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ABSTRACT

This study of available evidence on cooperative union-management efforts to solve employment problems indicates that roughly one-half of the larger unionized manufacturing facilities have embarked on cooperative efforts. Thus, larger firms have already made the decision to cooperate or not, and targeting government money to them to encourage cooperation would not be beneficial. The limited available evidence suggests that government assistance could make a difference by helping smaller organizations decide to cooperate and by helping them in the initial implementation of cooperative efforts. Few cooperative efforts enlist or encompass a majority of employees. The key to the success and longevity of cooperative efforts is finding mechanisms or processes by which the parties can juxtapose relative power activities and cooperative activities. The overriding policy implication is that any government assistance should be focused on helping private parties make the transition from experimentation to institutionalization. The Department of Labor should commit \$500,000 to support rigorous studies and coordinate dissemination of their findings through the Bureau of Labor and Management Relations. The findings can be further disseminated through seminars and more effective use of areawide labor-management committees. (The document contains 2 figures, 5 tables, and 84 references.) (CML)

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38. COOPERATIVE EFFORTS TO SOLVE EMPLOYMENT PROBLEMS

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38. COOPERATIVE EFFORTS TO SOLVE EMPLOYMENT PROBLEMS

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I. Introduction

The purpose of this report is to synthesize with a critical eye, the available evidence on cooperative union-management efforts to solve employment problems. As is laid out in my general theoretical framework discussed in Section II, this synthesis will examine the decision and implementation, maturation, and outcome stages of these cooperative activities. In Section III, the type, extent, and recency of cooperative activities is first examined, followed by a summary of the potential costs and benefits associated with cooperative activities vis-a-vis more traditional adversarial activities. The key foci of these efforts is then examined. Section III ends with a synthesis of the factors that appear to induce or impede the establishment of cooperative efforts. Subsequently, the key factors influencing the intensity and diffusion of cooperative efforts and the central problems encountered are addressed.

Section V focuses on the outcomes of these cooperative efforts; namely, performance, labor-management relations, and union leader and member outcomes. Finally, the last section is devoted to identifying the primary public policy implications and developing public strategies to assist the parties that choose to engage in cooperative efforts to solve employment problems.

II. A General Theoretical Framework

In order to synthesize and evaluate the literature and in order to understand the implications for public policy regarding cooperative efforts to solve employment problems, we first need a general theoretical framework to guide both analyses. We lack any professional consensus, however, on what that general theory should entail, especially as it applies to cooperative efforts. Furthermore, one central criticism of most of the existing literature on cooperative efforts is that it lacks analysis grounded in a more general theoretical framework. Instead, only pieces of the larger puzzle are examined. The result is that most scientific investigations of the evolution and impact of cooperative efforts on the resolution of employment problems are inadequately constructed.

There have been several recent efforts at developing a general theoretical framework by Barbash (1984), Kochan, Katz, McKersie (1986), and Cooke (1985, 1989,c). In all three models, environmental factors (economic, technical, and sociopolitical) play key roles in shaping the employment relationship and associated outcomes. In all three, certain organizational factors (e.g., collective bargaining structure, size, history, etc.) also shape the employment relationship and associated employment outcomes. Barbash and Cooke develop some fairly explicit assumptions of behavior of employers, employees, and union leaders. Within the environmental and organizational constraints, the parties go about maximizing or minimizing toward preferred optimal outcomes in the employment relationship. Barbash, however, is not explicit about how

these behaviors within given constraints lead the parties to engage in cooperative efforts to solve employment problems. Although largely consistent with Barbash's and Cooke's models, Kochan, Katz, and McKersie fail to clearly state a full set of fundamental assumptions of behavior for all parties that would drive the employment relationship, and in turn explain employment related outcomes. Although (unlike Barbash) Kochan, Katz, and McKersie address cooperative efforts, except in a piecemeal fashion it is unclear how their theoretical framework predicts cooperation, the intensity and diffusion of those efforts, and associated outcomes.

