to the rest of the project group. A brief introduction indicating the event attended by the author was generally followed by a lengthy list of topics covered in the seminar or meeting with some discussion of each. Such messages typically ended with a formal concluding phrase and the author's name and affiliation. NAGA's usage rules for this newsgroup were imported relatively unchanged from its paper form

In its introduction of the news-system to the Acorn project group, NAGA thus attempted to establish not just the use of a new medium, but some specific norms for its use. In some, though not all, cases, it created newsgroups to embody a genre with a definite purpose and at least some common elements of form. NAGA's initial configuration of newsgroups and its explicit structuring of guidelines on how to use the news-system served to deliberately constitute the project group's initial genre repertoire within the news-system medium.

NAGA's Ongoing Shaping of News-System Usage

NAGA's deliberate shaping of news-system use within the Acorn project continued after its initial establishment. As we have explored elsewhere (Okamura et al, 1994; Orlikowski et al, forthcoming), NAGA *reinforced* what it

saw as appropriate use of the medium through ongoing education of users; it *adjusted* the news-system itself and the rules and norms surrounding its use to respond to perceived problems, user requests, and the changing project situation; and it initiated *episodic changes* in the news-system as a whole to facilitate effective communication within the project. In each of these activities, NAGA also continued to explicitly structure the genre repertoire of the Acorn project.

The ongoing education that NAGA used to reinforce appropriate use combined training for new members and reminders (both private and public) for current users. Some such reminders reinforced genre norms. For example, they suggested that users should embed only relevant pieces of a prior message (rather than the entire message) in their reply message, shaping the form of a new electronic genre—which we have called the dialogue genre (Orlikowski and Yates, 1994)—probably imported by the original NAGA members from USENET.

NAGA also adjusted the definition and usage rules of newsgroups and created new newsgroups on an ongoing basis in response to requests, complaints, and their own perceptions of usage problems. For example, it adjusted the definitions of the *announce* and *general* newsgroups several times in an attempt to keep these required newsgroups to a reasonable size and to clarify the norms for the official announcement genre, encouraging project members to use it primarily for one-way announcements and to limit their discussions in these newsgroups to brief clarifications. While NAGA preferred to cluster its creation of newsgroups into change episodes, it also created a few new newsgroups, some of which established new genres, at other times in response to user requests. Messages in the *headlines* newsgroup, for example, announced the arrival and location of relevant articles, technical reports, and books, and took the form of a typical introduction plus lists and descriptions of the new acquisitions.

Finally, NAGA used change episodes as a mechanism for reflecting, reassessing, and reconfiguring the news-system in a way that would solve larger problems, respond to changing needs, and pursue NAGA's goal of improving communication within the Acorn project. The two change episodes, which occurred three months and ten months after the new-system was made official, also had implications for specific genres. For example, in the second change episode, NAGA resolved the problem of the official announcement genre by creating two new newsgroups—*official/general* and *official/secretary*—to replace *announce* and *general*. Both had a moderator assigned to screen submissions and post only those judged as appropriately official in purpose and formal in style. In its mediation activities, NAGA thus played a deliberate and often proactive role in shaping specific genres and constituting Acorn's genre repertoire.

Emergent Pattern of Media Use

In an interesting contrast to the explicit structuring of genre norms by NAGA, the use of the news-system by the separate teams, evident in their use of the *local* newsgroups, reveals an emergent pattern of use based on the implicit structuring of genre norms.

The *local* newsgroups were created to provide a forum for the intra-team communication of each of the six

teams (though they were not restricted to team members). NAGA's influence in shaping the genres enacted in these *local* newsgroups was much less important than its influence in the news-system as a whole. NAGA's general admonitions, such as the one about restricting the length of embedded messages, no doubt influenced the messages posted to the *local* newsgroups, as did the participation of at least one NAGA member in each team. Nevertheless, implicit norms seem to have emerged in the groups, differentiating their genre repertoires within the local newsgroups. In particular, in the two *local* newsgroups that we studied, those of SG4 (one of four software teams) and SYS (the hardware team), we found that the genre repertoires, while composed of the same set of genres, differed significantly in their use.

Composition of the SG4 and SYS Genre Repertoires

Both teams' genre repertoires were composed of five genres (see Yates et al, 1995 for more detail).

Paper memo resembled traditional Japanese paper-based memos in purpose and form.

Electronic memo varied from traditional memos in a few aspects of form, such as allowing informal tags after signatures.

Dialogue messages responded to prior messages and included all/part of the embedded messages.

Administrative announcement messages covered administrative topics and included formatting features such as a title.

Technical announcement messages covered technical topics and included formatting features such as a title.

