# Discovering the Rules: Folk Knowledge for Improving GM Partnerships

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Partnership collaboration, a critical emerging strategy for General Motors (GM) and for organizations in general, is a way to combine resources and complementary expertise to create new knowledge, products, or services. Since partnerships are a relatively new organizational form, our team was commissioned by the head of GM Research and Development (GM R&D) to understand how private-sector research partnerships functioned and how we might offer suggestions for improving their effectiveness. Participants and organizations engaged in partnerships represent a vast population that stands to benefit from social science research. Understanding partnerships involves examining aspects of the culture of the partnering organizations, as well as the historical context of the partnership, partnership structure and dynamics, activities undertaken, and partnering outcomes. Through our analysis of interview data from the Alcan-GM and BP-GM partnerships, we discovered the concept of *partnership rules* – prescriptions offered by partnership participants for how partnerships should work. In this report, we develop and validate a methodology for uncovering these unwritten rules. We discuss the methodological and organizational contributions from this methodological analysis and describe the impact of this methodology on all types of GM's research partnerships.

Key words: Partnership rules, unwritten rules, methodology, partnership cycle, partnership structure and dynamics

### Introduction

In recent years, a number of firms have entered into a variety of inter-organizational relationships such as strategic alliances, joint ventures, franchises, coalitions, university research consortia, and partnerships (Ring and Van de Ven 1994). Firms initiate these types of relationships to reduce costs, gain access to new technology and markets, leverage emerging expertise across different internal organizational units, accelerate commercialization of new technologies, facilitate knowledge from laboratories to industry, and merge complementary skills (Ertel, Weiss, and Visioni 2001; Hagedoorn 1993; Mowery 1998; Ring and Van de Ven 1994).

Despite the perceived benefits of these partnering relationships, the failure rate of such ventures is high—upwards of 60 percent with some as high as 80 percent (Duysters, Kok, and Vaandrager 1999; Gulati and Khanna 1994; Meschi 1997; Nahavandi and Malekzadeh 1988). Organizational

We would like to thank Alan Taub for sponsoring our Partnership Networks research program. We also thank those from GM, BP, and Alcan who participated in and fully supported our study. Their perspectives and insights on partnering helped us to understand and explain their experiences, and view them within the broader context of organizational change. We acknowledge the assistance and introductions we received from Kathy Taylor and Jim Spearot from GM, Tom Bond and Frank Gerry from BP, and David Moore, David Rinehart, and Dick Daugherty from Alcan. Finally, we thank the many reviewers of this report for their helpful comments and suggestions: Marc Robinson, Bob Trotter, Linda Catlin, Gülcin Sengir, Kurt Godden, and Jim Wilce.

and cultural differences account for most of the difficulty in achieving synergy among the partnering organizations. Some studies have highlighted strategies to increase the likelihood of partnership success, including examinations of relationships (Gill and Butler 2003; Masciarelli 1998), trust and control (Das and Teng 1998; McAllister 1995), negotiation (Brannen and Salk 2000), and structure and project characteristics (Yang and Taylor 1999). Researchers associated with these studies have used a number of methodologies (e.g., surveys, archival data, lab experiments) to examine partnership functioning and effectiveness (Cravens et al. 1993; Weber and Camerer 2003; Yang and Taylor 1999). Other researchers, relying largely on social-network analyses, have directed attention to partnership structure and how it evolves over time (Ahuja 2000; Anderson 1994; Gulati 1995; Kogut and Walter 2001; Madhavan, Koka, and Balaji 1998). The primary focus of these studies has been to illustrate stages in structural forms emerging during the partnership cycle.

Neither the partnership effectiveness studies, nor those exploring collaboration networks, shed much light on partnership culture as it is in the process of forming. In these new and highly volatile partnering entities, there is little chance to understand emerging and evolving assumptions and expectations in relation to actual behavior, or to offer assistance to the participants to enhance the likelihood of partnership success. Documenting the emerging culture of these partnering entities would fill a gap in the evolutionary stream of partnership research by providing an understanding of the day-to-day partnership activities, work processes, and participant concerns during the partnership cycle. It would also contribute to

a more systematic understanding of partnership effectiveness from the standpoint of the participants themselves.

In addition to contributing to the partnership literature, there are practical reasons for engaging in partnership research. Opportunities may result which benefit organizations attempting to work together. General Motors (GM) is one of many firms that has sought business and research partners. One senior GM executive states:

Partnering is essential to take full advantage of new market opportunities. With ever-changing customer requirements, increased regulatory concerns and the fast pace of technology development, no one can go it alone. GM today is partnering with suppliers, other [automotive manufacturers], government and universities to ensure that we're ready to respond with technologies that will allow us to meet customer and societal requirements in all regions of the world.<sup>1</sup>

The stakes are high for industrial organizations such as GM and its partners to participate in such ventures. The increasingly competitive external environment continues to exert pressure on firms to develop new products and services faster, better, and cheaper than in the past.

It was in this context that our research team was commissioned to examine partnership functioning associated with GM R&D—the research arm of the corporation. The interdisciplinary nature of our research team enabled us to integrate qualitative data collection techniques and analysis with a broader perspective of GM's business strategies and processes. Tracy Meerwarth and Elizabeth Briody are both cultural anthropologists hired by GM to conduct a variety of organizational culture studies at GM. GM hired Tracy as a contract researcher in 2002. Elizabeth has been a GM employee since 1985. Devadatta Kulkarni, who has been with GM since 2000, specializes in math-based modeling of systems and work processes at GM.

We conducted our research during the summer and fall of 2001 with GM R&D and two private-sector firms—Alcan International Ltd. (Alcan) and BP (formerly known as British Petroleum). We were interested in understanding the structure and dynamics of partnership functioning, with the goals of improving partnership effectiveness for all parties involved. We define partnerships as collaborative arrangements in which partners combine resources, time, and expertise toward the creation of new knowledge, products, and services. Our interview questions focused on participant descriptions of partnering motivations and relationships as the participants planned and conducted their partnership work activities.

In our interview data we found that study participants voluntarily offered prescriptive statements that stipulated appropriate partnership behavior. These statements emerged from the interviews and were not solicited by the research team during the interview process. They prescribed how their partnership should be working—whether it was currently working that way or not. These prescriptive statements represented the vast majority of all of the unwritten rules we uncovered. We labeled such prescriptive statements *partnership* 

rules, finding that they provided insights into understanding the structure and dynamics of the emerging partnership culture. We define partnership culture as the assumptions, expectations, beliefs, and values guiding partnership behavior. In particular we focus on both the structural (e.g., tasks, roles, incentives, projects) and dynamic (e.g., relationships, changes associated with them) aspects of partnership culture. We identified 440 partnership rules in our interview transcripts; this count translates into 13 rules per interview hour for our data set. We then validated the concept and content of partnership rules in a number of informal discussions and validation sessions (i.e., presentations reviewing the findings and recommendations) during which partnership participants and other organizational members and leaders were present.

In this paper, we document a new methodology for exploring the emergence of partnership culture. We explain how we discovered, defined, translated, classified, and interpreted the partnership rules. We discuss the methodological and organizational contributions of uncovering and examining the rules and describe the impact of this methodology on GM's research partnerships.

# **Defining the Unit of Analysis**

Distinguishing codified rules from our unit of analysis, emergent partnership rules, is critical to understanding our methodology. Codified (i.e., established, written, standardized) rules have been described as salient features of organizational and social structure (Douglas 1973; Durkheim 1933; Gerth and Mills 1946; Weber 1947). In this way, rules have organizational purpose. They are "dependable," that is, they serve as a reference point to guide decision making; they are created by organizational leaders (Weber 1947:328-341). Codified rules represent "claims about the way things happen, or ought to happen" (March, Schulz, and Zhou 2000:15) based on "organizational purpose" (Weber 1947: 328-341). Codified rules are dynamic in that they change over time in response to events and experiences. They also can furnish insight into the structure, functioning and evolution of any social group or institution. The topic of written rules now enjoys more detailed, analytical attention. One study, for example, examines written rules in formal organizations and changes in those rules over time (March, Schulz, and Zhou 2000).