With respect to the purpose of this synthesis of the literature and policy implications, let me briefly restate a central thesis of Cooke's (1989,c) general model, which has critical implications for understanding cooperative efforts to solve employment problems. In a nutshell, Cooke's central thesis is that the establishment, maintenance, diffusion, and ultimate outcomes of cooperative efforts hinges on a fairly delicate juxtapositioning of the processes and activities associated with the resolution of conflicts of interests via relative power, on one hand, with the pursuit of mutual interests via cooperative efforts, on the other hand.

A. A Brief Overview

In the discussion that follows, it is held that both management and the work force want to get "as-much-as-possible" for itself out of the employment relationship. This does not imply that each party is purely egoistic or downright greedy (although such behavior is not

necessarily excluded). Nor does this imply that either party completely ignores the interests of the other party; it cannot without at some point jeopardizing its own welfare, or ultimately destroying the any employment relationship altogether. Getting as-much-as-possible simply implies that most people prefer more over less of a desired "pie," and that this basic desire largely governs each party's behavior.

In getting as-much-as-possible, two key dimensions of the employment relationship come into play: (1) the overall size or value of the pie available to the parties, and (2) the division of the pie between the parties. Until very recently, our own history indicates that management stakeholders were typically viewed as having sole responsibility for increasing the size or value of the pie via decisions related to operations, marketing, finance, and human resources. This view of management's exclusive domain has, historically at least, not only been widely shared by management and its stakeholders, but by the work force and union leaders as well. Concurrently, union leaders have been viewed as agents whose primary role has been to wrest from management as-much-as-possible for the work forces they represent, leaving to management the full responsibility and task of baking a bigger pie or else giving up some of the dessert it might otherwise enjoy. Hence, until late, management has baked the pie and fought with the union over how it was going to be divided (and in Doug Fraser's words, "even before it got baked").

Cooperative efforts to solve employment problems, in contrast, reflect a concerted effort in which the work force and its representatives share some of the responsibility and, hence,

decision-making in baking the pie (ideally a larger pie, at a lower cost and/or of higher quality). The basic dilemma underlying collaboration is that it requires cooperation and trust. The table is laid, knives and forks clearly in sight. Each party knows from where the other is coming. When it comes to dividing the pie, however (especially when a 9-inch pie has been reduced to an 8-inch pie), the parties again pit themselves against one another. In turn, trust and cooperation diminish if not vanish, and there are losers and winners.

In the following subsection, we lay out a more thorough and rigorous theory than our metaphor of baking and dividing pies. Although the reader may find the exposition a bit abstract, over-simplified, and/or cumbersome for his or her tastes, the theoretical framework yields some fundamentally important propositions about collaboration, which in turn guide the synthesis and evaluation of the literature and has implications for policy.

B. A More Cumbersome Theoretical Analysis

In the abstract, one can, for the moment, imagine that there is a fixed sum of net gains derivable from a given employment relationship at any point in time. This sum of net gains is a function of both extrinsic rewards (e.g., profits and wages) and intrinsic rewards (e.g., recognition and autonomy). For ease in the discussion that follows, the combination of extrinsic and intrinsic rewards will be referred to as "utility."

This fixed sum of utility at any point in time is divided between (a) management (including all management stakeholders in the employment

relationship), and (b) the work force (including its union representatives). Assuming that both management and the work force prefer more over less utility from the employment relationship, it follows that each party normally seeks to maximize its respective gains (hereafter called "absolute utility"). This dimension of the employment relationship is characterized by inherent conflicts of interest; what one party gets, the other loses or is foregone.

The absolute or relative amount of utility enjoyed by either party, however, is dependent on the total utility derivable from the employment relationship. It is this variable-sum dimension of the employment relationship that inhibits either party from exercising too much power over the division of total utility. Very importantly, it is this variable-sum dimension that may induce the parties to collaborate in ways that will increase total utility over time. The actors, however, do not always recognize the so-called "prisoner's dilemma" they may be facing and, in turn, recognize the potential mutual gains available through collaboration. Furthermore, even when the prisoner's dilemma is recognized by all parties, the parties are often unable to foster sufficient trust, which would allow them to establish a workable game plan designed to maximize their respective gains.

