ENTREPRENEURSHIP
THEORY
and
PRACTICE

Vol. 19, No. 3
Spring, 1995

Published Quarterly by Baylor University
The Formation and Incorporation of Virtual Entrepreneurial Groups
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This article argues that the recognition of anomaly in organizations is socially organized through the formation of virtual entrepreneurial groups. The process of group formation and incorporation within the organization is described. The new group, e.g. a virtual group, is a mobile strategic position within an existing organization. Case data is drawn from a two-year observational period in a firm which underwent a major reorganization. A mix of qualitative and quantitative methodologies is used to describe the adjustment of this new group with existing groups before and after reorganization. Differences in inter- and intra-communication and work patterns are discussed.

"Ad hoc formations within institutions have been found to facilitate firm-level entrepreneurship and innovation" (Kanter, 1988; see also Mintzberg, 1979, 1983). In fact, the term "adhocracy," earlier coined by Bennis (1966), describes an institutional structure that sustains the formation of corporate groups, all temporary by design. Such groups are highly suited for the performance of complex, innovative, and uncertain tasks in turbulent environments (Galbraith, 1971, 1974, 1977; Davis & Lawrence, 1977; Kolodny, 1981; Kanter, 1983; Peters, 1987). Incorporation, in the sense of corporate group emergence and its formation, including its relationship with the parent institution, is "assumed" to occur. However, little attention has been paid to the actual structural processes of incorporation and how work and communication patterns subsequently change. I argue that the introduction of innovative concepts may transform conventional collective behavior in prescribed ways in existing institutional settings.

To that end, this article represents a step toward addressing the complex interactions among hierarchy, network, and myth which virtual entrepreneurial groups must navigate in order to realize the innovation. A virtual entrepreneurial group is a mobile strategic position within an institution. I describe the formation of such a group within a contemporary business organization using an anthropological framework and method called continuous contextual analysis (cf. Van Velsen, 1967; see also Van Maanen, 1988). This approach is used to understand how groups coalesce around anomaly, resulting in their formation and incorporation by the firm. The setting is a high-technology organization called SOFTEK (a pseudonym). The brief description contained herein is part of a larger ethnography drawn from my field notes when I was the visiting anthropologist for two years from 1987 to 1989. During that time, I administered two network surveys, before and after a reorganization that occurred in December, 1988. Using qualitative and quantitative data, I analyze how communication patterns change as the new group and the company adapt to one another.

I describe how this entrepreneurial group emerged and developed in an ad hoc manner only to subsequently assume a life of its own—far exceeding the expectations of
the individuals tangentially or centrally involved in the group (Sahlins, 1963; Levine, 1985; Kapferer, 1969). I suggest that the entrepreneurial activities of virtual groups are the dialectical outcome of two opposing organizational forces: autonomy and constraint. Mobile and unstable, these groups rise and fall situationally amid routine activity. They are perceived as virtually powerful not in spite of their instability but because of it; hence their name, virtual groups (Stephenson, 1990). This understanding of a virtual group is different from typologies of corporate groups or process analyses.1

OBSERVATIONS

The empirical data are collected from two years of participant observation within SOFTEK, a computer software company consisting of approximately 200 employees. SOFTEK is a subsidiary of an NYSE “blue chip” high-technology firm established in 1948 and currently employing approximately 3,000 people. The principal products of SOFTEK are computer software programs that assist in the statistical design of manufacturing processes and scientific experiments. Most of SOFTEK’s customers are research facilities and large manufacturing firms that have existing databases and other sophisticated computerized systems already in place. These companies often require additional consulting services in order to fully integrate their existing databases with SOFTEK’s software products to provide a composite and fully integrated information technology system. As the growth of information technologies pervade SOFTEK’s client base, increasing amounts of time were required in off-site consultation. Jason Tiner, the subsidiary president, reasoned that a substantial portion of the company’s revenue could be garnered, not only from its individual products sales, but from these customized consulting services as well.

