Learning from Failure: Towards an Evolutionary Model of Collaborative Ventures

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Abstract
This paper reports on a longitudinal case study of the interaction between two partners to a failed international joint venture. We develop a model of the collaboration process in partnership and alliances based on earlier work by Ring and Van de Ven (1994) and by Doz (1996). We employ a series of events that occurred in the course of the relationship as the unit of analysis in order to trace the interactions between the partners, and to explicate the impact that external shocks have on their perceptions of efficiency and equity. The impact of these events, as well as the responses they elicit, on the quality of the relationship (and vice versa) are also considered. We find that the partners' assessments cause them to either engage in renegotiation of the terms of the contract, or to modify their behavior unilaterally, in an attempt to restore balance to the relationship. The process feeds back until a new mutual understanding of equity is restored, or else the relationship deteriorates gradually until a point when the venture is dissolved. We conclude that positive feedback loops are critical in the evolutionary process, that relationship quality is both an outcome and a mediating variable, and that procedural issues are critical from the start in fostering a climate for positive reinforcement and the building of mutual trust and confidence in the relationship.
(*Alliances*; *Collaborative Behavior*; *Relational Quality*; *Joint Ventures*; *Learning and Failure in Alliances*)

Introduction
The last two decades have witnessed a significant increase in the frequency and magnitude of inter-firm collaborations (Hladik 1985, Contractor and Lorange 1988, Hergert and Morris 1988, Hagedoorn 1995). The complexity of organizational tasks required by technological acceleration and the rapid globalization of markets have made it increasingly difficult for any one firm to go at it alone in all product/markets of interest. Thus, inter-firm collaboration is "a major topic of interest and relevance in the present organizational world" (Smith et al. 1995, p. 20). Whereas much has been written on this general phenomenon, there is little empirical evidence on the dynamic aspects of collaboration (Parkhe 1993a, Yan and Gray 1994), and even less on the conditions that lead to the termination of such agreements (Larson 1992, Smith et al. 1995).

Studies focusing on the phenomenon of alliance[1] formation outweigh those dealing with their evolution. The traditional economic view of alliances (Hennart 1988, Balakrishnan and Koza 1993, Buckley and Casson 1996) starts from a firm's need to acquire necessary complementary resources in order to pursue a particular product/market strategy. The firm may turn to an alliance as the most efficient option when compared with either *de novo* investment, an arms' length market transaction, or acquisition (Kogut 1988). For this to be the optimal choice, the alliance must meet three conditions: (1) the markets for the resources to be combined are somehow imperfect, affecting the ability to contract efficiently; (2) some resources have characteristics of public goods—namely, they can be shared at a low marginal cost making independent replication more expensive than acquisition; and (3) the key resources are firm-specific imbedded assets (Granovetter 1985), making acquisition expensive or wasteful.

Although advocates of this perspective recognize the limitations of a static approach and acknowledge that dynamic considerations influence the alliance evolution, only those conditions that affect its efficiency as an organizational form are considered determinant. Moreover, despite the fact that a number of researchers have acknowledged the importance of sociological and dynamic aspects in the collaboration process (Larson 1992, Ring and Van de Ven 1994, Gulati 1995, Ariño 1997; as well

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as Jones et al. 1998, and Madhok and Tallman 1998), little attention has been paid to its evolution. Recent work by Ring and Van de Ven (1994) and by Doz (1996) are two important exceptions to this trend, as are the papers by Larsson et al. (1998) and Kumar and Nti (1998).

Ring and Van de Ven (1994) propose a process framework where alliance evolution consists of sequences of negotiation, commitment, and execution stages. Each of the stages comprises a number of repeated interactions, the outcome of which is assessed in terms of efficiency and equity. One important contribution of this paper is the explicit treatment of the concept of equity, understood as "fair dealing," into the analysis. According to the authors, the concept goes beyond an economic/rational calculation of equivalence of benefits, and includes the sociological meaning of indebtedness where "equivalence is not necessary, and reciprocity is sufficient" (Ring and Van de Ven 1994, p. 94). The authors are silent, however, about the conditions under which outcomes may be considered efficient and equitable.

Doz (1996) explores how the evolution of cooperation in strategic alliances is related to several learning processes that mediate between initial conditions and outcomes. Initial conditions are found to be not only important per se, but also as they influence a number of critical subsequent learning processes. As partners learn from their interactions in joint or coordinated activities, they re-evaluate the alliance by monitoring it for efficiency, as well as each other for equity and adaptability.[2] The path from re-evaluation to readjustment is determined by the partners' willingness to keep committing to the relationship, in itself dependent on the quality of the relationship.

In the following section we first integrate these two views into a tentative model describing the evolution of collaboration in inter-organizational arrangements. The next section discusses our methodology and research design, as well as the specifics of the research setting. The section on findings describes the events that took place over the four-year life of the subject alliance, divided into 14 discrete events. We then elaborate further on the initial model, incorporating our interpretation of these events and offering a fuller evolutionary model of collaborative behavior in alliances. Finally, we present our conclusions and suggestions for further work.

A Tentative Model

The insights obtained from these two seminal papers can be readily integrated (Figure 1). Initial conditions are the outcome of preliminary negotiation and commitment stages, which the parties accept provided they satisfy their objectives in an efficient and equitable manner. As commitments are executed, learning processes unfold that result in a re-evaluation of those initial conditions. A new sequence of negotiation and commitment takes place that may lead to a set of revised conditions (or new equilibrium) followed in turn by a new execution stage. Changes in external conditions may also precipitate a similar cycle. Alliance failure can thus be attributed to: (1) initial conditions that are inconsistent with economic efficiency requirements or which hamper learning; (2) environmental changes that modify the efficiency or equity conditions to a nonremediable degree; or (3) a breach in performance that results in a deteriorated relationship.

Initial Conditions: Efficiency and Equity

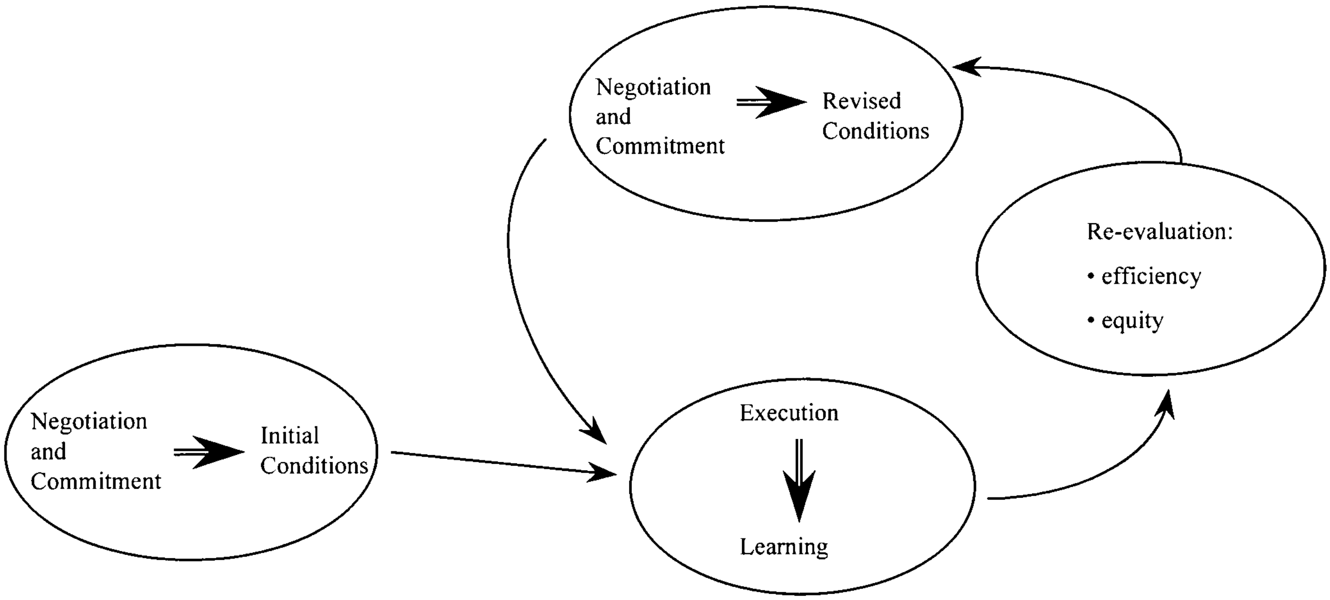
All organizational arrangements must fulfil efficiency and equity conditions (Ouchi 1980). An alliance is efficient in a Pareto optimal way if there is no other alternative arrangement that would leave one party better off without the other being worse off. It fulfils equity conditions if the standards of reciprocity are met. Finally, a company will remain in an alliance insofar as it continues to perceive it to be an efficient and equitable organizational form for its purposes.[3]

The value that a firm expects to gain from an alliance depends on its current strategy, its expectation about future environmental conditions, its own planned contributions as well those it expects from its partner to the alliance, and on the negotiated distribution rules that will apply to future benefits. Expectations about the partner's future behavior will be conditioned by prior experiences and by the quality of the relationship between the partners.

Relational quality is an elusive but important concept. It depends partly on the personal bonds between key executives on both sides, on their trust in each other, and on the broader reputation the partners have for fair dealing (Hosmer 1995, Zaheer and Venkatraman 1995, Ring 1996, and Sydow 1997). But it is also affected by more objective assessments of previous contributions made by the partners in the relationship. The former can be influenced by events outside the venture, whereas the latter applies principally to the execution of prior commitments with respect to the venture.[4]

If efficiency conditions are met, the expected value from the alliance to each company must be greater than zero, and greater than the expected value from any alternative organizational arrangement that achieves the same purpose. Furthermore, any initial distribution rules must be set so as to provide incentives for each company to behave in the manner expected of them. The equity condition would require that both firms are initially satisfied

Figure 1 **A Tentative Model of CV Evolution Source: Based on Ring and Van de Ven (1994) and Doz (1996)**



that the relative value of the alliance to each company be proportional to their respective contributions.