For the sake of simplicity, an underlying assumption of the theory is that both managers and workers seek to maximize their respective utilities derivable from the employment relationship. Toward the goal of maximization, the parties' behavior is dependent upon relative and total power. Relative power determines the distribution of a fixed sum of utility derivable from the employment relationship. Total power, on

the other hand, determines the size of the total utility available to the two parties.

Relative Power: The relative power function is stated as:

$$\text{Relative Power}_i = f \left(\frac{1}{\text{cost of demands}_j} + \frac{\text{sources of power}_i}{\text{sources of power}_j} + \frac{\text{bargaining skills}_i}{\text{bargaining skills}_j} \right)$$

The first component of the relative power function envelops Chamberlain's (1958) notion of the "cost of agreeing," which maintains that the relative power of party i decreases as the cost of demands upon party j increase. The central point here is that either party has greater relative power to obtain smaller demands than larger ones (everything else constant). Hence, in comparing relative power between the parties, either over time or across organizations, by definition alone one must control for the actual or perceived costs of any demands.

The second component of the relative power function holds that as the sources of power available to party i to force its demands on party j increase (relative to the sources of power available to j to reject the demands of i), the relative power of i increases. With respect to Chamberlain's thesis, sources of power depict the ability of either party to impose costs of disagreeing upon the other party. The sources of power available to the parties are derived from the economic, sociopolitical, and technical environments of the employer and from organizational features of the employer and union.

Relative bargaining skills is the third component of the relative power function. In attempting to maximize the relative share of total utility, each party attempts to change the perceptions of the other

regarding the sources of power available to each and the costs of demands on the other. Given the complexity and subjective nature inherent in the assessment of the sources of power and the pecuniary/non-pecuniary costs of demands, one can imagine that there is significant opportunity for changing perceptions (and hence demands). That party which is more skilled or adept at changing the perceptions of its opponent (of course to the given party's benefit) effectively increases the given party's relative power over the other. These bargaining skills are not only important during regular contract negotiations but also in the administration of contracts.

Total Power: Total utility derivable from the employment relationship is determined by the combination of human and technical capacity of the employing organization, constrained by the economic and sociopolitical environments of the organization. In attempting to maximize total utility, the parties rely on total organizational power, which is the ability of an organization to extract from its environment the kind and magnitude of benefits preferred.

The total organization power function is stated as:

$$\text{Total Organizational Power} = f \left(\frac{\text{Human + Technical Capacity of Organization}}{\text{Economic + Sociopolitical Environment Constraints}} \right)$$

The capacity of an organization to produce a product or provide a service at a profit is a function of both human capacity and technical capacity. Human capacity is the combined capacity of all stakeholders of the organization, from the top strategic decision-making offices down to the shop floor. Technical capacity represents the combination of all

the types of technologies utilized throughout the organization, how these technologies are integrated, and how well these technologies and their integration are utilized in production or in the provision of services by all members of the organization. In addition to the human and technical capacity of an organization, total organizational power is determined by the constraints (or lack thereof) imposed by the economic and sociopolitical environments.

Relative Power v. Total Organizational Power: Based on perceptions of relative power and total power, workers and managers seeking to maximize their respective utilities must weigh the expected net gains from (a) relying solely on relative power or (b) also working jointly to increase total organizational power. Under the assumption of maximizing behavior, we must hold that each party would seek to utilize that combination of relative and total power it perceives as best serving its own interests. Hence, each party weighs the perceived costs and benefits of various combinations of relative and total power activities that could maximize its absolute utility. Both parties, however, must come or be forced to the same conclusion on the appropriate mix. In deciding that some degree of collaboration will lead to increased utility for each party, the parties are attempting to (a) increase organizational capacity and/or (b) reduce the constraints of the economic or sociopolitical environments directly.