Codified rules only account for some of the rules in organizational and social contexts. Unwritten, emergent rules have long been a focus for qualitative researchers. Such studies have highlighted the range of acceptable behavior in a given cultural context, and often the range of consequences for following, breaking, or establishing new rules (Ferraro 2001; Haviland 1999). Our unit of analysis, partnership rules, represents a type of unwritten, emergent rule.

Two similarities between codified and emergent rules become apparent when we identify the purpose of rules and the evolution of rules over time. The codified rules are a dependable guiding mechanism for managing and maintaining organizational structure and focus. Emergent rules are

adaptation mechanisms for establishing commonly accepted patterns of behavior. With respect to partnership functioning, both types of rules may evolve over time in response to pressures external to the partnership, partnership expectations and behavior.

# **Comparing Codified and Emergent Partnership Rules**

Table 1 compares codified and emergent partnership rules based on selected features. Codified rules are generated based on specialized expertise (e.g., legal, engineering) within the partnering organizations. They help frame certain aspects of the venture and have the potential to be enforced by organizational leaders. They are typically shared with partnership participants.

Emergent partnership rules are individually-based, independently-generated, voluntary perceptions and assessments of the partnership. Because partnership rules are emergent, and not yet formalized, they are not yet fully enforceable. As they emerge, they may be accepted or ignored by participants. In contrast to codified rules, the degree to which participants adhere to or reject emergent partnership rules is often unclear and more difficult to determine. Moreover, partnership participants are typically unaware of these unwritten rules.

We found both types of rules in the BP-GM and Alcan-GM partnerships. Written rules appeared in the BP-GM and Alcan-GM partnership documents. These codified rules represented a starting framework for the partnership work. They advised participants from both a legal and work-process standpoint on certain boundary conditions (e.g., partnership length, roles, intellectual property disclosures). The codified rules did not emphasize areas such as partnership interactions and strategies for working together effectively, which we found to be the focal point for the unwritten partnership rules. Consequently, we focused our analysis on the unwritten partnership rules.

# **Identifying and Analyzing Partnership Rules**

The identification and subsequent analysis of unwritten rules is a challenging endeavor from a methodological perspective. A large body of literature focuses attention on social interactions involving the interplay between language use and an individual's orientation to the social and environmental context (Gumperz 1999b; Gumperz and Hymes 1972; Sapir 1921; Whorf 1956). One concept in this literature, contextualization cues, suggests that linguistic features such as syntax, lexicon, and delivery style, are critical in interpreting meaning (Casson 1981; Drew and Heritage 1992; Gumperz 1982a).

A different literature explores text data through content analysis (Holsti 1968; Krippendorff 1980). This technique is used in analyzing and making inferences from text by relying on the creation of categories. Basic units of text (e.g., words, sentences, themes) are selected for analysis and then classified into content categories (Weber 1985). Researchers typically select either one of these basic units of text, or the theme concept, as the unit of analysis.

Our approach is different in two significant ways. First, our unit of analysis is multifaceted. The structure or unit of analysis might be a clause, a sentence, or a series of sentences. What matters is the presence of a verbal cue—a stylistic criterion evoking prescription or action recommended by study participants. Second, our unit of analysis must satisfy both stylistic (i.e., verbal) cues and content criteria—not one or the other. The content criteria emphasize aspects of partnering or the activities of the partnership. Thus, our concept of partnership rules is grounded in the interdependency of style and content. We describe the analysis process we followed in integrating the stylistic/linguistic features with the thematic content. This integration yields significant insights into cultural understandings along with study-participant recommendations for change associated with partnering.

# Background on the Partnering Firms and Partnerships

GM, the world's largest manufacturer of vehicles, has been in business since 1908. GM is a \$185 billion <sup>2</sup> North American company whose headquarters are based in Detroit, MI. GM employs 325,000 people around the world. Brands include Chevrolet, Buick, Pontiac, Oldsmobile, Cadillac, GMC, Saturn, Hummer, Saab, Opel, Holden,

Table 1. Differences Between Codified Rules and Emergent Partnership Rules

Feature	Codified Rules	Emergent Partnership Rules	
How generated?	Collective assessments	Individually and independently generated, voluntary perceptions and assessments	
Who enforces?	Organizational leaders	Potentially many organizational participants	
Are recognized?	Yes, by participants	No, not until made explicit	
How articulated?	Written, codified	Verbally suggested or prescribed guidelines	
Consequences?	Yes	Possibly, yet to be determine	

and Vauxhall. GM is also involved in financial services, satellite communication systems, medium and heavy-duty transmissions, and locomotive engines.

Alcan is a global provider of primary aluminum, fabricated aluminum, flexible packaging materials, and technology solutions. Alcan is a \$13 billion Canadian company based in Montreal, Quebec. The company operates in 41 countries and employs 88,000 people worldwide. Alcan has six business groups: Primary Metal, Bauxite/Alumina/Specialty Chemicals Group, Engineered Products, Rolled Products Europe, Packaging, and Rolled Products Americas and Asia.

BP is a \$233 billion British corporation based in London, England. The company is involved in the exploration and production of crude oil and natural gas, refining, marketing, supply and transportation, manufacturing and marketing of petrochemicals. BP currently employs 115,250 people worldwide. BP has operations in Europe, North and South America, Australasia, and Africa.

# Partnerships and the Research Projects

Because the focus of our project was to understand the emerging partnership culture, we were interested in learning about the ethnographic context of the work projects and relationships. Participants in the two partnerships were involved in high-visibility research issues of interest to the participating firms and to the wider public. Both technical experts (e.g., researchers) and research managers from the partnering firms participated in these partnerships. Specifically, the R&D partnership with Alcan involved several projects that focused on integrating new material technology and studying advanced vehicle designs for lighter, more energy-efficient vehicles. The research projects in the BP-GM partnership focused on alternative fuel technologies. While each of the partners had firm-specific goals, each partnership was designed to leverage resources and expertise to create beneficial research outcomes for both parties involved.

Many of the participants knew each other from professional association meetings or prior work done in consortia with multiple firms, governmental agencies, and laboratories. Once the partnership projects got underway, the participants would meet (either in person or virtually) to outline specific project objectives, roles and responsibilities, budgets, and timeframes. For example, visits would be made to each other's facilities, data would be collected, analyzed and shared, and reviews of the work would be provided to the joint management. The outcomes of the partnerships typically included research reports, patents, policy directions and changes, and future work opportunities.

# **Data Collection and Analysis**

#### **Interviews**

We conducted 33 interviews with managers and technical experts from the Alcan-GM and the BP-GM partnerships

(see Table 2). We also conducted a small sample of feasibility interviews that informed our research design. This number represents 100 percent of the participants in these partnerships. Our interviews took place in Warren, Michigan (GM), Farmington Hills, Michigan, Kingston, Ontario (Alcan), and Naperville, Illinois (BP). In Warren, Farmington Hills, and Kingston, we also attended briefing meetings. Including managerial and technical experts in the sample provided us with a multilevel perspective on research partnerships. We supplemented our interviews with 11 validation sessions and included feedback from the validation sessions in our analysis.

The interviews lasted one hour on average. We conducted half the interviews with one researcher present and the remainder with at least two researchers present. We made this decision to ensure consistency in our data gathering. Interviewing allowed us to collect detailed descriptions of partnership perceptions, experiences, and events from the perspective of the study participants themselves. Our interview questions focused on the following aspects of partnership culture: 1) the role(s) the individual played in the partnership, 2) description of the partnership (e.g., projects, people involved), 3) history of the partnering relationship, 4) current state of the partnership (e.g., accomplishments, changes, risks, concerns), and 5) advice for the future success of the partnership. By employing an emic (i.e., participants') perspective, we were positioned to explain partnership activity and interaction in the terms and constructs used by the study participants.

Audio taping interviews is not typical GM corporate practice. Consequently, we took careful notes during the interviews, capturing participants' statements as completely and accurately as possible.<sup>3</sup> We dictated our written field notes into a tape recorder and had them transcribed. We reviewed and revised the transcripts for accuracy and completeness. These interview transcripts were the key data source for our analysis.