Finally, initial conditions must include a number of operational elements that will govern the execution of the alliance's strategy. These should include (Doz 1996) a set of task definitions for both parties, administrative procedures, and decision rules regarding most functional areas. It is precisely these elements that will govern the interactions between the partners and lead to learning and conflict resolution as the environment or expectations change over time.

Adjusting to Change

Changes in any of the variables that determine the value of the alliance to the respective partners, whether external or endogenous, would necessarily lead to changes in the efficiency of the venture to one or both partners, and/or in the equity relationship underlying each partner's sense of reciprocity. As this occurs, the affected partner will attempt to restore balance in the relationship. Efficiency may be restored by readjusting the firm's contributions to the venture and/or the outcome distribution rules. A loss of equity would require similar corrective action. The more extreme the imbalance, the less likely corrective actions will be effective (or the more drastic they would need to be), and the more likely the relationship will deteriorate to the point of risking the dissolution of the alliance.

Assessments about efficiency and equity are conducted under uncertainty conditions. The sources of uncertainty are twofold: there is uncertainty regarding future states of nature, but also about the extent to which the partner will behave as expected. Uncertainty about future states of nature resolves through processes of learning about the external environment as well as the strategic context of each participating company. Uncertainty about the partner's future behavior resolves through processes of learning about the partner, its goals, and motives.

A firm learns about its partner by interacting with it. The knitting thread of the process of collaboration is the series of interactions between the partners (Ring and Van de Ven 1994, Madhok 1995, Doz 1996). In fact, Kumar and Nti (1998) argue that the extent to which the partners meet their goals depends partly on the pattern of interaction. Since previous interactions are likely to affect subsequent ones (Larsson et al. 1998), such patterns acquire considerable importance. Consequently, understanding how a firm assesses efficiency and equity outcomes in its interactions with the partner, and how this may lead it to take corrective actions, either unilaterally or in concert with the partner, is critical to gain deeper predictive insights into the collaboration process.

This paper contributes to build such theoretical understanding by reporting research on a longitudinal case study of the interactions between two partners to a failed international joint venture (JV). We cover the JV's entire life time, from its inception to its dissolution. The analysis is at the event level, by which we mean "a critical incident when parties engage in actions related to the development of their relationship" (Ring and Van de Ven 1994, p. 112).

The use of an event as the unit of analysis allows us to trace the interactions between the partners in response to specific stimuli. Such observations are then used to augment current models of alliance evolution by providing a fuller explanation of the efficiency and equity assessments that mediate between learning-about-the-partner and readjustment processes.

Method and Research Design

Others have argued the need for qualitative research that allows us to understand the core issues underlying a theory of collaboration (Parkhe 1993a). In particular, Smith, Carroll and Ashford (1995, p. 19) call for "more longitudinal case studies that are capable of capturing the complexities and dynamics of cooperation." This analysis attempts to fill this void and follows a design by Yin (1984). We track the interactions between the partners to "Joint Venture Company" (JVCO)—an equity joint venture between two multinational firms in the consumer products industry. The case was selected based on two considerations: it provided a dynamic setting with considerable variance in the concepts of interest, and it had been in operation for a sufficient period of time so that relational issues could be expected to have surfaced.

Research Site: The Partners

JVCO is a 50/50 JV owned by two multinational companies: U.S.-based North American Company (NAMCO) and Europe-based Hexagon, S.A.[5] NAMCO is active in a number of segments of the household products industry, including cleaning products, toiletries, and personal hygiene. The market for its main product lines is very competitive; six giant multinational companies compete fiercely in most world markets. NAMCO has experienced rapid international expansion in recent years; its income from international operations exceeded 60% of total revenues. NAMCO is the market leader in many countries for its dominant product line, but its position is weaker in other product areas.

Hexagon is a French company with high product diversity in three main fields: specialty chemicals, cosmetics, and pharmaceuticals. Despite this diversity, Hexagon has a star branded product in its "Hexa" cosmetic line. The markets in which Hexagon operates are competitive, with both multinational and local companies active in most product areas. The company grew internationally early in its life; more than 80% of Hexagon's income comes from international operations. Hexagon is market leader in many product areas throughout Europe, and has profitable niche positions elsewhere. Due to growing opportunities for leveraging its brand name and technical expertise, Hexagon is engaged in an active acquisition program. Table 1 summarizes the main features of both companies.

NAMCO and Hexagon had been competing in Scandinavia with a marginal but profitable product that both had developed independently for the local market. The product was a new "ecological" cleaning liquid—applicable to both personal and household uses, made of natural ingredients, fully biodegradable, and appealing to the environmental consciousness of Scandinavian consumers. Both firms were interested in the potential for such ecological cleaners in other world markets, but lacked the full complement of resources to do so on their own.

NAMCO had a strong manufacturing and distribution system worldwide, composed of a network of independent agents.[6] Yet, the necessary technical capabilities for this product were localized in its Scandinavian distributors, which made it difficult to apply them on a world scale. Furthermore, NAMCO's brand name (consistently ranked among the most valuable brand franchises in the world) could not be extended to this product, and the company had a history of failure in recent product introductions. Management was understandably hesitant of the risks involved in such a new product area. Hexagon, on the other hand, possessed strong technical capabilities in this area and had an equally powerful brand name that could be leveraged in this field. They lacked, however, the distribution system necessary to launch the product on a world scale, particularly in terms of access to specialized retailers.

Beginning in the late 1980s, Jason Graham, President of International Operations at NAMCO, and Charles Polansky, Executive VP at Hexagon, met on several occasions to compare notes on international market developments. Realizing their common interest in ecological cleaners and their complementary capabilities, they promoted the concept of a JV that would join resources and exploit this latent possibility. They eventually sold the idea to both companies' boards, signed a letter of agreement in November 1989, and concluded negotiations for the JV in March 1990. After nearly four years of joint operations, the JV was dissolved in December 1993.

Research Setting: Products, Markets, and Resources

For an explanation of the products and markets involved, the resources contributed by the partners and the initial distribution rules, see Table 2. The initial thrust and primary objective of JVCO was the international roll-out of the ecological cleaning products originally developed for the Scandinavian market. Two other product areas were added later to JVCO's portfolio in order "to exploit economies of scope and take advantage of the parents' distribution and technical resources, while providing a more

Table 1 Description of JVCO's Partners

	NAMCO	HEXAGON, S.A.
Products	Household supplies (dominant) Toiletries Personal hygiene	Specialty chemicals Cosmetics Pharmaceuticals
Product diversity	Medium-Low: dominant product line >50% of sales	High: multiple product lines (none >10% sales)
International diversity	High: over 60% of sales	Very high (>85% of sales) with Europe accounting for about 60% of total
Market developments	Rapid international expansion in recent years Market for dominant product line very competitive and with lower growth prospects Distribution gaining importance in value added	Long history of international expansion Competitive markets
Competitive position	Market leader in most world markets in dominant product line Weaker position in other product areas	Dominant position throughout Europe in traditional products Niche positions in most global markets
Key strategic thrust	Reduce dependency on dominant product line Consolidate and extend distribution control Rapid international expansion Seek high margin niches in related fields	Grow its non-European businesses Leverage its brand name to related health and personal care products by investment or acquisition

Table 2 Joint Venture Characteristics

Products	Ecological liquid cleaners (for personal and household use) Hypoallergenic soaps and skin care products Dietary substitutes	
Resources contributed by the partners	NAMCO:	Access to its network of company-owned and independent distributors/manufacturers
	Hexagon:	Trademarks (Hexa, Hexa-Kleen, and Hexa-Care); product and production technology and know-how; dietary substitutes (never introduced)
Incentive systems	50/50 profit and loss split Cost reimbursement for the use of corporate resources Cost reimbursement plus fee for new developments 4% royalty payment for use of trademarks and facilities to each partner	

diversified portfolio to the venture." One was a new line of hypoallergenic soaps and skin care products for the mass market, based on similar products traditionally distributed by Hexagon through pharmaceutical channels in Europe and North America, and incorporated into the JV from the start.[7] A second was to consist of ready-to-drink dietary substitutes, based once again on Hexagon's pharmaceutical trade products, to be added at a later, nonspecified date. All of these products differed from the traditional ones on which they were based in two important dimensions: they were aimed at the mass market and they represented a "convenience" item relative to the more specialized positioning and channels associated with the traditional Hexagon formulations. The venture would have worldwide rights to all these products, except for ecological cleaners in Scandinavia where both companies would retain their independent operations and brands.

Hexagon's contributions included its trademarks—"Hexa", "Hexa-Kleen", and "Hexa-Care"—and its production technology and know-how. NAMCO would contribute its own corporate trademark and access to its global manufacturing, packaging, and distribution system, and would assist JVCO in demonstrating to its independent distributors the advantages of introducing and aggressively promoting JVCO's products. Distribution of Hexa-Kleen would require investments in point-of-sale promotional equipment, to be funded by JVCO, by the distributors independently or jointly with JVCO.[8]

Figure 2 depicts JVCO's organizational structure and indicates the various options available for it to carry out its functional activities. The partners made it clear to the JV management team that they should avoid duplicating the partners' respective infrastructures. R&D would be subcontracted to, and most product ingredients would be sourced from, Hexagon. Manufacturing and packaging of final products would be done either at Hexagon facilities, at NAMCO's distributors, or by unrelated third parties. JVCO's management retained the option to invest in production facilities, but clearly on an exceptional basis. Sales and distribution would normally take place through NAMCO's distribution system (including its network of independent agents all over the world), as well as through NAMCO's Retail Division in North America, but could also be carried out independently or eventually through JVCO's own distribution system. Whereas the JV agreement did not require JVCO to seek approval from NAMCO in order to access the latter's distribution system, the partners recognized a mutual benefit in requiring JVCO to work through NAMCO and its divisional and regional offices (particularly in North America) to this effect.