A fundamental dilemma becomes apparent as the parties simultaneously weigh relative and total power options and requisite behavior. Both management and its stakeholders and the work force and its selected union representatives must sort through the options

underlying both the relative and total power functions. In sorting through these options the parties, in effect, weigh the perceived potential costs and benefits (both pecuniary and non-pecuniary) of a wide range of possible actions, ranging from no collaboration to extensive collaboration. Assuming that the parties act rationally in selecting among available options, the parties will behave in ways at least perceived to be most beneficial to them (i.e., that which maximizes their respective utilities). This maximizing or optimizing behavior, however, is based on subjective expectations about various costs and benefits, is constrained by incomplete information and limited experience, and is sometimes influenced by inaccurate or misleading information. Furthermore, and very importantly, organizational decision-making is quite complex, as it involves a large cast of individuals with varying interests and varying degrees of authority and influence. Given that historically, employers and unions have largely attended to resolving conflicts of interest via the exercise of relative power, it would appear to be a safe assumption to hold that the draw of resolving conflicts of interest supersedes the draw of working jointly on mutual interests. A key challenge to unions and employers, therefore, is to find ways to juxtapose or balance the resolution of conflicts of interest with the pursuit of mutual interests.

Bearing these caveats in mind, the decision to collaborate must satisfy two general conditions: (1) each party (management, the work force, and union leadership) must perceive that the potential benefits from proposed joint activities outweigh the perceived costs; and (2) each party must perceive that the net benefit from collaboration is

greater than the net benefit derived from exclusive utilization of relative power.