The idea of a corporate consulting service as a commercial service rendered to client companies had a long tradition within the parent company but had never been operationalized in the SOFTEK subsidiary. The timely revival of this idea occurred after Tiner reviewed a customized programming system developed for a major client. In May of 1987, representatives from the client company were so impressed with the quality of the work, that they requested additional customized service to ensure the smooth interface, integration, and operations of its decentralized databases and networks. Generalizing from this client’s experience and extrapolating to the general market, Tiner discussed with his vice presidents the possibility of expanding this kind of consulting activity within the subsidiary.

After a few informal meetings with Larry Helm (the systems engineer who developed the system described above), other senior systems engineers, vice presidents, and consultants, Tiner decided to proceed and develop a strategic plan for implementing a corporate consulting service. In June, at the next quarterly company-wide meeting, he announced the name, purpose, and general mission of the new project, which was called Corporate Consulting Services (CCS). During these early stages, he did not confer extensively with middle management. In June, 1987, responsibility for the project was initially assigned to Carol Lund, a middle manager in the sales division of the company. Lund already had a “full plate” and did not have any prior experience initiating a separate and new business within the company. When she sought the assistance of her experienced junior and senior colleagues, she had difficulty enlisting their support for

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1. For typologies, the reader is referred to “ideal types” in Weber (1964, 1968), “corporations aggregate” and “corporations sole” in Smith (1974, 1978), or “virtual positions” in Mackenzie (1986). For case studies on groups, the reader is referred to Mintzberg (1979, 1983) and Tiffany (1975). For processes, a general description can be found in Bourdieu (1977); case studies in Moore (1975) and Turner (1957).
planning a business strategy. Essentially, selling the idea to her colleagues when it was ill-defined was just as troublesome as selling the service to clients. Lund was exasperated in her attempts to find people to help her. She commented that she felt trapped in a position of responsibility with minimal support or authority.

After several months of futile and frustrated efforts, the project was reassigned in September, 1987, to Peter Randolph, another middle manager within the sales division. However, after a few months, Randolph was not able to implement the idea of a professional consulting service either. His plan was somewhat different from Lund’s approach. Randolph sought to develop relationships with client companies in the absence of an overall long-term strategy. However, when the client companies were formally approached with a contractual arrangement, the commercial possibilities vaporized. Randolph was confused by this market response and could not understand why client companies were reluctant to enter into binding contracts.

By the end of the year, the enterprise seemed doomed. Lund could not effectively organize a group to draft a plan and Randolph could not close the deals. Both managers were unable to mobilize collective efforts to develop CCS. There was no further development for the next few months. In February, 1988, Tiner approached Joe Calissi, a senior vice president from another subsidiary to develop a business plan for CCS. Prior to working at SOFTEK, Calissi had garnered the requisite experience by starting, running, and selling his own business. His skills and previous experience seemed a reasonable match for the new project.

Calissi’s manner was quiet and unassuming. He met with his small staff and together they drafted an elementary set of documents needed to start the business. At this time, Tiner recognized the need to have the project better defined with the proper authority. Therefore, a new division was created in June, 1988, with Calissi as its vice president. Within months, contracts were being negotiated, a mission statement had been drafted, and a business plan for the strategic development and implementation of CCS had been written. Figure 1 outlines the trajectory of the development of CCS throughout the hierarchy of the organization.

Six months later, in December, 1988, SOFTEK was reorganized. Figure 2 summarizes the reorganization of the company during this observational period. During the reorganization, Customer Service was merged with the new CCS division. The new president thought that the reorganization would improve the efficiency and productivity of the company. CCS could develop new products more effectively by being closer to the customer. Thus, within a year’s span, CCS began as an idea and a few ad hoc meetings to become a fully functional division within the company. The observational period ended approximately one year after the reorganization.