The economic rationale behind the formation of JVCO appears quite strong, as all JV efficiency conditions cited earlier are met (Table 3). The incentive system was also appropriately conceived to reflect these economic contributions. Both partners would receive royalties at 4% of net sales for the use of their respective trademarks and know-how. JVCO would reimburse the two parent companies for all activities subcontracted to them at cost, plus a reasonable margin (generally 10%). Finally, all the JV's profits and losses would be split between the partners on a 50/50 basis.[9] It was expected, however, that initially

Figure 2 **Constellation of Major Organizations in JVCO's Space**

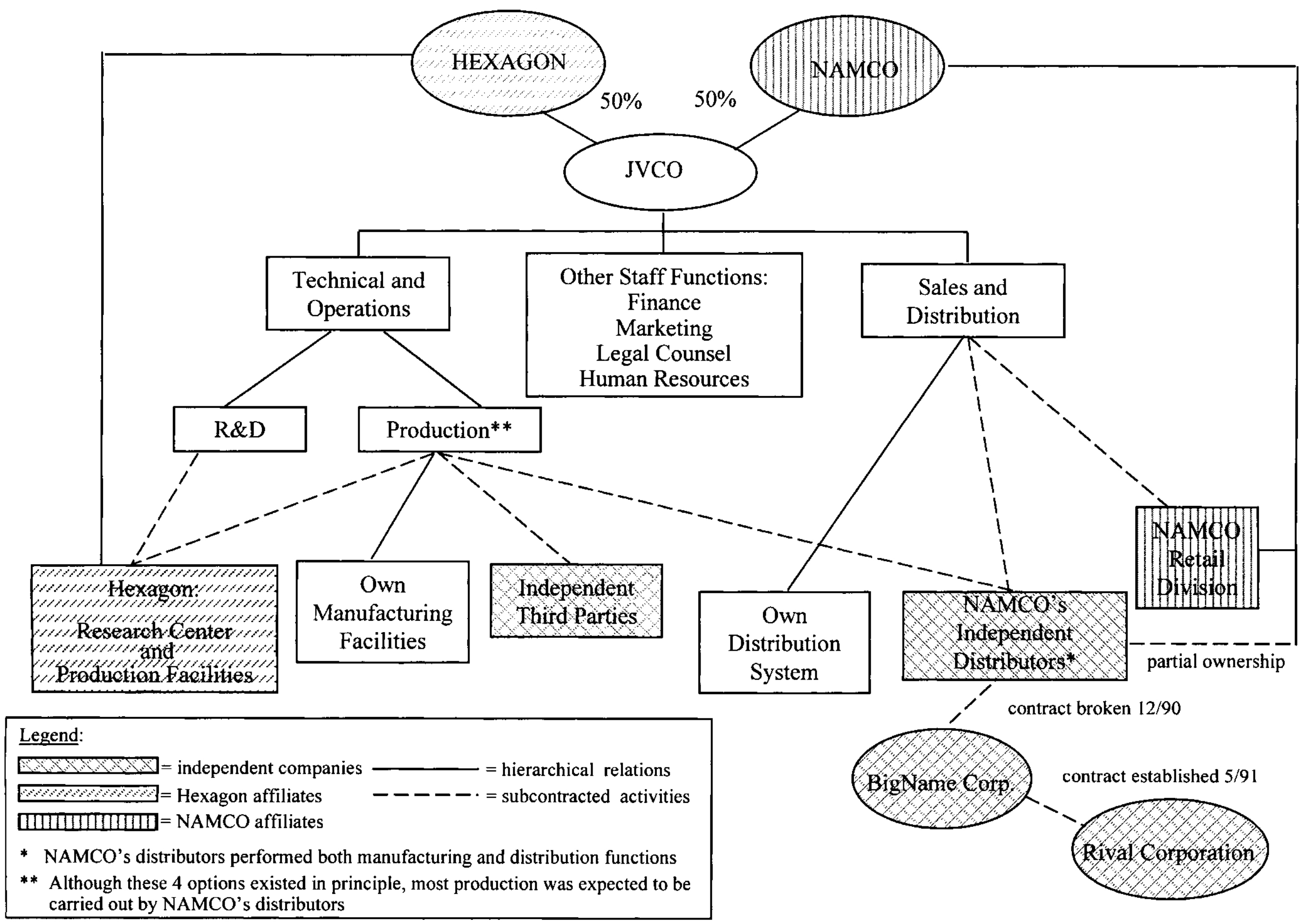


Table 3 Efficiency Conditions for JV Optimality

	Hexagon's contributions		NAMCO's contributions
JV efficiency conditions	Product and production technology and know-how	Trademark	Access to distribution system
Market failure	Difficult to encode and monitor quality ex-ante Few if any independent providers (small numbers)	Difficult to value ex-ante	Few available of this quality and global reach (small numbers)
Characteristics of "public goods"	Difficult to replicate at marginal costs	Zero marginal cost Difficult to replicate	Low marginal cost of usage Difficult to replicate
Firm-specific assets	Capabilities embedded in those for other products	Value associated with Hexagon's image	Access to NAMCO's distribution system is not feasible outside NAMCO

most profits would be retained within JVCO to finance its international expansion.

Six people composed JVCO's Executive Board, three from NAMCO and three from Hexagon (Table 4). The Executive Board was given broad powers to review and approve critical decisions concerning, for example, all agreements between JVCO and its parents or their subsidiaries and affiliates, and between JVCO and third party manufacturers or distributors, technical matters, investment decisions, and new market entry. Decisions by the Board would require the consent of at least two of the three members of each partner. Messrs. Graham and Polansky, the two executives responsible for the initial concept and the acknowledged "godfathers" of JVCO, were named co-chairs of the Executive Board. Howard Taylor, a 30-year veteran executive from NAMCO, was selected to be JVCO's CEO. Other staff members were appointed from both organizations as shown in Table 5.

Data Collection and Analysis

We collected both archival and interview data. Archival data cover the entire life of the JV from its inception to the date the partners decided to dissolve it. The main archival source was the minutes of all the meetings of JVCO's Executive Board. These constituted about 180 pages of unusually rich and detailed information. These minutes had been read and approved by all board members shortly after each meeting, confirming that they accurately reflected the participants' views and comments. Additional archival data include a large volume of management reports (including several dealing with the nature of the inter-partner relationship prepared by the JV's CEO), organization charts, financial and market reports, internal newsletters, etc. Finally, we collected relevant press clippings and releases dealing with JVCO and its parents.

Interviews were employed to complement the archival data, serving as a means to triangulate the validity of our findings (Eisenhardt 1989). We interviewed all the members of JVCO's management team, privately and face-to-face. We also held a meeting with the full team, as well as several informal meetings with the JV's CEO. The interviews were semi-structured and ranged in length from 45 to 125 minutes; some informants were interviewed several times. The interviews were carried out between September 1993 and May 1994. Table 5 lists the managers that were formally interviewed, indicating their company of affiliation, prior years of service, and the number of times they were interviewed. Finally, all key JV executives read and commented on an early draft of this paper for accuracy.

In our analysis of all relevant case data, we followed Miles and Huberman's (1984) suggested procedure, whereby data reduction, data display, and conclusion drawing/verification are interwoven before, during, and after data collection. Though uncommon in economic studies of organizations, this sort of field-based dynamic research provides a useful complement to broader population studies and allows us to bridge the gap between research on the economic and relational aspects of alliances.

We proceeded to analyze the data by means of data reduction techniques, guided by the broad research question: how does a partner's behavior evolve as a consequence of events that affect the inter-partner relationship? We first numbered the paragraphs of all minutes of the Executive Board, management reports and interviews transcripts, and prepared a list and description of all issues

Table 4 JVCO's Executive Board Composition

Periods	Board members	Company	Position held at parent company
	Jason Graham*	NAMCO	Executive V.P. and President of International Operations
Founding (March 1990 to Summer 1992)	Ivan Hinchey	NAMCO	Executive V.P. and President of North American Sector
	Jim Sharp	NAMCO	Senior V.P. and Chief Financial Officer
	*Charles Polansky**	*Hexagon*	*Executive Vice President*
	Robert Guillot	*Hexagon*	*Executive Vice President*
	Oscar Thibault	*Hexagon*	*Senior Vice President*
Summer 1992 to dissolution (December 1993)	Joe Howell*	NAMCO	Executive V.P. and Chief Operating Officer, International
	Don Isaacs	NAMCO	Executive V.P. and Chief Operating Officer, North America
	Jim Sharp	NAMCO	Senior V.P. and Chief Financial Officer
	*René Michaud**	*Hexagon*	*Chief Operating Officer*
	Robert Guillot	*Hexagon*	*Executive Vice President*
	Oscar Thibault	*Hexagon*	Senior Vice President

* = *Co-chairs of the Executive Board*
Underlined = Venture's "godfathers"

that appeared in them recurrently. As understanding context is critical for an accurate interpretation of events, we prepared a context chart that maps in graphic form the inter-relationships among all organizations involved in our study (Figure 2). Next, we focused our efforts on the issues that appeared to have a greater impact on the inter-partner relationship, clearly a judgement call based on the frequency reports described above. A total of 26 such issues were identified in this manner. Eighteen were retained as meeting the critically criteria, whereas the remaining were considered to be either minor or subsumed among the former.

The next step was to construct a series of information displays to handle the data systematically. These consisted of a string of role-by-category matrices ordered in a temporal sequence. For each document we prepared a 14×4 matrix where the rows were all participants in the JV (grouped either as representatives of each of the two partner companies in the Executive Board, or as members of the top management team of the JV) and the columns were labeled as perceived JV's goals, incentive structure, resource commitment, and perceived partner's behavior. Thus, inputs in each cell were summaries of various individuals' comments on the selected issues, grouped by roles and categories. Related comments were connected and numbered, so as to have a clear picture of the time sequence in which they had been made. As a result, we developed fourteen of these role-by-category matrices which we ordered by time of occurrence.