#### **Documents**

Other sources of data were partnership documents such as Memos of Understanding (MOU), confidentiality agreements, project reviews, correspondence, annual reports, and company brochures. We explored Alcan, BP, and GM's web sites for company overviews, press releases, and additional information on GM R&D partnership activity.

Table 2. Number of Interviews by Firm and Role

	Alcan	GM	ВР	GM	Total
Managers	3	2	4	4	13
Technical Experts	7	7		2	20

# **Analytical Approach**

We analyzed the interview data using content analysis to arrive at an understanding of its key themes and patterns. <sup>4</sup> While most studies applying content analysis rely on a priori categories developed deductively, we identified the general concept of partnership rules, and its specific subcategories, using an inductive approach. Our approach to content analysis combines the emic perspective with the etic (i.e., researcher perspective) to make sense of the partnership data. The etic perspective shapes and expands upon the emic expressions and insights, thereby leading to a more comprehensive conceptual framework for the entire analysis.

# **Interpreting the Data**

We used five methodological processes that enabled us to organize and interpret the data associated with the two partnerships:

- Discovering the partnership rules
- Operationalizing and refining the rules
- Translating the rules into the researcher version
- Categorizing the rules by selected attributes
- Validating the rules with study participants

# **Discovering the Partnership Rules**

Due to the inductive nature of the work, we had few preconceived notions of what we might find when we began our analysis of the interview transcripts. We designed the study to learn about the tenor of the partnerships and the issues facing the participants as they attempted to establish and maintain their working relationships. We found that partnership participants relied primarily on language to articulate their thoughts, ideas, and experiences. One product of our interviews—study participants' verbal expressions—provided us with insights into the salient elements of the partnership from their points of view. Our study participants' direct engagement in the work of the partnership was strengthened by the particular sampling we had done. We were able to gather a range of perspectives because our study participants were involved in both technical and managerial roles.

Our research team read and re-read selected interview transcripts to acquaint ourselves with participant descriptions of the partnerships. We noticed a pattern of rules that seemed to appear in all of the interviews. Examples of this pattern included:

- You need to spend time thinking about what you want to solve.
- There has to be a benefit for both parties in a partnership.
- In the end, if you can't put the product together to satisfy our customers, both lose.
- We have to protect our competitive advantage.

To us, these statements represented views about how partnerships should function. In effect, partnership participants

seemed to be designating appropriate actions or conduct. These statements were prescriptions, freely elicited in response to interview questions, about participants' work on the partnerships. We labeled these prescriptions *partnership rules* because they offered a specified guide for partnership behavior. Partnership rules became the overarching framework for our analysis, the product of which was the synthesis of the participants' and researchers' perspectives. Because of the prevalence of this pattern, we speculated that the value behind partnership rules would be a conceptual tool for understanding emerging partnership culture.

# **Operationalizing and Refining the Rules**

Our next step was to operationalize partnership rules so that we could distinguish the rules from other portions of the text. Then we would be in a position to apply our method to uncoded segments of text. As we read the interview transcripts, we began looking for common characteristics associated with the text. This search allowed us to categorize the rules into larger sets, which could be structured into a broader, overarching classification. Figure 1 is a typical example of an exchange in which we noticed the pattern of partnership rules.

It seemed to us that when this study participant spoke for the second time, he twice offered guidance on necessary partnership behavior. We bracketed two rules from the surrounding text (see Figure 2). The study participant first emphasized the importance of coping with ambiguity. He then introduced a contingency situation, explaining that his firm would involve specific individuals to mediate the issue.

Almost simultaneously, we noticed not only that these bracketed statements prescribed some action related to the partnership, but also that specific verbal cues were evident as well. In the first case, the study participant used the phrase

Figure 1. Interview Excerpt Containing Partnership

Study Participant:	Relationships that start at the top can work faster and can resolve problems quicker. Bottom's up is tremendously difficult.
Researcher:	So, how do you manage this—you personally?
Study Participant:	You have to be able to deal with ambiguity (stated strongly). X and Y have been two point people with the energy companies. If there is a rough spot, then we'll get A and B or C involved. I'm not sure who will fill that gap now that C is gone.

Figure 2. Bracketed Rules from the Interview Excerpt

Study Participant:	{You have to be able to deal with ambiguity (stated strongly).} {X and Y have been two point people with the energy companies. If there is a rough spot, then we'll get A and B or C involved.} I'm not sure who will fill
	that gap now that C is gone.
	I that dap now that C is done.

"have to," indicating his recommendation for specific action. In the second case, the study participant used an "if...then" phrase as a possible strategy for managing a given situation. While the majority of statements in our transcripts contained one rule, in some instances, a statement could contain as many as two partnership rules. These verbal cues alerted us to potential rules.

Based on this initial analysis, we recognized that partnership rules had both content and stylistic characteristics. For our purposes, content characteristics refer to what is said (i.e., the focus, theme, or topical nature of the statements under consideration). For example, one content characteristic is that the segment of text pertains to either the Alcan-GM or BP-GM partnerships, rather than activities unrelated to these partnerships. By contrast, we use the phrase stylistic characteristics to capture how statements are made (i.e., the grammatical or verbal cues associated with the statements). Stylistic characteristics are equally relevant to the identification of partnership rules (e.g., have to, authoritative tone of voice, if...then) because they often prompt a closer examination of the content of the text.

Next, our research team worked together to develop a preliminary set of criteria to identify rules from the bracketed segments of the interview transcripts. One decision we made was that each rule had to exhibit both content and stylistic criteria. For example, if the text read, "You deal with ambiguity" (rather than "You have to be able to deal with ambiguity"), it would satisfy the content criteria since the statement pertained to R&D Center partnerships. However, it would not satisfy the stylistic criteria because there is no stated recommendation or authoritative emphasis to the statement; instead, the statement is simply descriptive.

Our process of developing the partnership-rules criteria was iterative in that we built on our previous efforts to extract the partnership rules from the data. We applied the existing rule criteria to new segments of text, revising the criteria as appropriate. Often we challenged the existing rule criteria by offering counterarguments. As an example, one of us—researcher A—argued that the statement, "I believe we should work with firm x to leverage resources" was a partnership rule. Researcher B disagreed, arguing that, "I believe" is neither authoritative in tone nor command-like;

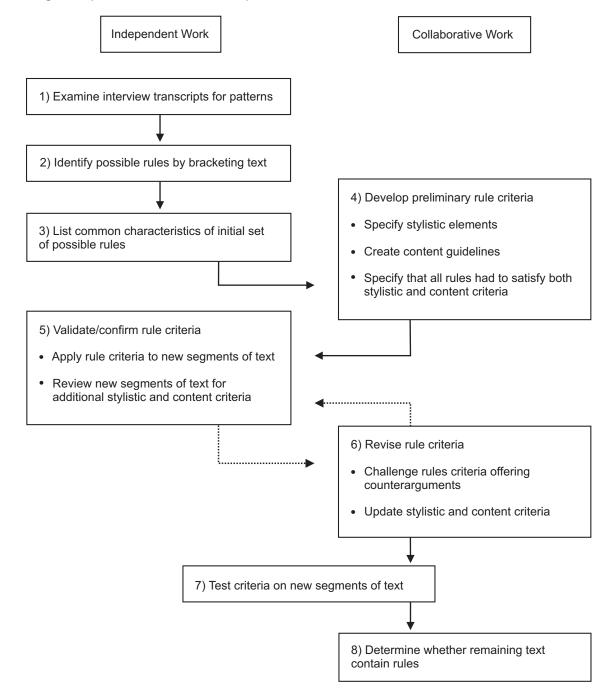
instead, "I believe" simply expresses the study participant's opinion, or perhaps desire. We did not consider "opinion-ated" participant dialog as represented in this example to be definitive enough to be classified as a rule. Researcher B's counterargument was based on stylistic criteria. In addition, Researcher B argued that the statement was not a rule because it did not fulfill the content criteria either. "Firm x" referred to in the statement was not a participant in either the Alcan-GM or BP-GM partnerships and therefore should not be included in our growing sample of partnership rules.<sup>5</sup>

Once we felt that our content and stylistic criteria were established, the next step was to ensure that different coders could replicate each other's work. It is important that initial rule criteria are understandable to ensure replicability of coding. Failure to strengthen the inter-rater reliability between researchers can undermine the credibility, validity, and utility of qualitative research (Carey, Morgan and Oxtoby 1996). We independently reviewed new sections of text from several interviews and then compared our bracketed text segments. When we first conducted an inter-rater reliability test, we reached agreement on rules 70 percent of the time; this test involved two researchers. This result prompted us to refine further and develop a stronger shared understanding of the rule criteria. After we designed a process for solidifying and improving the reliability of the rule criteria, the final level of agreement within our team of three researchers showed substantial improvement. The success we achieved in coding each transcript was 90 percent. We attribute this increase in reliability to robust rule criteria and our enhanced understanding of the participants' perspectives of the partnerships.