At the time of the first survey, in October, 1988, SOFTEK comprised 220 employees distributed among six departments. Among these employees, 143 responded to a survey which asked employees to name their contacts in answer to the question: “With whom do you talk in order to make decisions about your work?” A response rate of 65% resulted from the first survey. Shortly after the first survey, the reorganization occurred. Approximately six months later, in June, 1989, a second survey was conducted. At this time, SOFTEK employed 221 individuals. The second survey resulted in a 42% response rate. Table 1 summarizes the number of employees in each department (N,) and the number of responses (n,) by department for the 1988 and 1989 surveys.

Inter- and intra-department communications drawn from the network survey are shown in Figures 3 and 4. The pattern of distribution of the inter- and intra-departmental communications for both years is distinctive and consistent. Sales and Development ranked highest in their internal communications. Excepting CCS, all departments’ intra-communication outweighed the inter-departmental exchanges. CCS is noteworthy in its
exception from the overall organizational communication pattern. The low percentage of intra-departmental communications of CCS is counter-balanced by a high frequency of communications. Thus, 75% and 73% of CCS's communications in the 1988 and 1989 surveys respectively were with employees from other departments.

From these results, I summarise that CCS represented not only a different way of thinking about a product but also a different way of communicating as well. The formation of CCS occurred within the framework of a traditional hierarchical organisation, which served as the basis for the routine production and manufacture of software products and manuals. However, the development of a consulting service meant that the typical transaction nature of a product sale to a customer was rethought and transformed into a continuing consulting relationship of service to the customer. The business question was whether consulting relationships could be developed into professional consulting services that were commercially profitable for the corporation. The operational question was whether individuals within the organization would work together and communicate across departmental boundaries to integrate an essentially new function into the overall work flow.

THEORETICAL BACKGROUND

Why Groups?

In this section, I briefly review the relevant literature in the anthropological and related disciplines that inspired me to reflect on the structural properties of group formation. Two lines of reasoning will become apparent. First, I will discuss how groups
Figure 2
The Reorganization of SOFTEK. The Department of CCS Was Merged With Customer Service.
Table 1

Summary Statistics of Communication Survey

<table>
<thead>
<tr>
<th>Department</th>
<th>N$_{1988}$</th>
<th>n$_{1988}$</th>
<th>N$_{1989}$</th>
<th>n$_{1989}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>98</td>
<td>57</td>
<td>92</td>
<td>40</td>
</tr>
<tr>
<td>Marketing</td>
<td>19</td>
<td>14</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Admin-Finance</td>
<td>23</td>
<td>16</td>
<td>26</td>
<td>9</td>
</tr>
<tr>
<td>Development</td>
<td>33</td>
<td>22</td>
<td>42</td>
<td>15</td>
</tr>
<tr>
<td>CCS</td>
<td>6</td>
<td>6</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>Customer Serv</td>
<td>40</td>
<td>28</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>President</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>220</td>
<td>143 (65%)</td>
<td>221</td>
<td>98 (44%)</td>
</tr>
</tbody>
</table>

are variously formed and incorporated within an existing institution. This research area is essentially non-quantitative and merges structural and processual models of social organization in addressing issues of institutional hegemony.

Second, I will discuss how these models may be understood through the descriptive statistics of network analysis. Specifically, inter- and intra-communication patterns may be interpreted with regard to how groups behave in an institutional context. Networks of work relationships that span specific boundaries may be evidence of entrepreneurial activity. Therefore, changes in communication patterns between established and formative groups may provide insight into how conventional categories are rethought, group identities forged, and work flows rerouted.

For example, scholars have repeatedly observed that cultural categories do not necessarily map in a one-to-one fashion onto group boundaries as they are socially constituted on the ground (Weber, 1964, 1968; Etzioni, 1961; Galbraith, 1971, 1974, 1977; Mintzberg, 1983; Barnes, 1968; Barth, 1959a, 1959b, 1966, 1969). This malleability, or "slack" in the cultural system, may be manipulated by individuals with chameleon-like finesse when they wish to change categorical identities. This inconsistency gives rise to a classic question regarding group formation within a corporate structure which revolves around the nature of the relation of the group with its parent institution. Precisely how groups are authorized to exercise power and authority by their institution is directly related to the manner in which these groups are tactically deployed throughout institutional hierarchies (Foucault, 1980, p. 87).