Finally, we built a large 3×46 matrix that summarized the information contained in the previous matrices, with one row for each of the two partner companies and one for the JV, and one column for each month between March 1990 and December 1993. Each cell contained information on the major events identified from the previous matrices, as well as the partner companies' perceptions of and the reactions to these events. This display allowed us to trace the evolution of the partners' interactions around all major events.

Findings: Events and Issues in JVCO's Development

The narrative below describes 14 major events that transpired in the four years of observation. Figure 3, derived from the analysis described in the methods section, summarizes the time line associated with these events.

Event 1: Transfer of Existing Hexa-Care Business to JVCO

In August 1990, prior to the launch of the venture's first ecological cleaning product, JVCO's Executive Committee accepted a proposal from Hexagon to transfer its pre-existing Hexa-Care line of hypoallergenic skin care products in North America to JVCO.[10] Beginning in January 1991, the Hexa-Care line would be distributed by NAMCO through its extensive wholesale and retail channels, and by NAMCO's Retail Division to the beauty salon/hairdresser channel (see Table 6 for channel segmentation and key competitive variables).

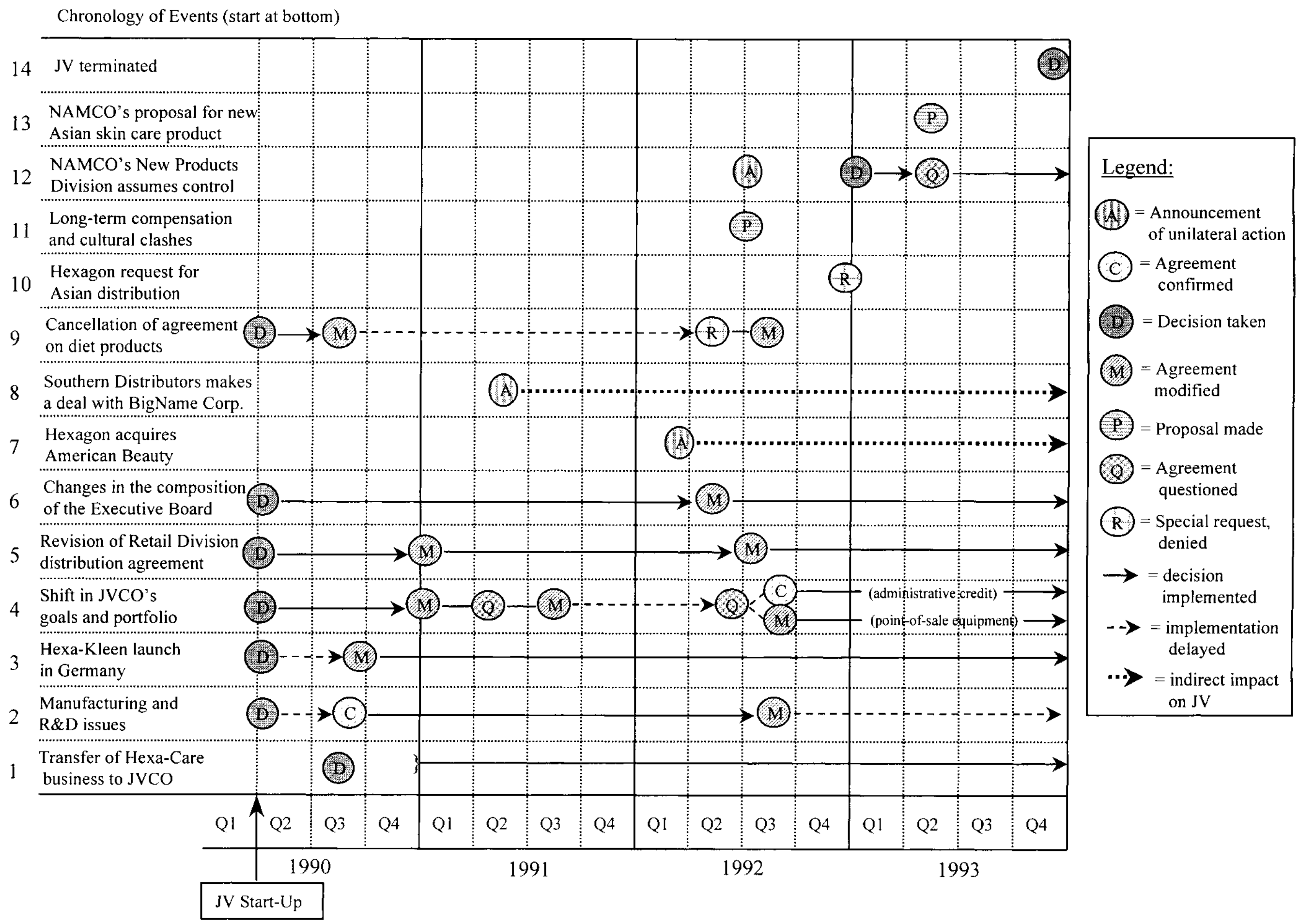
Event 2: Manufacturing and R&D Issues

Hexa-Care products could be manufactured through two distinct processes: one involved high-temperature sterilization, whereas the other made use of certain chemical

Table 5 JVCO's Executives Interviewed

JVCO Position held in 1993	Number of formal interviews	Company of origin	Prior years of service
Chief Executive Officer	3	NAMCO	30
VP/GM for North America	2	Hexagon	11
VP/GM for Latin America	1	NAMCO	6
VP/GM for Pacific and Europe	2	NAMCO	16
VP Technical and Operations	1	Hexagon	22
VP Finance and CFO	2	Hexagon	10
VP Human Resources and Public Affairs	3	NAMCO	12
VP and Legal Counsel	2	NAMCO	9

Figure 3 JVCO Time Line of Issues and Events



additives and preservatives. Hexagon had always favored the former as resulting in a healthier and more natural product, consistent with its positioning and image. Most of NAMCO's distributors, however, did not have the equipment on hand capable of producing Hexa-Care under the high-temperature process. To do so would require

Table 6 Channel Segmentation and Key Competitive Variables

		Channels			
		Supermarket and drugstore chains	Discount stores	Department stores	Beauty salons and hairdressers
NAMCO's affiliates:		Independent distributors	Independent distributors	Independent distributors	Retail Division
Key variables	Ecological liquid cleaners (Hexa-Kleen)	Special displays Shelf space	Special displays Shelf space	Not applicable	Not applicable
	Hypoallergenic and skin care products (Hexa-Care)	Special displays Shelf space	Self-serving displays Shelf space	Sales demonstration and displays	Distribution intensity and service

costly investments and training in new manufacturing techniques. It was agreed, therefore, that NAMCO's distributors would be engaged mainly in the distribution of Hexa-Care, whereas most manufacturing and packaging operations would be carried out by Hexagon or by third parties.

A manufacturing contract between JVCO and Hexagon was concluded in August 1990, and a formula for calculating transfer prices was established. Hexagon would contribute to the JV its current product formulas, and any further product developments solicited by JVCO would be performed by Hexagon's laboratories and charged back to the JV on a cost-plus-incentive basis.

During the 1991–92 discussions aimed at resolving distribution problems (see Event 4 below), NAMCO's Howell suggested that a different manufacturing process, one that would allow its distributors to perform production and packaging functions, and not only distribution, would motivate them to push Hexa-Care more forcefully. As a result, Hexagon's board members agreed at their July 1992 meeting to allow NAMCO's distributors to produce Hexa-Care using the lower temperature, chemical-additive process, and to develop an adequate formula for this purpose. Members of JVCO's management team asked whether it would be an issue for Hexagon to use the Hexa-Care brand on a product manufactured with preservatives. Hexagon's Michaud responded that he did not believe so, "provided NAMCO's distributors would back up this product as vigorously as the competitors were pushing theirs." However, according to JVCO's management, Hexagon delayed the development of a suitable low-temperature formula, thereby frustrating their ability to introduce the product to a wider market.

Event 3: The German Market Launch

The first product launch of Hexa-Kleen, the venture's flagship product, was scheduled for Germany in September 1990. Hexagon's original product formula however, proved inadequate and difficult to modify for the German market. After several ill-fated attempts, JVCO obtained access to NAMCO's Scandinavian formulation, which proved more appropriate for German tastes. As a result, the product was launched on schedule.

Event 4: Shift in JVCO's Strategy in Favor of Hexa-Care and Distribution Issues

Initial conditions called for a major emphasis in the roll-out of ecological cleaners to all world markets. The competitive environment, however, was difficult. Whereas ecological cleaners had been successful in Scandinavia (and increasingly in other Northern European markets, such as Germany), those few companies (including Hexagon) that had tried to enter the U.S. and Asian markets with similar products had met with little success, in spite of important investments in product development and promotion. On the other hand, the market for hypoallergenic soaps and skin care products was dynamic and fast growing. JVCO faced two main competitors in attempting to capitalize on the Hexa-Care franchise. "Small Co." was an independent, entrepreneurial company whose pioneering product line consisted exclusively of toiletries and skin care products and which was growing rapidly. "BigName Corp." had entered the skin care market by leveraging a strong brand name in a related business, and by gaining market access through agreements with selected NAMCO distributors. JVCO thus faced a difficult choice: create a new product category in ecological cleaners against market apathy, or focus on a growing market segment where it would have to start from a position of relative weakness.