Figure 3 illustrates the eight-step process we used to uncover partnership rules, develop, revise, and test the rule criteria. One feature of the process is that it involves both independent and collaborative work within the research team. When working independently, we examined the text and developed preliminary analyses and interpretations on our own. When working collaboratively, we discussed, negotiated, and reached consensus about the rules in any given portion of the text, thereby reducing potential biases. We illustrated the seventh step—testing for reliability—halfway between independent and collaborative work because it was associated with both. Step 7 was first an independent activity since we individually assessed portions of the text for any partnership rules. It was subsequently a collaborative activity as we shared our assessments and negotiated whether or not a given portion of text contained any rules.

A second feature in the eight-step process is procedural. Although we have depicted this process as largely linear, there is a substantial iterative component to it. When working independently, we repeatedly found that we had to check and re-check our own preliminary analyses to ensure internal consistency. When working collaboratively, particularly in steps 5 and 6, as the broken arrows indicate, we found that we frequently had to revise the rule criteria until we were satisfied that all of the rules emerging from the uncoded text could be linked with the rule criteria.

Figure 3. Eight-Step Process for Partnership-Rule Definition

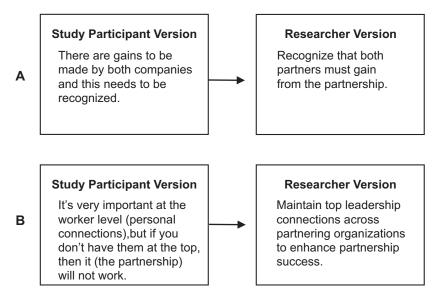


# Translating the Rules into the Researcher Version

Following the identification of rules, we translated the study participant version of the rules from the text into the researcher version of the rules. A translation would enable us to analyze the partnership rules more efficiently and effectively. The study participant version of the rules tended to be both lengthy and complex. We thought it would be easier

to compare our sample of rules by developing a shortened and simpler version of each one. Translated versions of the rules would help us to construct content categories more easily. Essentially, we wanted to understand what message the participants were trying to convey. This task involved filtering out extraneous material while retaining key concepts, ideas, themes, or experiences. Translating the rules was challenging and time consuming. However, our goal was to produce

Figure 4. Example of Text Translation to Researcher Version



an objective and accurate assessment of the study participant version of the rules. The researcher unpacks, and mediates the "cultural, cognitive, attitudinal (and) historical" information from the source text during translation (Shreve 2002:7). Figure 4 represents our attempt to eliminate superfluous text, while retaining key themes.

In both examples (A and B), the researcher version is shorter, simpler, and generalizeable to other cases. We wrote the translation so that the researcher version began with a command statement to signal a rule. We retained the key themes in the translation by relying on three different strategies. First, we often drew on surrounding text to provide context and additional detail so that we could furnish the essence of the participant version. Second, we compared our participant version with rules that we had previously categorized to ensure internal consistency in the translation. Third, we relied, to a certain extent, on our own knowledge and technical background and expertise. Our research team's applied expertise in diverse fields (e.g., supply-chain management, product distribution, organizational culture) enabled us to develop clear, concise, robust translations thereby enhancing our ability to portray the participants' views effectively. As we became more familiar with the interview transcripts and the partnerships in general, our ability to propose appropriate rule translations improved significantly.

Next we focused on achieving consensus on the final translation of the partnership rules. As with operationalizing and defining the rules, the process was iterative. We interpreted the text using the surrounding text, the previously-categorized, rules, and our research team's expertise. We shared our interpretation, proposing a particular translation. We then negotiated the key idea behind the proposed translation—often proposing alternative translations until we were satisfied that

we had obtained the best translation. Ultimately, all three of us reviewed all proposed translations to arrive at a consensus on a final translation for each rule.

# **Categorizing the Rules by Selected Attributes**

We compiled the translated versions of the rules into spreadsheets, along with selected attributes of both the study participants offering the rules and attributes of the rules themselves. Table 3 is an example of a spreadsheet from our analysis. We selected rules in Table 3 to highlight a mix of rules as well as study-participant and researcher attributes associated with those rules.

When attributes are applied to the rules, the rules become dynamic—directed prescriptions for partnership behavior. This process enabled us to compare similarities and differences in the rules at increasingly detailed levels of analysis. Attributes of the study participants included partnership affiliation, firm membership, and role. Rule attributes included current state (i.e., whether the rule was operational in the partnership), and content (i.e., thematic categories into which the rules were classified).

# **Study-Participant Attributes**

One attribute is partnership affiliation (see Table 3, Column 2). The first four rules are associated with the Alcan-GM partnership, while rules five through eight pertain to the BP-GM partnership. The Alcan-GM partnership contributed 291 rules, or two thirds of the 440 partnership rules. The BP-GM partnership contributed the remaining 149 rules, or one third of the total rules. The lower percentage of rules associated with the BP-GM partnership may indicate more stability and satisfaction with the overall partnership experience. The high number of rules

Table 3. Examples of Partnership Rules by Study-Participant and Rule Attributes

Study-Participant Attributes

	Study-Participant A	Attribute	<b>9</b> S	Rule Att	ributes
Translated Rules	Partnership Affiliation	Firm	Role	Current State	Content
Provide immediate feedback to integrate technology into products	Alcan-GM	GM	TE	Not Yet in Place	Joint Work
2) Recognize partner's unique capabilities against its competitors	Alcan-GM	GM	M	In Place	Motivation
3) Provide partner with limitations on material specs to speed product desi	gn Alcan-GM	Alcan	TE	Not Yet in Place	Joint Work
4) Steer technology into application	Alcan-GM	Alcan	М	Ideal	Launch
5) Align managerial and researcher expectations concerning vision, resources and time in partnership	BP-GM	BP	TE	Not Yet in Place	Planning
6) Work continually to align firm's priorities	BP-GM	BP	M	Not Yet in Place	Firm Business Strategy
7) Create mutual commitment, trust, and respect in partnerships	BP-GM	GM	TE	Ideal	Joint Work
8) Have major successes to ensure management support for all partnership projects	BP-GM	GM	M	In Place	Joint Work

contributed by both firms overall may reflect participant learning and adjusting to partnering as a new organizational form.

A second study-participant attribute is participating firm—GM, BP, or Alcan (see Table 3, Column 3). In the BP-GM partnership, BP offered 64 rules (43%) compared with their GM counterparts who offered 85 rules (57%). It is possible that GM is somewhat less satisfied than BP with the partnership experience, but additional analysis is needed to test this possibility. In the Alcan-GM partnership, Alcan expressed 151 rules (52%) compared with 140 rules (48%) from GM. Here the proportions are largely equivalent, possibly suggesting that each partner assessed its partnership as its partner did.