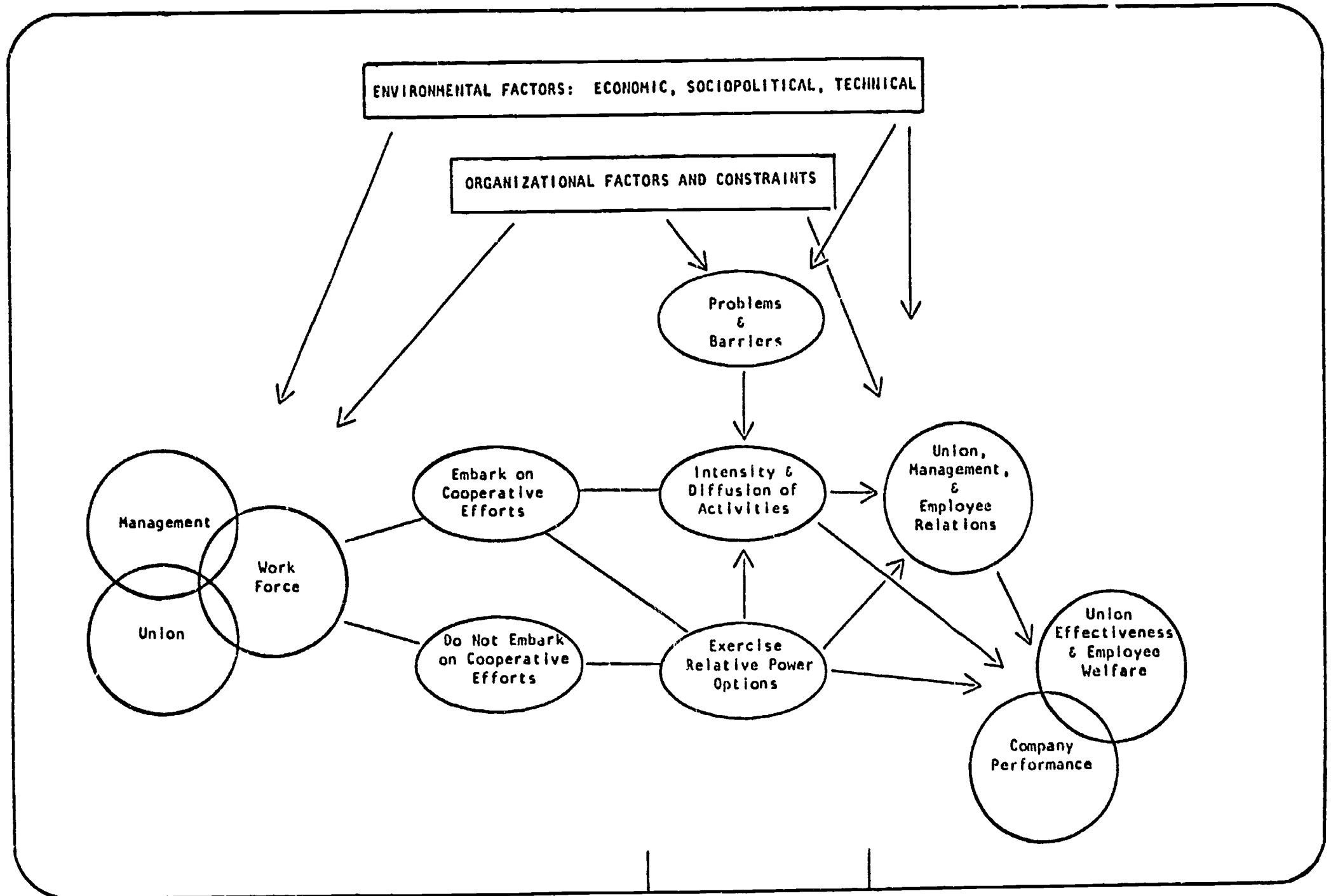
C. Components of Analysis

As illustrated in rudimentary form in Figure 1 above, there are three fundamental components to an analysis of cooperative efforts to solve employment problems. Within Component 1 (Decision and Implementation), we need to examine the decision to embark on cooperative efforts. Here, the parties (managers, employees, and union representatives) weigh the perceived costs and benefits of cooperative efforts vis-a-vis the perceived costs and benefits of maintaining the status quo relationship. In the synthesis and evaluation of the literature, we seek to identify the salient factors affecting these perceived costs and benefits that in turn, induce or impede the establishment of cooperative efforts to solve employment problems.

Within Component 2 (Maturation), we need to identify the salient factors that make for more or less intensive and diffused cooperative efforts. Here we will examine the environmental and organization factors imposed on the parties, the impact of various problems and barriers that undermine cooperative efforts, and the impact of the exercise of relative power options on cooperative activities.

Finally, within Component 3 (Outcomes) the research synthesis and evaluation is designed to assess the impact of cooperative efforts on solving employment problems, in particular, on improving the labor-management relationship and climate, and on enhancing company performance, union effectiveness, and employee welfare.

FIGURE 1



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III. The Decision to Engage In and the Implementation of Cooperative Efforts

In this section, I first examine the type, extent, and recency of formalized cooperative efforts as reported by various survey reports. Second, the literature addressing the factors that induce or impede the establishment of cooperative efforts is summarized. Third, the limited scientific investigation of the factors associated with the establishment of cooperative efforts is examined. Lastly, I summarize what appear to be the salient factors either inducing or impeding the establishment of formalized cooperative activities.

A. Type, Extent, and Recency of Cooperative Activities

Based on several recent surveys, Table 1 summarizes the extent of various types of formalized jointly administered union-management cooperative programs in the private sector. Table 2 provides a comparison of employee relations activities in small to medium sized union and nonunion establishments. The samples are unique (see bottom of tables) and, therefore, the survey responses do not reflect a random sample of all businesses. Nor are responses fully comparable across surveys since each survey instrument is unique. However, these surveys encompass the most extensive efforts to date at documentation of cooperative activities.

Along with several more narrowly focused data collections, these data provide at least a rough approximation of the type and extent of cooperative efforts designed to directly or indirectly resolve employment problems. These additional data collections include the following.