One of the most well-conceived typologies of corporate group formation is provided by M. G. Smith (1974, 1978). Ironically, it was Smith's own field experiences in non-industrialized settings that helped him understand institutional processes in more industrialized ones. He formulated a two-dimensional model based on a functional and formal dimension. The functional dimension represents collective activity and is divided into (1) plural formations or "corporate aggregates" of collective activity, and (2) offices or "corporations sole" occupied by only one incumbent at a time. The second dimension is based upon the formal criteria of whether a corporate group or office is considered to be (1) a perfect corporation or (2) an imperfect "quasi-corporation."

"Quasi-corporations" are ideal to study from the standpoint of group formation because they represent "irregularities" that occur in the hierarchy. Rather than focus on ideal types (Weber, 1964) or perfect corporate groups (Smith, 1974, 1978), Smith was
Figure 3
Inter/Intra-departmental Ties.

THE TIES THAT BIND
1988 SURVEY

SOFTEK Departments

- % Internal
- % External
THE TIES THAT BIND
1989 SURVEY

SOFTEK Departments

% Internal  % External

Devel: 76  24
Cust.Ser.: 71  29
Sales: 66  34
Mkt: 59  41
Adm/Fin: 51  49
CCS: 73  27
intrigued by "quasi-corporations," which he called "categories" and "commissions." These groups lacked adequate autonomy by not meeting specific organizational criteria such as determinate membership, procedures, closure, etc., a discussion of which Smith outlines (1978) but which is beyond the scope of this paper. What is important from the standpoint of this discussion is that these "quasi-corporations" were more objects than agents of administration; that is the actions and policies of the parent organization constrained these groups rather than enhanced their autonomy.

Subsequently, and independently of Smith, Mackenzie (1986) developed a notion of highly unstable collectives in corporate processes called "virtual positions." These virtual positions span traditional organizational boundaries or divisions and as such, their respective domains of authority overlap with pre-existing organizational affairs. Mackenzie's argument supplied a much needed processual perspective to Smith's original but static typology of corporate groups.

Groups, Networks, and Hierarchies

The "micro" group analyses of Smith and Mackenzie demonstrate how groups navigate institutional barriers within the firm. This approach is distinct from the market or hierarchy frameworks proposed by Coase (1952) as well as the literature on networks or cliques. Certainly relationship "networks" have been studied and documented in publishing (Coser, Kadushin, & Powell, 1982), joint ventures (Walker, 1988), and partnerships (Dore, 1987). Whether a network is a "hybrid" on a continuum of organizational governance as Coase would argue (1952), or whether it is a distinct organizational arrangement as argued in Powell (1990) is an "academic" distinction, unnecessary for determining how networks (however defined) contribute to entrepreneurial activity.

Larsen (1992) recently argued that network forms of organization offer advantages specific to entrepreneurial firms. She found that network dyads between firms helped each respective firm or hierarchy adapt to the environment. Within the firm, Larsen's (1992) findings have certain consequences. She argues that entrepreneurial activity often depends on the personal knowledge that comes from communicating with others. Managers are compelled to act on ambiguous information generated by ineffective communication channels. As information courses along formal and informal channels, countless obstacles exist that can thwart, block, or reroute information critical to successfully managing a new group venture.

A myth is that communication will always "sort itself out." While it is assumed that people accomplish their work by communicating with others, very little is understood about the invisible communication patterns that link parts of the organization with each other (Granovetter, 1973; Tichy & Fombrun, 1979; Tichy, 1981; Griffin & Hauser, 1992; Krackhardt, 1990). In this respect, the findings from the communication analysis in this paper reveal distinctive patterns that may be associated with entrepreneurial activity.