After the difficulties associated with the Hexa-Kleen launch in Germany, JVCO's management saw the development of the Hexa-Care line of skin care products in North America as the path for short-term growth and profits. Thus the U.S. launch was quickly followed by the introduction of Hexa-Care in Asia beginning in March

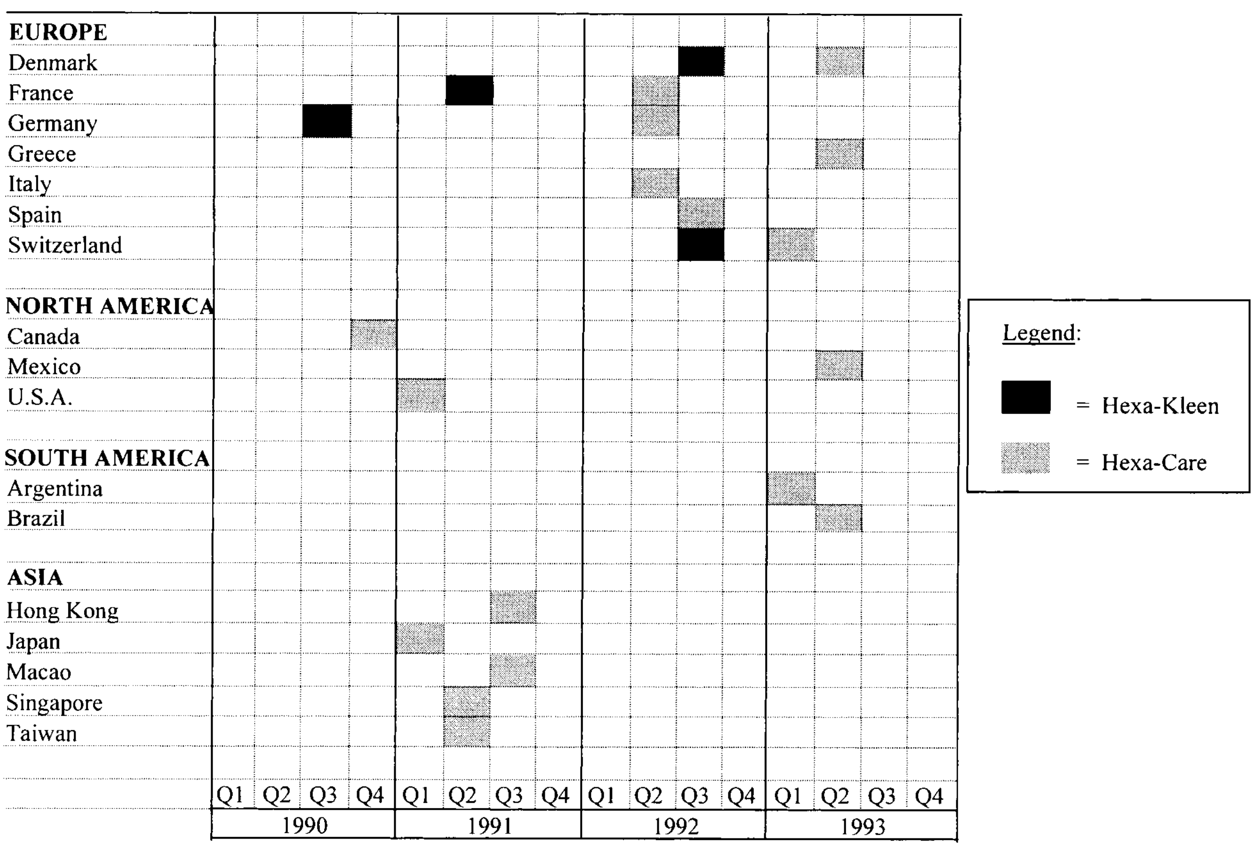
1991 (see Figure 4 for a time line of product introductions by country). By May, the emphasis on skin care products was such that members of the Executive Board—such as Jason Graham, the venture's NAMCO "godfather"—urged JVCO's management not to lose sight of the original purpose to enter the ecological cleaners market. Graham's counterpart, Hexagon's Charles Polansky, shared this view and expressed the opinion that it would be preferable to give priority to Hexa-Kleen, even at the risk of delaying JVCO's break-even operations.

At the May 1991 Executive Board meeting, Jim Sharp, NAMCO's CFO, argued that a specific agreement covering the availability of the NAMCO distribution system was now necessary. NAMCO's operating units could not be expected to push JVCO's products if they were cannibalizing their own, particularly since its distributors were receiving a higher margin from Hexa-Care than from NAMCO's own products, albeit on much smaller volumes. The issue of a North American service contract between JVCO and NAMCO was also raised. NAMCO's regional offices in the U.S. and Canada acted as interface between JVCO and the distributors. The idea of giving these offices an "administrative credit" based on the performance of the JV's products within their geographic areas was accepted by NAMCO in July 1991, but there were delays in implementation. Sharp's views were that:

> "When the JV was originally put together, the parties did not contemplate that NAMCO's divisions and regional offices would be used by JVCO to obtain access to the NAMCO [distribution] system . . . When JVCO [accesses] the distributors, that access is to be negotiated on an arm's length basis, regardless of any ownership interest either of the parents might have in the distributor."

This shift in emphasis from ecological cleaners to specialized toiletries was formalized in October 1991, when Howard Taylor, JVCO's CEO, presented a report to the Board entitled "A Review 18 Months After Formation." Although he acknowledged that the original purpose of the JV was ecological cleaners, research had shown that market potential was limited to certain European markets. Developing Hexa-Kleen beyond Europe would require a new product concept for which heavy R&D and promotional investments would be necessary. Hexa-Care, on the

Figure 4 JVCO's Product Launches



other hand, enjoyed good consumer acceptance in all markets into which the product had been introduced. As a consequence, Taylor argued, "the original vision that the principal product would be Hexa-Kleen [had] migrated to the view that Hexa-Care had the largest and most immediate market potential." The Hexa-Kleen project would not be abandoned, but it would receive less attention from management than Hexa-Care.

By mid–1992, this shift in JVCO's strategy was affecting each company's interpretation of the spirit of the agreement. In June, Howard Taylor described the differing partners' views:

> "Hexagon held the view that access to NAMCO's distribution meant that their regional and divisional offices would sell-in and manage the Hexa-Care brand with its distributors just as if it were a NAMCO brand. NAMCO viewed their obligation differently: they would introduce JVCO representatives to the distributors and recommend that Hexa-Care be included in their product portfolio. In NAMCO's view, JVCO would be responsible for selling-in and managing the products. If JVCO elected to subcontract that activity to an operating division of NAMCO, it would then have to compensate them."

At an informal meeting held in July 1992, three new board members were introduced (see Event 6 below). Don Isaacs, one of NAMCO's new members, commented that the original JV concept called for JVCO to invest in additional point-of-sale equipment, rather than use scarce shelf space and substitute a JVCO product for one of NAMCO's. He remarked that "it had never been part of the concept to pull NAMCO products off the shelves." Polansky explained that this was not the intention, and added that Hexagon was equally concerned about the lack of support the NAMCO system gave Hexa-Care. René Michaud, Hexagon's new board member, indicated that, while impressed with Hexa-Care's development to date, he was disappointed with the lack of progress in Hexa-Kleen (a view shared by all NAMCO executives at the meeting).

One month later, at the August 1992 Executive Board meeting, Sharp reiterated NAMCO's position in the following terms:

> "The initial emphasis in discussions between JVCO's parents had been on ecological cleaners. This orientation had tended to mute any concerns NAMCO may have had regarding cannibalization, since ecological cleaners were viewed as generating incremental sales without replacing existing products on retailers' shelf space. Once JVCO was established, however, it took on more of a skin care emphasis . . . NAMCO regions and divisions are reluctant to assist JVCO purely on a cost basis. In their view, the cannibalization of NAMCO products by Hexa-Care in local markets would be accelerated by their own efforts, without adequate compensation for lost sales."

By the end of the meeting, agreement was reached with regards to a new distribution service contract. NAMCO would allow JVCO access to services sourced from its regional and divisional offices at cost. NAMCO would also offer its regional and divisional offices an administrative credit representing NAMCO's share of local JVCO margins. JVCO could offer personal incentives—such as prizes and sweepstakes—directly to NAMCO personnel in these regional offices. As a Guiding Principle, " 'access to the distributor system' by JVCO means that NAMCO and its distributors will deal with JVCO products on a basis equal to NAMCO corporate products. Provided that JVCO contributes to investment in additional distribution equipment, the current distribution space will be equally available to JVCO products."

Event 5: Renegotiation of Retail Division Agreement
Throughout this period, another continuing problem had been the reluctance of NAMCO's Retail Division to handle Hexa-Care distribution to the beauty salon/hairdresser channel.[11] The Division had a strong market position with respect to this channel, one that would have been difficult for JVCO to replicate. After considerable discussion, JVCO agreed in July 1992 that NAMCO's Retail Division would operate the Hexa-Care business on an "open book" basis (revenues and costs would be openly reported to the partners), and that it would receive 50% of any profits generated by sales to this channel.

This concession, however, breached the 50/50 profit split in the JV agreement. NAMCO's Retail Division would henceforth keep 50% of all profits from Hexa-Care sales (instead of just cost recovery plus a margin). The other 50% would accrue to JVCO, to be divided equally by the two partners. As a result NAMCO's share of the JV's profits through this channel would amount to nearly 75% of the total.

Event 6: Changes in the Composition of JVCO's Board
Three members of the Executive Board retired from their respective companies in mid–1992, including the two individuals responsible for creating the joint venture in 1989. On NAMCO's side, Joe Howell replaced Jason Graham and Don Isaacs took over for Ivan Hinchey. Howell's and Isaacs' positions in NAMCO were the same as those Graham and Hinchey had occupied prior to their retirement. On the Hexagon side, René Michaud, Hexagon's newly appointed Chief Operating Officer, replaced Charles Polansky.