Another participant attribute is role (see Table 3, Column 4). We categorized the participants as technical experts or managers based on the type of partnership work in which they were involved. For example, we grouped those whose primary contributions involved decision-making related to resources, budgets, and partnership projects as managers. Technical experts were those whose primary contribution to the partnership was research. Our study participants and other interested attendees validated our categorization during the validation sessions and the review of this paper as an internal GM research report. This breakdown allowed us to examine role differences associated with the rule counts (see Table 4)

Pulo Attributos

Table 4. Partnership Rules by Partnership, Firm, and Role

	BP-GM Partnership		Alcan-GM Partnership		
Role	ВР	GM	Alcan	GM	Total
Technical Experts	15 (23%)	37 (44%)	79 (52%)	130 (93%)	261
Managers	49 (77%)	48 (56%)	72 (48%)	10 (7%)	179
Total	64	85	151	140	440

and the rule content. Role differences appear both within a partnership (i.e., between technical experts and managers) and across the two partnerships (i.e., among technical experts, or among managers).<sup>6</sup>

We call attention to two features of the rule counts associated with role. The BP managers offer proportionally more rules in the BP-GM partnership (77%) than do either the BP technical experts (23%) or the GM managers (56%). We see the opposite pattern in the Alcan-GM partnership where GM technical experts (93%) offer significantly more rules than the GM managers (7%). By contrast, the rule counts among the Alcan technical experts and managers are quite similar (52%) and 48% respectively). One implication of this finding is that there is an imbalance between GM technical experts and GM managers in the Alcan-GM partnership. It may be that the low frequency of rules by GM managers signals the need for more managerial involvement in partnership activities and planning. A similar imbalance occurs with BP managers relative to their technical experts. Another implication may be that because Alcan technical experts and managers express about the same proportions of rules, it is likely that they are aligned in how they experience the Alcan-GM partnership.

#### **Rule Attributes**

We identified two rule attributes in Table 3—current state and content.7 The current-state attribute (see Column 5) indicates whether the rule is currently in operation in the partnership (i.e., in place or not yet in place), or a preferred or expected element of the partnership (i.e., ideal). This attribute allows us to analyze whether or not there is a developmental sequence for rules, and to understand time-sensitive perceptions about the preservation, removal, or adoption of rules to improve partnership effectiveness. For example, we classified rule #8 as "in place" because the GM manager who furnished the rule indicated that the GM-BP partnership already experienced some success. Alternately, a rule may be categorized as "not yet in place"—as is the case for rule #6. Similarly, a rule may be considered an "ideal" state. In classifying a rule as ideal, we made no judgment as to whether the rule was in place or not; to make such a judgment would have required supporting evidence such as observation, and validation by partnership participants. However, the tone and the surrounding text did enable us to infer the participants' "preferred" state. The GM technical expert who proposed rule #7 indicated that this rule should be in place on all GM partnerships.

Table 5 focuses on partnership rules by partnership, firm, and current state. When the total rule counts for GM, BP, and Alcan are combined, 176 rules are "in place," compared with 135 rules "not yet in place," and 129 "ideal" rules. Comparing the "in place" and "not yet in place" rules, partnership participants evaluate the two partnerships favorably on balance. However, if we consider linking the "not yet in place" with the "ideal" rules, the emphasis in interpretation shifts; participants have some view of what the partnership culture should be. They clearly are proposing ideas for addressing issues and concerns that they have experienced. We also note differences at the partnership level. If we combine the BP-GM rules, 80 rules are "in place" compared with 25 rules "not yet in place." We argue that this pattern is evidence of a partnership that is "working," though participants desire some change. If we combine the Alcan-GM rules, only 96 rules are "in place" compared with 110 "not yet in place," suggesting a greater degree of concern about partnership functioning.

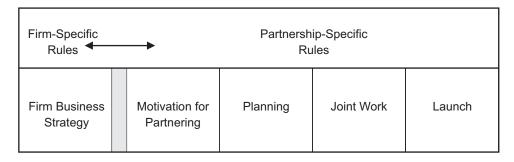
When we compare the individual firms on their assessment of the current state of the rules, BP and GM are fully aligned. BP indicates that 32 rules (50%) are "in place" while GM's percentage is slightly higher (57%). Similarly, the proportion of the "not yet in place" rules are about the same (19% and 15% respectively). These findings suggest that BP and GM tend to view the partnership in a similar way. By contrast, Alcan and GM show greater variation. GM indicates that a higher proportion of rules are "in place" (39%) compared to "not yet in place" (33%), while Alcan suggests that a higher proportion of rules are "not yet in place" (42%) compared to "in place" (28%). GM and Alcan seem to view their partnership quite differently. In both partnerships, the proportion of "ideal" rules is similar among all the firms.

The final column of Table 3 (see Column 6) identifies the content category for each rule. We initially classified the rules into five, mutually exclusive content categories. We labeled one such category, reflecting firm-specific rules, Firm Business Strategy. Four of the content categories focus on

Table 5. Partnership Rules by Partnership, Firm, and Current State

	BP-GM Partnership		Alcan-GM		
Current State	ВР	GM	Alcan	GM	Total
In Place	32 (50%)	48 (57%)	42 (28%)	54 (39%)	176
Not Yet in Place	12 (19%)	13 (15%)	64 (42%)	46 (33%)	135
Ideal	20 (31%)	24 (28%)	45 (30%)	40 (28%)	129
Total	64	85	151	140	440

Figure 5. Initial Conceptualization of the Relationship between Firm-Specific and Partnership-Specific Rules



partnership-specific rules; we labeled them Motivation for Partnering, Planning, Joint Work, and Launch (see Figure 5). Although rules can be classified as firm-specific and partnership-specific, they influence each other. Indeed, sometimes it is difficult to separate firm activities from partnership activities.

The Firm Business Strategy category contains rules pertaining to the need to align the R&D partnership with the overall business strategy and day-to-day operations of each partnering firm. The category also includes rules that prescribe the need to understand the influence of external factors (e.g., individual networking activities, political pressures, environmental regulations) on the firms involved in partnership activities.

The Motivation for Partnering category contains rules pertaining to the stated reasons for a firm's participation in one of the partnerships. These rules focus on explaining the rationale(s) for initiating the partnership and identifying partnering benefits. The Planning category contains rules associated with the focus of the work that would be undertaken in a partnership. These rules stress the planning activities for the joint work including the specification of project plans, goals, and objectives. It also includes process planning for the partnership including "how" and "when" the work will get done. The third category, Joint Work, contains rules pertaining to the day-to-day work practices of the partnership after the collaborative work gets underway. This category includes such elements as work tasks, roles and responsibilities, management support, and the quality of partnership interaction. Our final content category is Launch. It includes rules for the "how," "when," and "what" related to commercialization potential resulting from the partnership effort.

We see a progression in the three categories associated with partnership-specific rules in Figure 5. A rationale for partnering (Motivation for Partnering) precedes the establishment of any specific plans for the partnership (Planning), which occurs prior to the project-specific work (Joint Work) and the potential for product commercialization (Launch). Each of these content areas forms a particular stage in the partnership cycle. As the partnership evolves, future stages

in the partnership cycle may follow, or the partnership may lapse and terminate, or regenerate into a new partnership cycle.

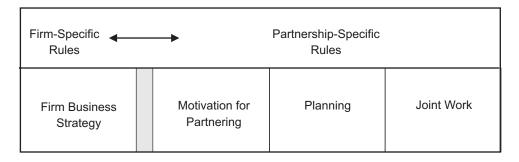
# Validating the Rules with Study Participants

We conducted validation sessions to share our results and to provide direct, targeted feedback and recommendations; over 40 individuals from BP, GM, and Alcan attended these sessions. There were a number of data-driven, methodological, and ethical motivations for integrating this validation technique into our data collection and analysis approach.

First, from a data perspective, we wanted to test the soundness of our findings to see the extent to which they reflected the perspectives of our study participants, and provided a framework that was explanatory and comprehensive of both partnerships. This kind of forum reduces researcher bias by allowing the participants to respond to the analysis and interpretations. Second, we believed that the data collected from these sessions would allow us not only to reevaluate and integrate insights from these sessions into our final analysis, but also expand our analysis into areas that were only partially developed without this iterative process. Methodologically, we were interested in using the concept of partnership rules as a foundation for developing research questions to be used in future survey instruments. Ethically, we felt that validation sessions, along with subsequent research reports, were important ways to share findings and recommendations with those participating in the study.