DISCUSSION

On close examination, the incorporation of groups into the organization means mediating between the distinctive structures of networks and hierarchy within organizations. I suggest that entrepreneurial activity by necessity must leverage both structures...
to realize the innovation. Table 2 presents a brief summary of the comparative features of networks and hierarchy, each of which will be discussed in turn.

**Networks**

Networks are relationships “typified by reciprocal patterns of communication and exchange” (Powell, 1990, p. 295). A seamless web of differential reciprocity through face-to-face and frequent interactions hold these relationships in place. Beneath the formal authority structures of hierarchies lies an intricate pattern of personal relationships. Messages and judgments course silently and unseen, connecting people and divisions within an organization. These connections are informal and usually bypass the formal reporting procedures. This behavior pattern can have widely varying results; for example, (1) tasks may be accomplished efficiently and effectively, or (2) an organization’s careful plans may be sabotaged by fomenting opposition to change.

Trust-based, these relationships are the ties that bind people together. However, this is not a warm and fuzzy form of social capital but instead a highly coercive technique for grooming, maintaining contacts, and monopolizing resources. Trust-based relationships are initiated by seeking similarity in others; that is, an attribute (business objective, experience, events) that at least two people may share or have in common. While trust may begin by seeking relationships with similar others, it can result in exclusionary groups. “Closely held” relationships based on trust are powerful in two senses: (1) they concentrate power by galvanizing a group, and (2) they focus vulnerability because that power is so concentrated in the group and its relationships. Failed relationships are not “firings” but betrayals. Unlike its relationship counterpart in hierarchies, betrayed relationships in networks are rarely reconstituted.

**Hierarchy**

Human hierarchies, like most hierarchies, are a response to complexity. Unlike some hierarchies, however, human hierarchies are generally explicitly stated in organizational charts, flow diagrams, etc. Hierarchical maps of human organizations facilitate solutions to complex problems by defining routes for the transmission of information and by establishing procedures for the settlement of disputes. Rigid hierarchical linkages

### Table 2

**Comparative Features of Hierarchy and Network**

<table>
<thead>
<tr>
<th>Features</th>
<th>Hierarchy</th>
<th>Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISIBILITY</td>
<td>Explicit/formal</td>
<td>Implicit/informal</td>
</tr>
<tr>
<td>FLEXIBILITY</td>
<td>Rigid</td>
<td>Elastic</td>
</tr>
<tr>
<td>DISCIPLINE</td>
<td>Procedural</td>
<td>Reciprocity</td>
</tr>
<tr>
<td>PUNISHMENT</td>
<td>Bilateral</td>
<td>Betrayal</td>
</tr>
<tr>
<td>RELATIONSHIP</td>
<td>Authority</td>
<td>Trust</td>
</tr>
<tr>
<td>DIVERSITY</td>
<td>Heterophyllly</td>
<td>Homophily</td>
</tr>
<tr>
<td>ANALOGUE</td>
<td>Freeways</td>
<td>Surface streets</td>
</tr>
</tbody>
</table>

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(chains of authority) are deified when they allow an organization to solve the problems that the hierarchical design anticipates, but the same rigid structures are denounced when they impede creative solutions to unexpected problems.

Hierarchies derive both their value and their limitations from the functions that they serve, namely turning complex problems into simple surrogates, the response to which can be selected with a minimum of effort and thought. A powerful source of simplification comes from the canonization of procedures in written rules and organization charts. These written rules are handed down largely unchanged and can be applied consistently across cases and persistently over time.

From consistency and persistency comes acceptance, and from acceptance comes effortless decision. The coercion, which is indispensable to the smooth and efficient operation of any organization, is present but not "felt" in a hierarchy once the rules are accepted. A breach of the rules is a transgression of the value of authority embodied in the rules and will result in bilateral punishment, for example: "You don't do what I say, I will fire you." In this way, resistance is minimized. Indeed, a bureaucrat carries out the rules without expending any energy questioning them, or typically even allowing coworkers to question them.