1. BNA report (1986): 1986 sample of bargaining agreements shows that 49% have contractual language covering joint committees on health and safety.
2. Weiss, BNA report (1980): 1980 sample of 152 unionized companies with alcohol assistance programs shows that 19% were jointly administered.
3. Cooke and Meyer (1989): 1986 sample of 120 large unionized manufacturing corporations shows that approximately 51% of unionized plants have established formalized joint team-based or committee-based programs (excluding health and safety).
4. New York Stock Exchange report (1982): 1982 sample of 1158 corporations shows that among companies with 500 or more employees, 44% had established quality circles, 16% had established "production teams," and 25% had established labor-management committees.
5. Kochan, McKersie, Chalykoff (1986): using Freedman's 1983 Conference Board Survey of 409 large companies, Kochan et.al. report that 67% of nonunion and 56% of unionized business units have established programs for which "employees meet in small groups to discuss production and quality."
6. Ichniowski, Delaney, Lewin (1989): 1987 sample of 296 nonunion and 152 unionized business units shows that 44% of nonunion and 49% of unionized business units have established "employee participation initiatives."

The identified surveys lead me to the following key but tentative summary:

- Team-based cooperative efforts have become fairly widespread across companies (but not necessarily within companies) in recent years, with roughly between 40-50 percent of the unionized sector engaged in quality circle, QWL, and other employee involvement activities. These activities appear to be only slightly more widespread in nonunion than in unionized settings. Importantly, however, not all team-based activities in unionized establishments are jointly administered. My best guess is that about 1/2 to 2/3rds are jointly administered.
- Approximately 1/3rd of unionized establishments have some form of union-management committee-based cooperative efforts ongoing. It appears that this form of collaboration reached a saturation point by the late 1970s.
- Jointly administered health and safety programs are the most common form of cooperative efforts in unionized settings, with one of every two establishments engaging in these joint activities. It does not appear, however, that there has been any additional diffusion of these joint efforts since the late 1970s.

TABLE 1

**TYPE AND EXTENT OF JOINT UNION-MANAGEMENT
PROGRAMS AS REPORTED BY VARIOUS SURVEYS
(Year of Survey in Parentheses)**

Type of Activity	Conference Bd (1978)	Voos (1983-84)	Cooke (1986)	Cooke (1988)
Team-Based Programs	---	25%	38%	17%
Quality Circles	---	---	31%	---
QWL/EI	8%	---	19%	---
Work Teams	---	---	18%	---
Committee-Based Programs	---	---	32%	31%
Labor Management Committee	20%	28%	15%	---
Productivity Committees	10%	---	17%	---
Health & Safety Committees	55%	---	48%	40%
Training Committees	16%	---	15%	17%
Substance Abuse Committees	---	---	21%	24%
Gainsharing Program (with employee involvement)	---	13% ^a	7%	1%
Profit Sharing Program (with employee involvement)	---	---	6%	1%
Stock Ownership (with employee involvement)	---	7% ^b	6%	1%
Sample Size	668	343	234	70
Average Company Size	13,860	417	2,280	174
% in Manufacturing	66%	83%	100%	100%

^aVoos (1987) combines gainsharing and profit sharing programs, and includes programs with and without formal employee involvement activities.

^bIncludes programs with and without formal employee involvement activities.

TABLE 2

**SELECTED EMPLOYEE RELATIONS PROGRAMS:
A UNION-NONUNION COMPARISON**

Program	All Establishments		Unionized Establishments	
	% with Program	Nonunion % with Program	% with Program	% with Joint Program
Team-Based	45%	52%	40%	17%
L-M Committee-Based	NA	NA	31%	31%
Health and Safety	67%	63%	71%	40%
Training	75%	70%	80%	17%
Substance Abuse	35%	20%	49%	24%
General Employee Assistance	38%	39%	38%	17%
Profit Sharing	41%	53%	29%	10%
Gainsharing	6%	2%	9%	1%
ESOP	8%	9%	8%	1%
Pay-for-Knowledge/Skill	17%	25%	10%	6%

Sample: Michigan Manufacturing; 70 union and 61 nonunion establishments; average size of establishment is 170 hourly employees. Cooke (1988).