During our validation sessions, we showed a single PowerPoint slide with the number 440 in a large, dark font. We wanted session attendees to focus on the sheer number of these rules. Then we argued that all partnership participants conceptualized how partnerships should be structured and managed through partnership rules. Session attendees typically laughed in response to these brief opening statements. In one session, an attendee countered, "I didn't give you any rules." We responded, "Oh yes you did." He appeared surprised. One of us explained, "People didn't say (to us), 'This is a rule.' Instead, they said something that we subsequently

Figure 6. Revised Conceptualization of the Partnership-Specific Rules



defined as a rule." Typically, partnership participants did not recognize the existence of partnership rules a priori. However, when presented with our evidence, they accepted the concept and were eager to learn more about it. Later, the same attendee summarized his thoughts stating, "If there is one overriding rule, it's *communicate with your partner*." Thus, we found that our research enabled us to make an implicit feature of the partnership—the rules—explicit.

Interestingly, this now-explicit partnership rule, *communicate with your partner* is unlikely to be found in a formal document such as a particular legal agreement associated with the partnership. Yet, this unwritten rule is critical to the folk knowledge (i.e., shared understandings) of operating in a partnership environment. It may evolve into generally accepted behavior (i.e., norm) on partnerships.

During another validation session involving only Alcan participants, our conceptualization depicted in Figure 5 was challenged. Alcan participants argued that the Launch category should be comprehended in the Planning category. Alcan's argument was that if potential commercial applications are not integral to the planning specifics (i.e., goals, objectives, and vision), then partnership success likely would be compromised. One Alcan manager states this point eloquently: "On the Alcan side, there's always an assumption that you will commercialize."

This example highlights a critical difference in the corporate cultures of the two partners. Alcan is applications driven. Whether Alcan is involved in supplying aluminum to GM or working on GM R&D projects, Alcan is motivated to push applications for aluminum into GM vehicle programs. By contrast, GM's perspective on research partnerships tends to be both broad and exploratory rather than targeted and applied in orientation. Nevertheless, we recognize that our data is based on rules that were collected at one point in time. We recognize that rules may change over time. GM participants on the Alcan-GM partnership accepted the repositioning of the Launch category in our process diagram.<sup>8</sup>

Based on this example, and the support of all firms in the study, we combined the Launch rules with the Planning rules, thus eliminating Launch as an independent category. We were able to construct a more accurate description of the partnership process from the perspective of all three firms (see Figure 6). Similarly, we were able to see an example of stress on a partnership given the differences in perception about commercialization intent; those differences offer opportunities for partnership discussion and negotiation.

Table 6 presents a breakdown of the various content categories, by partnership and firm, into which the partnership rules were classified. In general, we see an increase in the

Table 6. Partnership Rules by Partnership, Firm, and Content

	<b>BP-GM Partnership</b>		Alcan-GM I			
Content	ВР	GM	Alcan	GM	Total	
Firm Business Strategy	11 (17%)	28 (33%)	52 (34%)	30 (21%)	121	
Motivation for Partnering	12 (19%)	17 (20%)	10 (7%)	15 (11%)	54	
Planning	16 (25%)	10 (11%)	26 (17%)	21 (15%)	73	
Joint Work	25 (39%)	30 (36%)	63 (42%)	74 (53%)	192	
Total	64	85	151	140	440	

rule count over the partnership cycle (i.e., Motivation for Partnering through Joint Work), culminating in the highest number of rules in the Joint Work stage. Joint Work, of course, was the stage during which we conducted our interviews.

BP and GM differ in two key ways in their partnership. First, 33 percent of GM's rules pertain to the Firm Business Strategy compared with only 17 percent for BP. For the GM participants, the GM business strategy is quite salient. Second, BP has a much higher proportion of rules associated with Planning (25%) than GM (11%). However, both partners have comparable proportions of rules in both the Motivation for Partnering and the Joint Work areas. Alcan's rules are similar to those of GM in the Motivation for Partnering and Planning categories. In general, GM's focus is largely in Joint Work, while Alcan's is in both Firm Business Strategy and Joint Work.

# Methodological and Organizational Contributions

### **Unwritten Rules Can Be Codified**

Past studies have indicated that studying written or formal rules is easier than studying unwritten rules because of the accessibility and visibility of written rules in an organizational setting (March, Schulz, and Zhou 2000). Although we accepted this premise, we believed that the unwritten rules would constitute a rich data set from which we would be able to explore emerging partnership culture. Thus, we sought a way to develop a methodology to codify the rules. The key methodological breakthrough was linking the verbal cues from the interview transcripts with partnership-specific content. The eight-step process we described makes explicit, comparable and generalizable what study participants were prescribing.

# Rules Provide Insight into Partnerships as a New Organizational Form

Unwritten rules are likely to have a greater impact on new organizational forms like partnerships than written rules—in part because few rules have been written down. In this case, unwritten rules illustrate the range of issues partnership participants experience and verbalize. These rules embody participants' hopes and expectations for managing the partnership.

Many of these unwritten rules will transition into cultural norms among partnership participants. Norms are defined as what is expected or accepted by the group; they regulate behavior and enhance group survival through reward and punishment (Boyd and Richerson 1990a, 1992b; Solits, Boyd and Richerson 1995). As a result, "interactions between individuals who share beliefs about how people should behave yield higher payoffs than interactions among people with discordant beliefs" (McElreath, Boyd and Richerson 2003:123). In these GM partnerships, there was a movement

towards an agreed-upon, accepted, or standard way of behaving as the partnership aged.<sup>9</sup> In particular, we would expect that attending to the risks faced by one's partner is likely to become a norm in these partnerships.

While some rules will become norms, others may become codified in subsequent partnership policies and agreements. Similarly, as particular organizations enter into more partnerships, they may use past MOU's, confidentiality agreements, and other documents as templates for crafting new partnerships.

# Rules Broaden Understanding of the Social and Economic Environment

Study participants link individual firm objectives and goals with partnership activities. Their partnership-specific rules take into account firm-specific rules, and vice versa. Partnership rules demonstrate that participants are actively engaged in creating and adjusting to the new paradigm of interdependent, collaborative work—all the while recognizing that external forces impact these relationships. Partnership rules provide insight into selected issues requiring corporate attention (e.g., managing the supply chain, increasing shareholder value). They also signal the extent of alignment between firm and partnership objectives, as well as the expectation that partnership success will enhance individual firm success.

#### **Rules Offer Insights into Partnership Health**

The rule counts provide us with a snapshot in time of a partnership's health. From the context surrounding each rule, we were able to discern whether the rules were "in place" or "not yet in place," or considered "ideal" (i.e., preferred or expected elements) in a partnership. A larger proportion of "in place" rules relative to those "not yet in place" suggests that the partnership is operating well—as in the case of the BP-GM partnership.<sup>10</sup> If the opposite pattern emerges, the rule counts likely suggest that the participants have a number of concerns; through the rules they prescribe numerous changes to partnership functioning. This pattern is evident in the Alcan-GM partnership. We also found that Alcan and GM tend to view their partnership in different ways, with Alcan expressing more dissatisfaction and GM expressing more satisfaction. Ideal rules are also an attribute of partnership health because they draw attention to participants' ideal or mental images of successful partnerships. As such, ideal rules offer suggestions on how and where to intervene to improve partnership effectiveness generally. All partners had similar percentages of "ideal" rules.

#### **Rules Reveal Role Differences**

Rule counts can be linked with partnership roles since we know which rules are associated with which interviews. Thus, it is possible to examine the rules for variation by role

(i.e., manager, technical expert) to identify similarities and differences. Technical experts may express more rules than managers, as in the case of the GM technical experts on the Alcan-GM partnership. Further investigation would be necessary to discover why such an imbalance occurred. When the proportion of rules between managers and technical experts is about equivalent, there is a good chance that the participants filling these roles are aligned in how they experience the partnership; Alcan technical experts and managers express about the same proportion of rules.

# Partnership-Specific Rules Illustrate Different Stages in the Partnership Cycle

A progression in the development of the partnership is evident in the partnership-specific rules. Rules classified in Motivation for Partnering represent participant views on the rationale for and benefits associated with partnering. This stage clearly precedes the Planning stage when particular goals and objectives are established with a particular partner. Finally, the rules in the Joint Work stage focus on the activities of the collaborative projects after the work gets underway. Forty-four percent of the rules associated with the two partnerships occur during this stage; Joint Work is the longest and most important of the stages, and was the active stage when we conducted our interviews. Future stages<sup>11</sup> may follow Joint Work as the partnership evolves, with some of these stages occurring in a subsequent partnership cycle.