A by-product of the regularization of organizational procedures is the presumption of perpetuity. Once the presumption is formulated, procedures acquire a venerability. Selective amnesia takes hold and institutional memory is manufactured to make the hierarchy appear old and immutable, and, like one of nature's fixtures, above challenge (Douglas, 1986).

Interaction Effect of Networks and Hierarchies

Charting the formal and mapping the informal organization produces two kinds of representations. These two map-making "guilds" have proceeded sometimes as if they were in competition for the same resources and sometimes as if they were preparing maps for different purposes. To give an apt analogy, there are maps of a city's freeway system, and separate maps of the complex web of "surface" streets. Each kind of map has its own market and helps to plan a different set of travel itineraries. But most journeys require both kinds of maps. More importantly, the functioning of the transportation system depends fundamentally on the interaction of traffic on the freeways and the surface streets. Not only does one system feed the other, but the overload or failure of one system spills over into the other, as drivers innovate to solve unexpected congestion problems.

This is my view of organizations. Two kinds of organizational structures exist side by side and interact in important ways to determine the behavior of the firm. The analogue of the freeway system is the corporate hierarchy; it is apparent, obvious, changes design only infrequently, and tightly controls behavior. The analogue of the flow of traffic on the surface streets is the informal network. It is apparent, but not obvious; the network is not the system of surface streets, but rather their pattern of use. This network changes organically and frequently as drivers constantly explore new routes, changing overall traffic patterns daily in ways that are beyond the direct control of traffic engineers. The network imposes relatively few constraints on behavior; if maneuvering becomes difficult, people will drive through parking lots, across lawns and even over pedestrians.

The maps of the freeways provided by business strategists and the maps of the back roads provided by some organizational behaviorists scholars are useful, but most travelers rely heavily on another kind of map. Verbal road maps, found in stories and myths,
fundamentally affect how both the freeway hierarchy and the network of back roads are used. Control over the outcome can come from redesigning the freeways, from adding some new back roads, but also by “nudging” the myths.

A Developmental Model

Figure 5 illustrates the basic structure of a model I use to describe the journey of a virtual group in a social and political landscape. In this journey, virtual groups must navigate networks, hierarchy, and myth in order to realize the innovation. It is a developmental model consisting of three dimensions, nested within each other: paradigm, process, and species or type of corporate group.

Stage 1 in Figure 5 represents how new ideas are often met with skepticism in a setting. These ideas may be voiced in informal networks, where the principals discuss, argue, and collaborate (sometimes uneasily) in joint enterprises. In the case of CCS, this new group provided services as opposed to the conventional array of products. A service is an abstract concept that represents a function that is fundamentally very different from the more material products routinely manufactured at SOFTEK. As such, this proposed conceptual innovation was anomalous to the more familiar myths about routine ways of working. At a time when traditional ways of thinking and working were challenged, this new idea was variously interpreted as people tried to integrate or reject it through their own understandings of project formulation.

In this case, individuals at first attempted to make sense of a new idea using the conventional meanings representative of workplace myths or traditional world views. By confronting anomaly through impromptu discussions in ad hoc groups, they discovered that an idea did not fit into their typical ways of thinking and doing. At this point, there were at least two possible meanings assigned to a new idea. One interpretation was embedded in the traditional world view or paradigmatic way of thinking. A second way represented a questioning state of mind that caused one to hesitate in accepting some premise or in making a decision to act. This stage was often typified in ad hoc or informal meetings.

This first stage was a chaotic stage in which various interpretations were examined and reviewed only to be rejected in frustrated attempts to clarify an ambiguous situation. My interpretation is that these apparently chaotic discussions and flurries of ad hoc activities produce a dialectical reaction in the confrontation of anomaly. This is necessary in order to help the principals understand the lack of fit between their conventional and collective understanding of a novel situation. The lack of clear direction in this first stage helps to generate and partially drive the next stage. Rather than regard this first stage as non-productive, I believe we should view it as an important stage in most novel situations. This first stage helps to facilitate a process, which in the unfolding of daily events can lead to a better understanding of the initial problems.