Event 7: Hexagon's Acquisition of U.S.-Based Cosmetics Company
At the July 1992 meeting, Mr. Michaud remarked that Hexagon's recent acquisition of a U.S.-based cosmetics

company (American Beauty) might allow them to perform some of the functions for which NAMCO had responsibility in the JV. NAMCO's representatives added that they were in the process of creating a "New Products" Division that could assume the operating responsibility for Hexa-Care, as well as other product concepts under development. It was clear to all parties that these actions, although unrelated to the JV, provided both partners with second-best alternatives to the current arrangement.

Event 8: NAMCO's Distributors Release BigName Corp. from Contractual Obligation

When BigName Corp. entered the market for hypoallergenic products in the early 1980s, it contracted with certain NAMCO distributors (with NAMCO's knowledge) for manufacturing, packaging, and distribution. These contracts were renewable on a yearly basis and included a clause by which BigName would be obligated to exit the market for comparable products for one year should it cancel unilaterally.

Following the public announcement on the creation of JVCO, BigName complained to NAMCO about a breach of trust. NAMCO responded that BigName's contractual arrangements were with independent distributors, not with NAMCO, and that, therefore, JVCO had not violated any commitments made by NAMCO or its distributors to BigName. Subsequently, BigName canceled its contracts with NAMCO's distributors and established a joint venture modeled on JVCO with "Rival Corporation," NAMCO's fiercest North American direct competitor.

BigName then approached its former NAMCO distributors and offered to compensate them for the contract cancellation, provided the latter lifted the one-year, noncompetition clause. Southern Distributors, a large regional company in which NAMCO owned a minority equity position, was the first to accept BigName's offer. Others soon followed, thus allowing BigName to re-enter the hypoallergenic market immediately and not lose competitive position relative to Hexa-Care. The settlement between Southern Distributors and BigName Corp. (valued at $1.5 million) was to be announced on the same day in May 1991 that JVCO's Executive Board was scheduled to meet. NAMCO's President, anticipating an adverse reaction from its partners, telephoned personally the President of Hexagon to give him the news, which was then communicated to other JVCO Board members.

Hexagon executives were shocked. As one of them put it, "How could they let our most formidable competitor back into the market for a lousy $1.5 million?" The issue was aggravated by the fact that NAMCO owned a significant share (but not a majority) of Southern Distributors, and that Jim Sharp, NAMCO's CFO and a member of JVCO's Executive Board, was also a member of Southern Distributors' Board of Directors. Furthermore, JVCO had complained earlier that Southern Distributors had not embraced the introduction of Hexa-Care following the JV agreement. From NAMCO's perspective, however, Southern Distributors was an independent company, and it was NAMCO's policy not to interfere with its distributors' operational decisions.

Event 9: Removal of Ready-to-Drink Diet Products from JVCO's Portfolio

In August 1990, at Taylor's request, the partners agreed to add ready-to-drink diet liquids to JVCO's portfolio at some future date. In May 1992, JVCO's management asked Hexagon to transfer the rights to a specific diet product to the JV. Hexagon declined to do so, advising JVCO's management to focus on ecological cleaners and skin care products instead. Once these were well introduced in the market, JVCO was told, they could make their request again. But at the August 1992 Executive Board meeting, Hexagon's representatives asked that any reference to diet products be removed from the Guiding Principles document.

Event 10: Request by Hexagon for Distribution Help in Asia

In December 1992, Oscar Thibault—head of Hexagon's global liquid cleaners business unit and a member of JVCO's Executive Board—addressed a request to Howard Taylor. One of Hexagon's operating units in Asia wanted to approach NAMCO's distributors in that country directly and ask them to handle local distribution for a type of dietary product. Taylor, after consulting with NAMCO's senior executives, transmitted the message that such a request would be outside the spirit of the JV agreement. Thibault then asked Taylor what would he think if Hexagon approached the local distributor of Rival Corporation for this service, to which Taylor replied, "this would be clearly against the intent and best interests of the JV."

Event 11: Long-Term Compensation Package and Cultural Clashes

In June 1992, Taylor put together a long-term compensation package for his management team, and submitted it to the appropriate authorities in both companies. NAMCO's reply came back in a matter of weeks, with only minor suggestions for modification. Hexagon, on the other hand, took the proposal under advisement and did not reply.

Throughout this period, relationships between individuals at both companies were not helped by the existence of fundamental differences in their respective corporate cultures. The U.S. company was built on a philosophy of tight controls and narrow scope of individual action, coupled with a high degree of freedom within such a scope and high rewards for performance, including a generous stock-option program. The European firm believed in greater and broader decentralization, yet offered more modest compensation, coupled with a greater tendency to respect functional boundaries and to consult other layers of management prior to taking action. One issue that brought these differences to the fore was the way executives from both sides interpreted their roles in the Executive Board. Hexagon's Board members tended to get involved in many operational decisions of JVCO, while the NAMCO executives were content with delegation within narrow boundaries.

Event 12: Transfer of Hexa-Care to NAMCO's New Product Division

By May 1993, Hexa-Care's performance in terms of volume and market share in North America compared unfavorably to that of its major competitors, Small Co. and BigName Corp. According to Mr. Michaud, the situation could be explained in two ways: "either the promotional campaign had been ineffective, or there was a lack of commitment from NAMCO distributors."

Responsibility for Hexa-Care operations at NAMCO was transferred to its New Products Division in early 1993. The transfer resulted in increased costs because of the greater complexity of handling Hexa-Care along with a number of other low-volume new products. Michaud questioned the advantages of this transfer, and judged that JVCO had not taken advantage of the explosion in the market for hypoallergenic and skin care products over the last two years. Thibault remarked that whereas poor product positioning was a plausible explanation for the lack of market penetration by Hexa-Care, the fact remained that wherever JVCO had received support from NAMCO distributors, Hexa-Care had done reasonably well.

Event 13: Proposal for a New Skin Care Product for Asian Markets

Isaacs and Howell suggested at the May 1993 board meeting the possibility of introducing a new type of skin care product using traditional Asian ingredients. JVCO's management questioned the strength of the Hexa brand for such a product. Whereas NAMCO had product formulas available from its Indian and Hong Kong operations, Hexagon had not been able to develop an acceptable formula for Asian-style toiletries. Howell urged the Board to decide quickly on this issue, but Michaud called for a deeper discussion between the partners before a decision was made.

Event 14: Dissolution of the Joint Venture

During the following three months, it became increasingly obvious that the partners' interests were diverging. Hexagon wanted to pursue the ecological cleaners project, while NAMCO was more interested in opening the Asian-style skin care category. American Beauty offered an alternative distribution system in North America and Europe for Hexa-Care. Hexagon's brand weakness in the Asian product category diminished its relative value to NAMCO. As a result, the partners announced in September their decision to dissolve the JV as of December 1993.

Action and Reaction in Response to Changes in Efficiency and Equity Conditions: A Revised Model

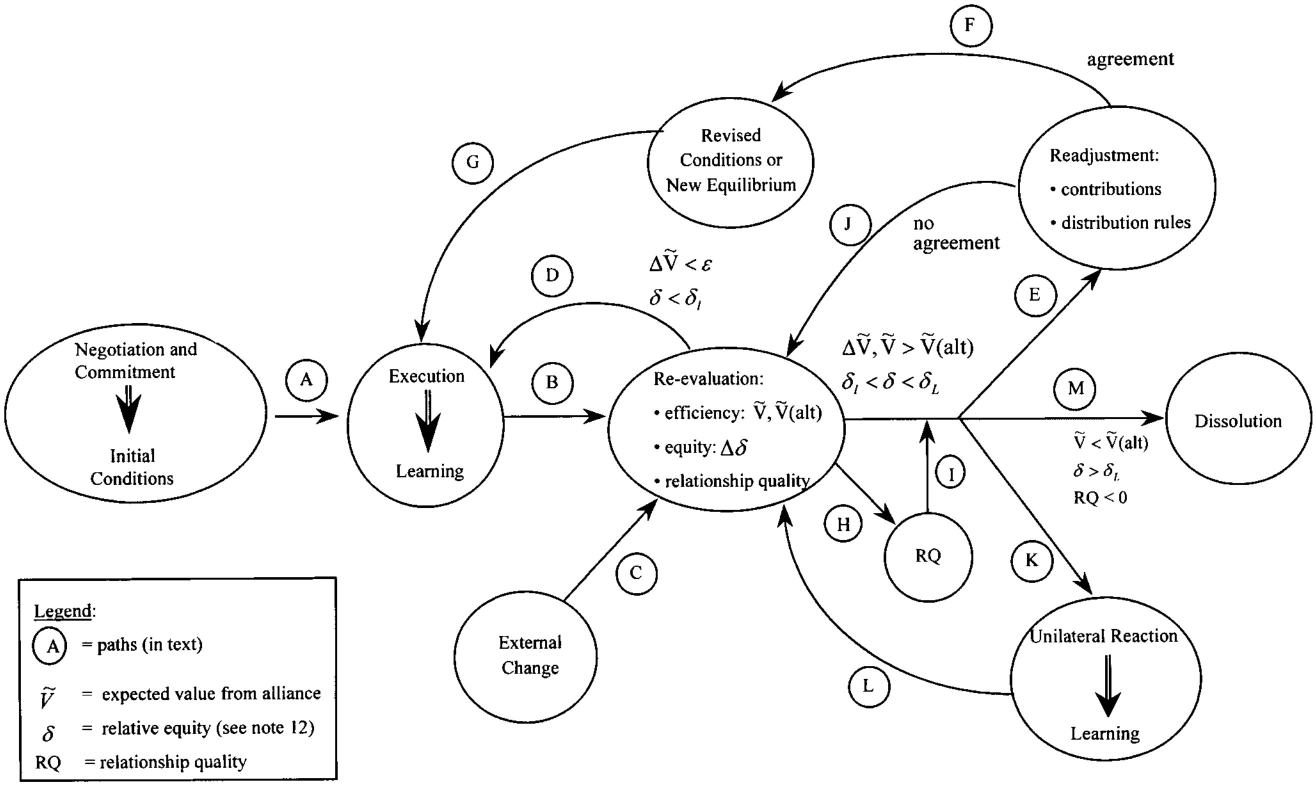
As these events are intertwined over time, the players' actions and reactions cannot be interpreted in isolation. We will first advance a revised model of collaborative behavior that emerges from the data (Figure 5), and then interpret the partners' temporal sets of interactions accordingly.