The composition of the news-system genre repertoires for SG4 and SYS included the general purpose paper memo genre for formal internal communication, the electronic variant with its slightly greater informality, the interactive and potentially quite informal dialogue genre for electronic conversations (probably learned from NAGA members who had seen it on USENET), the typical administrative announcements that might be present in most organizations, and technical announcements in accord with the R&D project's purpose. The similarity of the two genre repertoires in terms of composition suggests that they were both influenced by paper-based norms in the R&D division as a whole, by the norms established by NAGA for the Acorn project as a whole, by the nature of the technical work on the common project, and by the capabilities of electronic media.

Use of the SG4 and SYS Genre Repertoires

While the genre repertoires of two teams were similar in composition, they differed significantly in the frequency with which each genre was drawn on by members of the team, demonstrating implicit structuring of team genre norms. Figure 1 shows the percentage of messages in each *local* newsgroup that could be classified into each of the five genres identified. As it shows, SG4 members drew much more frequently than SYS members on the conversational dialogue genre (28% vs. 13%) and on the less formal electronic variant of the memo (24% vs. 18%). In contrast, SYS members drew more often than SG4 members on the formal and bureaucratic administrative announcement (27% vs. 24%). and paper memos (7% vs. 2%). These two different profiles of genre repertoire use suggest different team norms: SG4 members took

advantage of the medium to demonstrate more interactivity and informality; SYS members demonstrated a greater (though not absolute) tendency to draw on traditional, paper-based genres. That group also showed less convergence of norms (27% vs. 9% unclassifiable into one of five genres).

We could identify one source of variation between teams by further analyzing the messages posted by the originating lab (A, B, and C) for each team member in SG4 and SYS. In SG4, 14 of the 28 members came from Lab A and 10 came from Lab B, while in SYS, 8 of the 24 team members came from Lab A and 13 from Lab C. As Figure 2 shows, SG4 team members who came from Lab B clearly contrasted with the other three groups profiled, using dialogue for well over 50% of their messages, and not using paper memo at all. Members of both SG4 and SYS who came from Lab A have similar repertoire use profiles except that those in SG4, perhaps influenced by the Bs in their team, used paper memo much less and dialogue somewhat more than those in SYS. The members of SYS from Lab C have the lowest level of convergence, with only 63% of their messages classifiable; they depended most heavily on the traditional administrative announcement. It thus seems that the culture of the lab of origin exerted some influence on the teams' use of their genre repertoires.
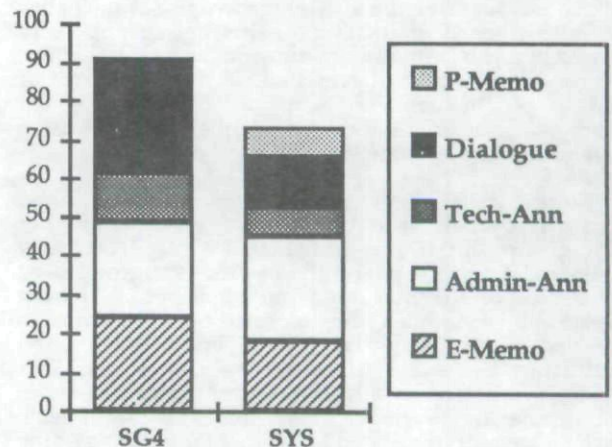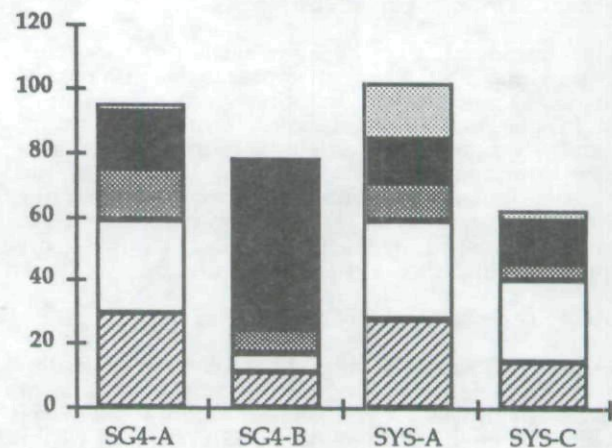
FIGURE 1

FIGURE 2

In the analysis of the *local* newsgroups, thus, we see the emergence of patterns of news-system usage that reflect the different norms of the local teams. Our interviews indicate that no explicit or deliberate discussion of news-system usage occurred among members of the teams, and their news-system usage consequently reflects members' implicit structuring of genre norms, based in part on norms imported from their original labs.