# Rule Content Pinpoints Similarities and Differences in Partnership Focus

Rule content provides insight into the kinds of issues that partnership participants deem important. It directs attention to rule-count differences and similarities in content between the partners. The similarities in rule content suggest that the BP-GM partnership is more aligned than the Alcan-GM partnership, particularly in the Motivation for Planning and Joint Work areas. Indeed, commonality in Joint Work is particularly critical as the partnering organizations attempt to achieve their goals and objectives.

# All Partnership Participants Create Rules

Our data challenge the popular assumption that rules are typically the prerogative of organizational leadership—created and maintained solely through their input. We found that rule-making behavior is an activity in which all partnership participants engage. Participants crafted and proposed 13 rules per interview hour on average, indicating that both technical experts and managers are involved in creating the emerging partnership culture. The partnership rules act as a dynamic repository of knowledge and an important source of insight into the best ways of working within a partnering arrangement from the perspectives of those most directly involved.

# Impact of the Rules Methodology on GM's Research Partnerships

Our discovery and subsequent validation of the concept of partnership rules spawned a succession of positive outcomes for GM, its organizational partners, and us as researchers. Here we focus on five such outcomes that demonstrate the applications of our research to partnership functioning and organizational change.

First, we provided both general and customized recommendations for GM, BP, and Alcan as individual firms, and the two research partnerships—BP-GM and Alcan-GM—created from these firms. During and following the validation sessions, study participants associated with the partnerships, along with higher-ranking members of the participating firms, told us that the recommendations were helpful and useful. For example, we addressed the key question posed to us by the project sponsor at the outset of the project: Do different types of research partnerships have to be managed differently? We emphasized that differences in partnership type—even within the category of private-sector partnerships—often involve differences in partnering expectations and behavior and therefore demand differences in approach and management. To assist partnership leaders and participants, we also presented and validated inhibitors and enablers of partnership success.

Second, we reshaped GM R&D's conceptualization of a research relationship. The initial view at the time we began our study was that partnerships run their course and end with little thought given to the time and effort required to develop and maintain them. Based on both our methodological and content analyses, and our discussions with GM R&D management, this view changed significantly. The revised conceptualization is that because healthy and productive partnerships are highly dependent on strong ties among project researchers, efforts should be ongoing to identify new project opportunities for collaboration. Moreover, in the course of these management discussions, we re-energized the leaders of the BP-GM partnership to work actively to promote this partnership's continuation, despite the finalization of the initial set of projects.

Third, we have continued to receive support for a broader partnership networks research program. Because of the enthusiastic response from GM R&D management to our work on private-sector partnerships, we were able to initiate a subsequent study of GM's partnerships with a variety of research-institutions, and more recently, an examination of research relationships involving internal GM R&D units.

Fourth, we developed a relationship-dynamics model (patent pending) dedicated to enhancing partnership effectiveness (Sengir et al. 2004). We created and validated the model, in part, by relying on our experience with GM's private-sector partnerships. A production-ready tool is being built from our advanced prototype for use in examining the structure and dynamics of GM's research partnerships, and for diagnosing and predicting partnership issues.

Finally, we developed and worked to implement a set of best practices for all GM's research partnerships. Our role involved presenting the best practices in a series of meetings at GM R&D, entertaining discussion of them, and addressing any issues raised by attendees. We also forwarded copies of these best practices to GM's research partners. These best practices, relating to building and sustaining relationships and improving work process effectiveness, were based on the insights derived from these private-sector partnerships, and from other subsequent research partnership investigations. All participants in GM's research partnerships are expected to use these best practices in their interactions with their partners, and in the decisions they make pertaining to their research projects.

#### Notes

<sup>1</sup>Larry Burns, GM A Century of Innovation Catalog (1999).

<sup>2</sup>Revenue figures for GM, Alcan, and BP are based on each firm's 2003 financials.

<sup>3</sup>One of the authors has developed a shorthand for the purpose of data collection and has shared that technique with the other authors.

<sup>4</sup>In contrast to a deductive approach where hypotheses and relationships between variables are identified a priori and then tested, during inductive analysis, data are collected, patterns are identified, and hypotheses are generated from the data (see Bernard 2000; Briody 1989).

<sup>5</sup>Sometimes participants directed rules toward organizations that were not part of their partnership. In other cases, the prescriptive statements were perceptions of their partner's rule. We did not include these rules in our sample count.

<sup>6</sup>Organizational affiliation has a more dominant effect on the way in which study participants craft partnership rules than the non-organizational attributes of the participants (e.g., gender, national-culture differences). This finding is consistent with other analyses conducted at GM (Briody et al. 2004).

<sup>7</sup>We also focused attention on the attribute of directionality (i.e., which partnering firm was the target of the rules). Because more analysis needs to be done in developing this attribute, we did not include it in this analysis.

<sup>8</sup>BP initially shared GM's conceptualization of the Launch category as the final category of Partnership-Specific Rules. However, both BP and GM agreed with the re-conceptualization of the Launch rules into the Planning category as suggested by Alcan.

<sup>9</sup>Norms are not static, however, and will change in response to a variety of factors both internal and external to the partnership.

<sup>10</sup>We are not assuming that the number of rules is correlated with partnership satisfaction; additional investigation would be required to make that determination. Rather, we view partnership health in terms of the relative balance of rules between partners—across the partnership overall and by content and study-participant and rule attributes.

<sup>11</sup>Based on our analysis of the BP-GM partnership (unpublished manuscript), the rules may also signal the transition from one partnership cycle to another, or cycle termination. For example, rules focusing on future, rather than current, work activities and relationships may indicate the end of one partnership cycle and the beginning of a new cycle. Such rules suggest the participants' redirected focus on future work and the

continuation of partnering relationships. Similarly, the absence of rules focused on the future may signal a desire not to rekindle relationships and joint work with a specific partner.

#### References

#### Ahuja, Gautam

2000 Collaboration Networks, Structural Holes, and Innovation: A Longitudinal Study. Administrative Science Quarterly 45: 425-55

Anderson, James C., Hakan Hakansson, and Jan Johanson
1994 Dyadic Business Relationships Within a Business Network
Context. Journal of Marketing 58: 1-15.

#### Bernard, Russell H.

2000 Social Research Methods: Qualitative and Quantitative Approaches. Thousand Oaks, CA: Sage Publications.

#### Boyd, Robert, and Peter J. Richerson

1990a Group Selection among Alternative Evolutionary Stable Strategies. Journal of Theoretical Biology 145: 331-42.

1992b Punishment Allows the Evolution of Cooperation (or Nothing Else) in Sizeable Groups. Ethnology and Sociobiology 13: 171-95.

#### Brannen, Mary Yoko and Jane E. Salk

2000 Partnering Across Borders: Negotiating Organizational Culture in a German-Japanese Joint Venture. Human Relations 53: 451-488.

#### Briody, Elizabeth K.

1989 Analyzing Qualitative Data Through Content Analysis. Warren, MI: GM Research Laboratories Publication 6812, September 25.

Briody, Elizabeth K., S. Tamer Cavusgil, and Stewart R. Miller 2004 Turning Three Sides into a Delta at General Motors: Enhancing Partnership Integration on Corporate Ventures. Long Range Planning 37: 421-434

#### Carey, J. W., M. Morgan and M. J. Oxtoby

1996 Intercoder Agreement in Analysis of Responses to Open-Ended Interview Questions: Examples from Tuberculosis Research. Cultural Anthropology Methods Journal 8:1-5.

#### Casson, Ronald W.

1981 Language, Culture and Cognition: Anthropological Perspectives New York: Macmillan.

#### Cravens, David W., Shannon H. Shipp, and Karen S. Cravens

1993 Analysis of Co-Operative Interorganizational Relationships, Strategic Alliance Formation, and Strategic Alliance Effectiveness. Journal of Strategic Marketing 1: 55-71.

#### Das, T.K, and Bing-Sheng Teng

1998 Between Trust and Control: Developing Confidence in Partner Cooperation in Alliances. The Academy of Management Review 23: 491-513.