After a process of negotiation and commitment leads to setting an alliance's initial conditions, the execution of those commitments begins, as does the associated learning processes (path "A" in Figure 5). This allows each company to learn whether the partner's contributions are as originally expected. As this assessment influences the expected value of the venture to the firm, it will have an impact on the firm's judgment of its efficiency and equity (path "B"). A similar re-evaluation process takes place as external changes in environmental conditions or in strategic context alter the alliance's expected value to the firm (path "C"). A number of "learning-action-reaction" loops are set in motion as a consequence, with positive or negative impact depending on whether they enhance or diminish the quality of the inter-partner relationship.

The first such loop consists of the benign case when, following a change in external conditions, the firm's evaluation concludes that the value it derives from the venture has increased or that any temporary imbalance thus created is within tolerable limits.[12] After such an assessment, a new iteration of the execution stage follows, with learning taking place that feeds back to the re-evaluation stage, as in loop "C–D–B".

If, on the contrary, the alliance is assessed as having a lower value (but still one superior to that of any alternative organizational arrangement), or if the temporary imbalance is judged as violating the equity condition, then some corrective action is required to restore efficiency and/or equity. Provided the prevailing quality of the inter-partner relationship is high or that procedural steps exist

Figure 5 Proposed Model of CV Evolution



to deal with such conflicts, then the partners will engage in a renegotiation process to readjust their respective contributions and/or the alliance's distribution rules. A successful renegotiation leads to a new equilibrium, and new iterations of the execution-learning and re-evaluation stages. This is the trajectory described by loop "C–E–F–G–B".

These two loops will be positive provided the execution stage that follows the revised conditions fulfils mutual expectations. As such, they will tend to reinforce relational quality, which, in turn, will mediate positively future renegotiations (path "H–I"). The firm will infer that the partner does not hold a hidden agenda and this will strengthen the relationship (Ariño 1995). In this context, we express relational quality as a cumulative variable that incorporates learning from past interactions and affects the level of inter-partner trust.[13]

However, if no agreement is reached at the renegotiation stage, then the aggrieved party may react unilaterally in an attempt to restore its lost efficiency or equity (loop "C–E–J–K–L"). A similar unilateral reaction may be undertaken when the result of the re-evaluation stage requires some corrective action, but the relationship quality is low and/or there were no established procedures for conflict resolution (loop "C–K–L"). Either one of these loops would result in a deterioration of the relationship quality as they will affect the firm's re-evaluation of its interests following the partner's unilateral reaction ("H").

Finally, the alliance will be dissolved when either its value to the firm (or to the partner) falls below that of some alternative arrangement accomplishing the same purpose, or if there is a serious violation of the equity condition. By then, the relationship quality may have deteriorated to the point where there is no possible renegotiation (path "M").

Interpretation of the Evidence from JVCO's Case

Let us now turn to the data and examine it from the model's perspective. The first three events described in the previous section are typical of a relationship in evolution. Within six months of start-up, both partners show a willingness to bring into JVCO the resources necessary to make it work, regardless of contractual agreements. Hexagon contributes its North-American Hexa-Care business (Event 1), thus increasing value to both partners at little cost. NAMCO came to the rescue of the German Hexa-Kleen launch in an area that was not within its sphere of responsibility in the JV (Event 3). Equally, Hexagon agreed to manufacture Hexa-Care for North America, an area where NAMCO's distributors were unable to perform as required (Event 2). These changes in the relative value-to-contribution ratios for both partners are small but positive, and serve to strengthen mutual bonds at this early stage in the venture's life. Within this positive atmosphere, Hexagon accedes to add dietary products to the venture's portfolio (Event 9).

This set of interactions follows loop "B–D–B–H". The actions taken by each party had the effect of increasing the value of the alliance to both companies ("B"). Even when some costs were implied, the increased value made the alliance more efficient, and any temporary imbalance in equity was within reasonable limits ("D"). As a result of the execution of these new arrangements ("B"), relationship quality was enhanced ("H").

By the end of 1990, however, a major problem surfaces as the shift in JVCO's goals (Event 4) leads to NAMCO growing increasingly concerned that the underlying incentive structure had changed. It appears to them that Hexa-Care is competing for shelf space and consumer attention with many of NAMCO's main products. Simultaneously, JVCO demands more involvement from NAMCO's regional offices to pressure distributors in North America to carry Hexa-Care (Event 5). From NAMCO's perspective, the situation is now substantially different from what they anticipated when the contract was signed. The original vision of incremental Hexa-Kleen sales has been replaced by the cannibalization of existing lines. With lower net benefits, why should NAMCO contribute access to its regional offices, unless offered additional compensation?

This second set of interactions follows loop "C/I–E–F–G–B–H". An external change, mediated by the extant quality of the relationship ("C/I"), initiates the cycle. An independent shift of goals by JVCO's management results in a drop in the expected value of the venture to NAMCO as well as an increase in its contribution, which leads to a deterioration in efficiency and a decrease in equity beyond an acceptable level. As the relationship quality was reasonably good at the time (it had been enhanced through the previous set of events), NAMCO's representatives expressed their concerns as a prelude to renegotiation ("E"). In the meantime, NAMCO's decision to provide but not deliver on the administrative credit issue illustrates a negative outcome along path "F–G–B" with the corresponding impact on relational quality ("H"). From Hexagon's perspective, however, access to NAMCO's offices was part of the deal. NAMCO's reluctance to provide such access was interpreted as a retreat from its original commitment that, in turn, diminished Hexagon's equity in the relationship.

The partners subsequent struggle to re-establish equity in the relationship takes the form of a series of unilateral reactions. Their inability to reach consensus about the interpretation of their respective obligations, and modify them if necessary in the face of significant external change, is allowed to fester and make their positions diverge. It must be added that the Southern Distributors incident (Event 8) in May 1991, had poisoned the relationship at the Board level. Not all board members felt that way, and certainly not those closely associated to the venture's creation, but Hexagon executives interpreted the incident as evidence of the relative low priority NAMCO accorded the JV.

The third set of interactions describes loop (B/C–E–J–H). It starts with Hexagon's learning of NAMCO's failure to live up to its commitment to give administrative credit to the regional offices ("B"), with a loss of both efficiency and equity for Hexagon. This evaluation is also influenced by the acquisition of American Beauty and the departure of the founding fathers (see below). The Southern Distributors incident adds to Hexagon's pessimism through a lowering of the relationship quality, an example of an external event to the venture which, nonetheless, has a critical impact on relational quality ("C–H"). Although NAMCO attempts to pursue further renegotiation of the distribution rules ("E"), the deterioration in relationship quality ("I") makes Hexagon reluctant to agree to NAMCO's claims, providing information for the next re-evaluation ("J") and deteriorating the relationship quality further ("H").

By mid–1992, a cumulative set of circumstances contribute to a rapid deterioration of the quality of the relationship in spite of enormous market success and potential.[14] The acquisition of American Beauty (Event 7) gives Hexagon for the first time an alternative resource, and a consequent reduction of its efficiency conditions in relation to the JV. A series of heavy blows follow, chief among which is the departure of the two founding fathers (Event 6). Agreements and understandings that may have been implicit in their thinking, or that could have been articulated in an informal telephone call, are now easily misinterpreted by those not involved in the original design and negotiations. Thus, unaided by this earlier sense of purpose, the partner's relationship and their perceptions of equity begin to diverge in an escalating manner.

The fourth set of interactions (loop "E–F–interruption") includes the eventual implementation of NAMCO's administrative credit commitment, but at the price of Hexagon's assent to contribute to new equipment purchases (Event 4). By this agreement ("E–F"), Hexagon appears to be testing whether NAMCO was willingly under-committing resources. The partners were now at a point that could result in an enhanced relationship, with restoration of efficiency and equity to both parties, had they executed their new commitments ("G–B–H").

However, the equilibrium is again tilted by the "open book" accord between JVCO and NAMCO's Retail Division (Event 5). To Hexagon, this meant that now NAMCO would get "a greater share of the pie" in this segment. Hexagon reacts by reducing its commitment to the venture in two important ways: it cancels the transfer of a dietary product (Event 9) and delays providing a low-temperature product formula to the JV (Event 2). Hexagon is thereby avoiding a further deterioration of its equity position through a drop in its own contribution.

This fifth set of interactions follows loop "B–H–I–K–L". NAMCO's action ("B") leads Hexagon to doubt their commitment to the JV, causing Hexagon's unilateral reaction ("K–L"), mediated by the decrease in relational quality ("H–I"). The equity condition continues to deteriorate. The acquisition of American Beauty begins to appear to Hexagon as an attractive alternative to the JV.

While outside the scope of this study, it is reasonable to speculate that the degree of cultural distance between both organizations acted as a magnifying influence on conflicts of equity. First, definitions of what is equitable may have different moral foundations in two distinct cultures, making communications difficult and misinterpretation more likely (Parkhe 1993b). Furthermore, as was the case here, different rates of executive compensation (Event 11) may engender in the participants a sense of distortion of equity that would translate from the individual to the organization level. Hexagon's attempt to restore equity in this instance was clearly impacted by their perception of the relative reward-to-effort relationship associated with its management and that of its partner. These circumstances probably acted as underlying external events that fed assessments of efficiency, equity, and relationship quality.