The second stage in Figure 5 is typified by informal or ad hoc groups coalescing around specific projects or tasks. The ambiguity of the first stage was removed or routinized by organizing standing committees, task forces, working groups—all with formal assignments and charges to implement CCS. During this second stage, the implementation of CCS was assigned to the two middle managers, Lund and Randolph. Their mandate was clear: develop a business.

Caught in the middle, however, they lacked (1) the necessary and detailed technical knowledge, and (2) the requisite managerial experience and company authority to persuade both senior colleagues and peers to join in the endeavor. Having limited authority and total responsibility, these middle managers were unable to navigate through a conceptual sea of endless options. Their failure to effectively conceive and implement a long-range business plan reflected their frustrated attempts to assimilate a novel situ-
Figure 5
Developmental Trajectory of a Virtual Group.

<table>
<thead>
<tr>
<th>PARADIGM</th>
<th>confront anomaly</th>
<th>assimilate novelty</th>
<th>canonize convention</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROCESS</td>
<td>exploit ambiguity</td>
<td>routinize uncertainty</td>
<td>institute leadership</td>
</tr>
<tr>
<td>CORPORATE GROUP</td>
<td>ad hoc (committees)</td>
<td>standing (task forces)</td>
<td>formal group (divisions)</td>
</tr>
<tr>
<td>STAGE 1</td>
<td>STAGE 2</td>
<td>STAGE 3</td>
<td></td>
</tr>
</tbody>
</table>

tion and to authoritatively leverage key relationships. Given the novelty and the structural constraints of their organization, they were unable to generalize from the technological heterogeneity of their customers to a viable commercial plan.

Both middle managers were limited in what they could do outside their own assigned and familiar lines of authority and responsibility. These lines of authority were embedded in a traditional manufacturing paradigm which conceived of an organization as hierarchically arranged and internally constrained through strict lines of authority. Customers were conceived as discrete sales transactions and products were envisioned as tangible. Clearly, the formation of CCS represented a novel direction for the company.

Kuhn (1970) reminds us that novelty appears only against a background provided by an older paradigm. Implicit in his notion of the conduct of normal and routine science is that innovative concepts can be introduced into an existing institutional setting, transforming conventional collective behavior.

For instance, the aborted efforts of the middle managers signalled a corporate commitment to push against organizational inertia. The appointment of Calissi as vice
president in the organizational hierarchy provided the necessary and legitimate leadership for the project. Calissi’s efforts were focussed on formalizing the corporate mission, operations, and strategy for the next five years. With an official budget and formal assignments, CCS was effectively transformed from its ad hoc informal stature to become a fully mature division of the company.

Summarizing, Figure 5 illustrates a developmental trajectory for the formation of a corporate group that recognizes a necessary chaotic stage replete with informal networks and ad hoc meetings where the principals confront anomaly and exploit ambiguity. The second stage is characterized by the assimilation of the novelty and routinization of uncertainty through the formation of standing committees and working groups with formal assignments. A third stage is characterized by strong leadership and canonization of a corporate strategy and mission. An explicit progression through these three stages is asserted: the virtual group must to be incorporated and assimilated into the hierarchy. However, the exact “timing” of each stage may be variable and depend on the specifics of situations (see “differential incorporation” in Smith, 1978, p. 378).

Virtual Entrepreneurial Groups

Constituted in 1988 and reorganized in 1989, CCS displayed a distinctive communication pattern as shown in Figures 3 and 4. The low percentage of internal communications of CCS is counter-balanced by a high frequency of external communications. CCS, a newly created department in the company, represented an “entrepreneuring” effort on the part of the company to explore new strategic directions. Responsible for developing new products and markets arising directly from customer consultation, CCS was compelled to actively communicate with other departments within the firm. Interdepartmental communications were motivated by an essential need to amass information and ideas for product development.