#### Douglas, Mary

1973 Rules and Meaning. Harmondsworth, England: Penguin.

#### Drew, Paul and John Heritage

1992 Analyzing Talk at Work: An Introduction. In Talk at Work: Interaction in Institutional Settings. P. Drew and J. Heritage, eds. Cambridge: Cambridge University Press.

#### Durkheim, Emile

1933 The Division of Labor in Society. New York: The Free Press

#### Duysters, Geert, Gerard Kok, and Maaike Vaandrager

1999 Crafting Successful Strategic Technology Partnerships. R&D Management 29:343-351.

#### Ertel, Danny, Jeff Weiss, and Laura Visioni

2001 Managing Strategic Alliances: A Cross-Industry Study of How to Build and Manage Successful Alliances. Brighton, MA: Vantage Partners.

#### Ferraro, Gary P.

2001 The Cultural Dimension of International Business. 4<sup>th</sup> ed. New Jersey: Prentice Hall.

#### General Motors

1999 Innovation Leadership Catalog, Warren, MI.

# Gerth, Hans H. and C. Wright Mills

1946 From Max Weber: Essays in Sociology. New York: Oxford University Press.

#### Gill, Jas and Richard J. Butler

2003 Managing Instability in Cross-Cultural Alliances. Long Range Planning 36:543-563.

#### Gulati, Ranjay

1995 Social Structure and Alliance Formation Patterns: A Longitudinal Analysis. Administrative Science Quarterly 40:619-52

#### Gulati, Ranjay and Tarun Khanna

1994 Unilateral Commitments and the Importance of Process in Alliances. Sloan Management Review 35: 61-69.

#### Gumperz, John J.

1982a Discourse Strategies. Cambridge University Press.

1999b On Interactional Sociolingustic Method. In Talk, Work and Institutional Order: Discourse in Medical, Mediation and Management Settings. S. Sarangi and C. Roberts, eds. New York: Mouton de Gruyter.

# Gumperz, John J. and Dell Hymes, eds.

1972 Directions in Sociolinguistics: The Ethnography of Communication. New York: Holt, Rinehart and Winston, Inc.

# Hagedoorn, John

1993 Understanding the Rationale of Strategic Technology Partnering: Interorganizational Modes of Cooperation and Sectoral Differences. Strategic Management Journal 14: 371-385.

#### Haviland, William A.

1999 Cultural Anthropology. 9th edition. J. Matthews, L. Spindler, G. Spindler, E. Richards, and B. Weeks, eds. Fort Worth: Harcourt Brace College Publishers.

#### Holsti, Ole R

1968 Content Analysis. Handbook of Social Psychology, G. Lindzey and E. Aronson, eds. Reading, MA: Addison-Wesley, 596-692.

#### Kogut, Bruce and Gordon Walker

2001 The Small World of Germany and the Durability of National Networks. American Sociological Review 66: 317-335.

#### Krippendorff, Klaus

1980 Content Analysis: An Introduction to Its Methodology. Beverly Hills: Sage Publications, vol. 5.

#### Madhavan, Ravingranath, R. Koka and Balaji, John E. Prescott

1998 Networks in Transition: How Industry Events (re) Shape Interfirm Relationships. Strategic Management Journal 19:439-460

#### March, James G., Martin Schultz, and Xueguang Zhou

2000 The Dynamics of Rules: Change in Written Organizational Codes. Stanford: Stanford University Press.

#### Masciarelli, James P.

1998 Using Relationship Management to Ensure Partnership Success. Strategy and Leadership 26: 24-30.

#### McAllister, Daniel J.

1995 Affect and Cognition-Based Trust as Foundations for Interpersonal Cooperation in Organization. Academy of Management Journal 38: 24-59.

#### McElreath, Richard, Robert Boyd and Peter J. Richerson

2003 Shared Norms and the Evolution of Ethnic Markers. Current Anthropology 44: 122-129.

#### Meschi, Pierre-Xavier

1997 Longevity and Cultural Differences of International Joint Ventures: Towards Time-based Cultural Management. Human Relations 50:211-228.

#### Mowery, D.C.

1998 Collaborative R&D: How Effective Is It? Issues in Science and Technology 15:37-44.

### Nahavandi, Afganeh and Ali R. Malekzadeh

1988 Acculturation in Mergers and Acquisitions. Academy of Management Review 13:79-90.

# Ring, Peter Smith and Andrew H. Van de Ven

1994 Developmental Processes of Cooperative Interorganizational Relationships. Academy of Management Review 19: 90-118.

# Sapir, Edward

1921 Language. New York: Harcourt Press.

Sengir, Gülcin, Robert T. Trotter, II, Elizabeth K. Briody, Devadatta Kulkarni, Linda Catlin, and Tracy L. Meerwarth

2004 Modeling Relationship Dynamics in GM's Research-Institution Partnerships. Journal of Manufacturing Technology Management 15: 541-559.

### Shreve, Gregory M.

2002 Translation, Fidelity and Other Mythical Beasts I Have Sited. Anthropology News 43:7.

# Soltis, Joseph Robert Boyd and Peter J. Richerson

1995 Can Group Functional Behaviors Evolve By Group Selection? An Empirical Test. Current Anthropology 36:473-94.

#### Weber, Max

1947 The Theory of Social and Economic Organization. Translated by A.M. Henderson and T. Parsons. New York, Oxford University Press. Weber, Roberto A., and Colin F. Camerer 2003 Cultural Conflict and Merger Failure: An Experimental Approach. Management Science 49: 400-415.

Weber, Robert Philip

1985 Basic Content Analysis. Beverly Hills, CA: Sage Publications. Whorf, Benjamin Lee

1956 Language, Thought and Reality. Cambridge: MIT Press.

Yang, Xiaohua and Marilyn Taylor

1999 Assessing the Effects of Structural and Project Characteristics on R&D Strategic Alliance Performance: A Unified Approach. Journal of High Technology Management Research 10: 105-122.



# March 28-April 2 • Hyatt Regency Hotel

The 65th Annual Meeting of the Society for Applied Anthropology will convene in Vancouver, British Columbia, Canada, March 28-April 2, 2006. The meeting theme—"World on the Edge"—is particularly appropriate, given Vancouver's geographic location and cultural diversity. The city is at the edge of North America and serves as the dominant gateway to the Pan-Pacific Region. As such, it provides a real as well as a metaphorical platform for assessing the central forces that are shaping our world—globalization, multiculturalism, boundaries and borderlands, population migration, and development.

Vancouver has served as a crossroads for diverse ethnic groups, from the peoples of the First Nations to its most recent Asian immigrants. The cultural richness of British Columbia rests in part on a national tradition of tolerance and public policy that emphasizes cultural and ethnic pluralism.

The 65th Annual Meeting invites papers to explore how these forces push populations to "the edge"—of their environment, their culture, their political autonomy. We seek to understand more precisely how culture and identity may be maintained in multicultural settings. We want to learn more about the tools people employ to preserve family structures, health, and nutritional behaviors, as people cross boundaries and leave traditional homelands.

The migration of populations has serious implications for labor markets. Migration also influences the spread of epidemic disease and highlights health disparities and class inequities within a society.

By addressing questions such as these in Vancouver, we reaffirm the commitment of our founders to apply our professional tools and theories to real world problems. In this commitment, we understand that "application" involves questions of tactics as well as method, many of which impact our professional lives. What role should professionals take to best understand and resolve contemporary problems? Is the tradition of science and objectivity possible in such situations? Can existing institutions, often the root source of social and political inequities, be converted to engines of reform? Can the redress of ethnic and class differences be achieved with true parity?

As a part of this commitment, the 65th Annual Meeting of the Society for Applied Anthropology will begin with a special day to highlight Vancouver and British Columbia. The paper sessions, tours, and special events on Tuesday, March 28, will have in common a geographic focus on the issues and problems unique to the meeting venue and framed to be instructive to all participants. Moreover, the events of that day will be organized to attract the general public.

Please contact Orit Tamir, 2006 SfAA Annual Meeting Program Co-Chair, with your comments and suggestions: sfaa2006@sfaa.net. Online registration and abstract submission are available at: http://www.sfaa.net/sfaa2006.html.