CONCLUSIONS AND IMPLICATIONS

Our research study has identified two contrasting patterns of genre use in a new electronic medium – a deliberate and an emergent pattern. This was an exploratory study in a Japanese context with a technically-literate R&D community and a particular type of conferencing technology. While more empirical research is clearly needed to explore these patterns in other settings, we believe that the patterns can serve as initial and suggestive archetypes for helping researchers and practitioners explain and understand how norms for using new media arise and change over time.

The deliberate pattern of media use involves the explicit and ongoing structuring of genre norms for a community of users. Such structuring may be conducted by insiders within the community of users, like NAGA, or by outsiders such as the MIS department or paid consultants. An inside perspective provides needed contextual information to define appropriate norms, ensures local credibility to obtain genuine user feedback, and allows the physical proximity which facilitates ongoing monitoring and adjustment of usage. Achieving socially agreed-upon genre norms in a new medium or new situation is often quite a lengthy and uncertain process (Orlikowski and Yates, 1994). NAGA's activities of explicit structuring seem to have facilitated and sped up this process in the Acorn project group's use of the news-system medium.

The second pattern of media use involves the implicit structuring of tacit genre norms by a community of users. By definition, such an emergent pattern of media use does not involve any reflection or articulation of what usage norms are appropriate for or intended in a new medium. We have suggested that such tacit emergence of genre norms typically occurs when people are confronted with a new condition (such as a new communication medium) and, in the absence of explicit guidance about how to deal with it, simply transfer existing norms and established habits from a familiar situation to the new one (Orlikowski and Yates 1994). The genre repertoires of the local teams within the larger Acorn project group. in large part reflected prior genres that they had used in other media and other labs, which they imported in the news-system and began using and varying without explicit consideration. This pattern of usage has the advantage of allowing users to begin to use a new medium quickly and without much intimidation. It may, however, lead users to simply apply ineffective habits of use from old technologies to new ones, making subsequent changes to use habits difficult.

We believe that most organizations acquire, adopt, and begin to use new electronic media without much active deliberation of what kind of genre or usage norms they hope to enact within them. Deliberate consideration of genres and genre repertoires may help implementors and users of new media in organizations determine what genres might be enacted within the medium given particular local conditions and context-specific task demands. Without such deliberation and common understanding about how a new medium might be used, genre ambiguity and unaligned communication expectations may easily result. Establishing shared norms and expectations about genres and genre repertoire among a group of communicators might significantly enhance their communicative effectiveness.

REFERENCES

Fujimoto, M. 1993. "Electronic Communication Technology in R&D Settings: Policy Implications for Public and Private Sectors," Unpublished S.M. Thesis, Cambridge, MA: Massachusetts Institute of Technology.

Fulk, J. 1993. "Social Construction of Communication Technology," *Academy of Management Journal*, 36: 921-950.

Giddens, A. 1984. *The Constitution of Society: Outline of the Theory of Structure*. Berkeley CA: University of California Press.

Markus, M.L. 1994. "Electronic Mail as the Medium of Managerial Choice," *Organization Science*, 5: 502-527.

Okamura, K., Fujimoto, M., Orlikowski, W.J., and Yates, J. 1994. "Helping CSCW Applications Succeed: The Under-Appreciated Role of Technology Mediators," *Proceedings of the Fourth Conference on Computer-Supported Cooperative Work*, Chapel Hill, North Carolina: 55-65.

Orlikowski, W.J. and Yates, J. 1994. "Genre Repertoire: Examining the Structuring of Communicative Practices in Organizations," *Administrative Science Quarterly*, 39: 541-574.

Orlikowski, W.J., Yates, J., Okamura, K. and Fujimoto, M. Forthcoming. "Shaping Electronic Communication: The Metastructuring of Technology in Use," *Organization Science*.

Rice R.E. and Associates (Eds.) 1984. *The New Media: Communication, Research, and Technology*, Newbury Park CA: Sage Publications.

Sproull, L. and Kiesler, S. 1991. *Connections: New Ways of Working in the Networked Organization*. Cambridge, MA: The MIT Press.

Trevino, L.K., Lengel, R.K. and Daft, R.L. 1987. "Media Symbolism, Media Richness, and Media Choice in Organizations," *Communication Research*, 14: 553-574.

Yates, J. and Orlikowski, W.J. 1992. "Genres of Organizational Communication: A Structurational Approach to Studying Communication and Media," *The Academy of Management Review*, 17: 299-326.

Yates, J., Orlikowski, W.J., and Okamura, K. 1995. "Explicit and Implicit Structuring Of Genres: Electronic Communication in a Japanese R & D Organization." Sloan WP #3809, Cambridge, MA: Massachusetts Institute of Technology.