The unique role of CCS in the organizational hierarchy and the communication network is noteworthy. In this setting, I observed that new ideas were voiced in informal networks, where the principals discussed, argued, and collaborated in joint efforts. Through impromptu discussion, people soon discovered that new ideas or innovative practices did not fit into their typical or routine patterns for performing work. Eventually an ad hoc group coalesced around the specific project of CCS in an attempt to develop ideas into defined work practices. Subsequently, it evolved into an independent business unit which was ultimately integrated into the mainstream of corporate activities. Its formation represented a paradox in organizational dynamics because it stood in dialectical opposition to the routine and traditional hierarchical organization of work.

My observations led me to conclude that CCS was a mobile strategic group which was “virtually” powerful because of its perceived mission and its ambiguous standing within the organization. It began as an ad hoc group which was ultimately incorporated. Its incorporation and subsequent reorganization after one year did not change the networking behavior that resulted in the high level of inter- and intra-company communication. By “networking” CCS employees ignored the boundaries of their own department and were able to constantly improvise and innovate by juggling information, ideas, and ways of working a full year after reorganization (see also Larson, 1992).

What remains unclear is how long this distinctive communication pattern will prevail given that the virtual group was incorporated and its ultimate “cultural” assimilation into the hierarchy surely pending. Ideally, if other variables could be held constant, a longitudinal study over a two- to three-year-period could provide additional insight as to the outcome of virtual groups. For instance, do they become fully assimilated into the
hierarchy? If so, are their distinctive qualities, including their communication patterns, reshaped by the monolithic norms of the organization?

It is difficult to judge whether the events reported here represent dysfunctional processes. A presumption of dysfunctionality implies a prescriptive knowledge of what constitutes “successful” ventures that is beyond the scope of this paper and beyond the reach of ethnographic description. More material to the point at hand, I mean to raise philosophical questions about the nature of the relationship between the virtual group and its host or parent institution when entrepreneurial activity coalesces around innovation.

CONCLUSION

Virtual groups provide a vantage point from which to study entrepreneurial collective action. When innovation is recognized in an institution, it is socially constituted through the formation of these groups. In the process of group formation, uncertainty is resolved. Struggling for legitimacy, virtual entrepreneurial groups push against indeterminacy in the unfolding of events by trying to impart order, form, and predictability to their immediate affairs.

What is puzzling is that the institution permits the formation of these groups, yet it will also seek to thwart the full development of the group. Why? Because virtual groups embody a paradox. Every explicit attempt to fix institutional agendas by the formation of these groups is by implication a recognition that the institution is mutable, not monolithic. At the same time, such attempts are a direct struggle against mutability and represent “processes of regularization” (Moore, 1975, p. 234).

Thus, virtual groups are caught in the middle. They are betwixt and between monolithic institutional tradition and embryonic entrepreneurial beginnings. The rise and fall of these groups is much like the rise and fall of big men, shamans, and leaders in other cultures: there is no science of navigation and no fund inherited from the experience of those who have gone before (Whyte, 1987). Therefore, generating innovation within an existing institutional framework may require individuals to break with convention. One means by which to accomplish this is to form virtual entrepreneurial groups.

Virtual entrepreneurial groups pushing against institutional inertia are problematic in that they pose a threat to “the way things are done around here,” as codified in the hierarchy. Ironically, while these virtual groups embody power, they also centralize their own vulnerability as well. Essentially, virtual positions or their incumbents are easy targets for attack. Their implicit vulnerability often results in their very undoing. To shield against this, they span hierarchical boundaries through networking. Their activity stands in stark contrast to the intra-group communication pattern represented by the majority of departments in the organization.

Virtual groups are locked in perpetual turmoil with the parent institution. In this process, a reflexive and collective group identity is annealed and tempered not in spite of dialectical opposition but because of it. The bitter irony is that in the unfolding of events virtual entrepreneurial groups contain the seeds of corporate inertia, which according to Smith, makes corporations die and die hard, but at the same time imparts to these fledgling groups a perpetuity of their own.

REFERENCES


Spring, 1995


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I wish to thank Alex Stewart and three anonymous reviewers for their helpful comments on the early drafts of this paper.