By early 1993, the business was at a standstill. NAMCO appeared more interested in the development of its New Products Division (Event 12), which had the same effect on its efficiency calculation than the acquisition of American Beauty had for Hexagon. Friction was also caused by an ill-timed request by Hexagon for distribution assistance in unrelated products (Event 10). The future of the relationship seemed poised on a sharp edge. The final straw was the suggestion by NAMCO to launch an Asian-style skin care product (Event 13). Michaud was clearly hesitant given that Hexagon did not have expertise in this product category and he was doubtful the brand could support such a product.

The lack of resolution of important issues in distribution, the loss of trust engendered by unilateral reactions aimed at restoring efficiency and equity by one or another party, and the appearance of alternative resources on both sides had taken their toll. The original champions were no longer there to defend their creation. It was time to move on (Event 14).

This final set of interactions incorporates learning from the past, as well as a number of external events ("C") that are the consequence of changes in the strategic context of each partner. The companies decide to dissolve the JV ("M") as the result of a lowered efficiency in the JV as compared with alternative arrangements, an accumulation of interactions that increase the perceived inequities ("B–H–I"), and a relationship the quality of which has deteriorated as a consequence of past interactions.

Concluding Discussion

Building on recent literature about the development of alliances and an in-depth longitudinal case study, we propose a model that explains their emergence, evolution, and dissolution. Our model focuses on the on-going assessment by the partners to an alliance of the efficiency and equity conditions prevalent in their venture at any given point in time, as mediated by the quality of their relationship. External changes, either in the environment or in the strategic context in which the alliance develops, trigger these efficiency and equity assessments. But this does not imply that the alliance is an isolated dyadic relationship. Rather, it is embedded in a space where other organizations will affect its relative value to each partner (Nohria and García-Pont 1991, Gomes-Casseres 1996). As Khanna (1998) argues in this issue, the benefits that accrue to an alliance participant are influenced by activities outside the alliance's constellation. Using each event in the alliance's history as the unit of analysis allows us to identify specific actions and reactions by the partners and the resultant learning that governs the collaborative process.

One may argue that the evolution of collaborative agreements is driven primarily by their initial conditions (Doz 1996). If these are wrongly configured, no amount of relationship building will compensate for their misspecification. In fact, the last-minute inclusion of HexaCare in this alliance, we have argued, may have been responsible for many of the problems that emerged in the venture. However, this position underestimates the impact of external changes, particularly when they affect efficiency conditions that are fundamental to the value of the alliance.

Our analysis considers relational quality as both an input to the success of the venture, and an output of the interactions between the partners. We model it as the sum of an initial store of goodwill—the result of external reputation and personal bonds established during the negotiation process—plus a term that accounts for actual observations of behavior over time in the context of the venture. The former corresponds to more standard static treatments of trust in inter-organizational relations (Zucker 1986, Hosmer 1995), whereas the latter is a dynamic term that will acquire more importance as time progresses. The learning-action-reaction loops described above can contribute positively or negatively to the building of the relational quality on a cumulative basis, as confirmed by Larsson et al. (1998). They have a self-reinforcing nature in that a series of positive loops, for example, can build a reserve of goodwill that will contribute to withstand an occasional severe setback in the relationship.

It is for this reason that the existence of procedural solutions for conflict resolution may be an important aspect of initial conditions. We propose that the existence of such procedures will influence the choice between the partners negotiating their differences or their undertaking unilateral action in the early stages of the relationship, thereby building the store of trust and goodwill necessary for long-term success. For this to happen, credible procedures for conflict resolution must be put in place to adjust relative contributions and the venture's distribution rules in such a manner as to restore efficiency and equity to the partners, and discourage them from relying on unilateral actions when subjected to external changes. As a result, relationship quality and mutual trust would be enhanced, and with it the probability of alliance survival (Chi 1994).

It should be noted that, as in all human endeavors, practice makes perfect. Both parent firms in this venture come from a long and proud history of successful operations where they have normally exercised significant control over most aspects of the business. Even when they worked with or through others (as NAMCO did with its distributors), the relationship was always asymmetrical. This lack of experience with shared governance may have made it even more important to institute conflict resolution mechanisms that would promote positive renegotiation loops, enhance relational quality, and reward collaborative behavior from the beginning. Thus, the apparent link between alliance experience and performance (Harbison and Pekar 1993, Simonin 1997) may be attributable to a firm's tendency to develop new alliances with those it already knows (Gulati 1995), as well as to its learning over time how to diffuse conflict in such arrangements.

Thus, we propose a number of extensions to this research that may further our understanding of the evolution of collaboration. Additional case studies at the event level, for example, would allow us to enrich the model with variables not present in our case, such as prior alliance experience. A second extension might consist of a more formal simulation of the model, allowing for the development of precise propositions for each hypothesized path. Such a model could be tested empirically in the fashion suggested by Ring and Van de Ven (1994). This may involve a longitudinal cross-case analysis at the event level that would allow building a database to include dates, actors, actions, outcomes (if observable), and data sources. Coding each event on a set of dichotomous variables would allow for quantitative testing of the model. Finally, an exploration of the relative effectiveness of different conflict resolution or trust-building mechanisms is sorely needed.

In conclusion, we posit the existence of an equity condition that may be subjected to empirical analysis. Our data suggest that the renegotiation process will be driven by some sense of an acceptable equity boundary, where minor deviations from such a condition appear to be easily tolerated and/or subjected to negotiation. It is when major changes appear that seriously disrupt one of the partners' sense of equity that a reserve of trust and goodwill is essential for a successful renegotiation. In its absence, the alliance will flounder.

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Endnotes

[1]We use the term "alliance" to include all arrangements between independent firms where each contributes certain assets under its control for a common purpose, and which are structured between the extremes of a spot market contract and a merger or acquisition. Such ventures range from joint product development agreements and other consortia in which no equity is exchanged, to the establishment of independent jointly-owned subsidiaries. These may be strategic or tactical in nature, and result from any number of motivations such as cost or risk reduction, organizational learning, market access, or political necessity. For a review of the extensive literature on such hybrid arrangements see

Kogut (1988), Borys and Jemison (1989), and Parkhe (1993a) inter alia.

[2]Doz defines the term equity as "the partner's behavior in terms of trustworthiness and forthrightness" (1996, p. 71). The concept of equity in social transactions can be traced back to Adams (1965), according to whom a condition of equity exists when the values of outcomes and inputs to each party are perceived as proportional. Webster's definition is consistent with these: "[the] state or quality of being equal or fair; fairness in dealing."

[3]For a more formal discussion of these propositions and other concepts treated in the paper, please send a note to "jdelator@anderson.ucla.edu" with your mailing address.

[4]We define relational quality as the sum of three terms. The first is the initial state of trust and confidence that exists between the partners, itself the result of the partners' status or broad reputation for fair dealing, as well as the confidence built through the negotiation process prior to the start of operations. The second term derives from the firm's cumulative experiences during the execution of the venture's agreements and commitments as it observes its partner's behavior, both in steady state conditions as well as during periods of environmental change. This experimential term is critical to the survival of the venture since it can either build up or drain the reserve of goodwill that exists among the partners; goodwill which in turn will mediate their ability to readjust to new conditions that require renegotiation of operational commitments, resources, or distribution rules. Thirdly, external events, unrelated to the venture, may also impact relational quality as they affect the reputation or credibility of the partners. For example, a public scandal would reduce a firm's reliability as seen by its partner; or the acquisition of assets that may compete with the venture may signal shifts in commitment that one firm could interpret as a betrayal. Therefore, $RQ_t = f(RQ_0 + \Sigma \text{ (Prior Experiences) } + XE)$. One may add that these terms need not be monotonic, but rather exhibit a decay function where more recent events and experiences weigh more heavily on the quality of the relationship than early or distant events. This would be particularly true when the key players change through retirement or reassignment, as was the case in our example.

[5]In order to preserve confidentiality, we have disguised the names of all companies involved and their characteristics, their products and markets, key dates, and the names of all participants. We have strived, nonetheless, to retain the essence of all critical variables and relationships.

[6]NAMCO's "distributors" performed final manufacturing (mixing and compounding), packaging, and distribution functions. One of NAMCO's corporate policies was to limit its investments in manufacturing or distribution facilities. They relied, instead, on a network of independent exclusive franchisees (generally called "distributors") who were loyal to the company and dependent on them to a large extent. The growing importance of these functions, nonetheless, had led NAMCO to own its own facilities, or take partial ownership in its distributors, when circumstances warranted it.

[7]We found no evidence prior to the start of the JV that the principals were concerned with possible cannibalization issues when adding this new product to the venture. As will become evident later, this was indeed a major source of contention and an argument can be made that by extending the product scope without considering potential conflicts, the JV founders altered initial conditions in a destabilizing way.

[8]Some of these ambiguities became critical as the venture began to face difficulties. See, for example, Event 4 in the findings section.

[9]The actual contract was more complex than depicted here, and it involved several levels of agreements: one international, excluding Scandinavia, one for North America, and separate sub-agreements whenever local subsidiaries of JVCO were established.

[10]Hexagon's traditional channels reached a small percentage of the population, particularly when compared to the retail outlets that would be opened to the product through NAMCO's participation.

[11]In 1991, the Retail Division had already obtained a lower transfer price from JVCO on the basis that its costs were high and they would otherwise drop the product. They now argued that margins were still too low to justify distribution unless they could share in any upside potential.

[12]A loss of equity would mean that the equity coefficient (that balance in the ratio of value to contribution among the partners) falls outside an acceptability boundary, requiring corrective action. We define δ_l as an acceptable temporary deviation from reciprocity that can be subjected to negotiation, and δ_L as an extreme deviation unlikely to be solved favorably, making dissolution of the venture probable.

[13]For a more detailed discussion of these issues, see the paper by Kumar and Nti (1998) and endnote 4, supra.

[14]Taylor estimated potential worldwide annual demand for Hexa-Care alone at over $1 billion.

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