- There appears to have been a very recent up-shot in cooperative efforts to solve substance abuse problems, with approximately 1 out of 5 unionized establishments (small and large) having established jointly administered programs. It also appears that interest in substance abuse programs is considerably more widespread in unionized than in nonunion establishments.
- Jointly administered financial incentives are becoming more widespread. About 20 percent of unionized medium to large establishments have jointly devised and administered profit sharing, gain sharing, and ESCP plans. For the most part, these joint financial incentive plans appear to be tied to employee involvement activities. In smaller manufacturing firms, profit sharing plans appear to be substantially more common in nonunion than in unionized firms.

B. Perceived Costs and Benefits of Joint Programs

There exists a rich literature about the potential costs and benefits of collaboration. This literature, however, is largely testimonial, based on the reported experiences of managers and union leaders involved in a wide range of joint activities. There is, in addition, a fair number of case investigations and some limited survey work to draw upon.

Potential Benefits and Costs to Management: According to the literature there is a wide range of potential benefits to management derived from joint programs. These potential benefits reflect various dimensions of the labor costs component of company competitiveness and, hence, profitability. In general, these potential outcomes effectively (directly or indirectly) reduce the costs of labor in the production process--by making the process more efficient, by increasing output per unit of labor, by reducing the cost of labor per unit of product produced, and by improving quality, customer, and supplier services.

Potential Benefits

- Increased Productivity¹
- Improved Quality of Product or service²
- Improved Customer Service³
- Enhanced Supplier Service⁴
- Reduced Waste and Rework⁵
- Reduced Overhead and Materials Handling Costs⁶
- Reduced Absenteeism, Tardiness, and Turnover⁷
- Reduced Grievance and Disciplinary Action⁸
- Faster Resolution of Problems
- Stronger Identity and Commitment to Company⁹
- Improved Communication (leading to better decision-making and improved labor relations climate)¹⁰
- Increased Organizational Flexibility and Adaptability¹¹
- Improved Relationships Between Supervisors and Employees¹²

Potential Costs

- Added Reorientation and Training Costs for Managers, Employees and Union Leaders¹³
- Perceived Loss of Authority or Status¹⁴
- Displacement or Loss of Jobs for Middle-Management and Supervisors¹⁵
- Wasted Time in Meetings¹⁶

Potential Benefits and Costs to Workers: Unless joint programs offer direct financial rewards, potential benefits to employees are largely intrinsic in nature.

Potential Benefits

- Increased Intrinsic Rewards from the Participation or Involvement Process¹⁷
- Greater Say in How Work Gets Done¹⁸
- Improved Working Conditions¹⁹
- Enhanced Skills/Education
- Heightened Dignity and Self-Esteem²⁰
- Improved Supervisor-Worker Relationships²¹
- Enhanced Financial Rewards from Incentive Arrangements²²
- Reduced Grievances and Quicker Resolution of Problems²³

Potential Costs

- Working Harder (not necessarily working smarter)²⁴
- Eliminating Jobs as a Result of Higher Performance²⁵
- Unwanted Peer Pressure to be Involved or Not Involved
- Unwanted Responsibility and Accountability

Potential Benefits and Costs to Unions: In weighing the potential benefits and costs of joint programs, union leaders estimate the value of joint programs in satisfying the needs and promoting the interests of (a) their constituencies, (b) the union as an institution, and (c) themselves as leaders. The potential benefits and costs to workers described above, therefore, are weighed by union leaders. The potential benefits and costs outlined below, on the other hand, are pertinent to the union as a viable institution and to the leaders whom, we can assume, prefer to benefit rather than be hurt politically from joint activities.

Potential Benefits

- Recognition from Members and Non-Members for Improvements²⁶
- Greater Input into Management Decisions (including greater access to company information and pre-notification of organizational changes)²⁷
- Reduced Day-to-Day Contract Administration Problems²⁸
- Greater Membership Input into Union Policies and Activities²⁹
- Improved Communication (leading to more harmonious interpersonal relations and trust)³⁰

Potential Costs

- Perceived Cooptation by Management³¹
- Heighten Political Conflict over Leadership Role³²
- Loss of Union Influence and Membership Commitment³³
- Increased Uncertainty of Re-election³⁴

Several general comments about the above costs and benefits are warranted. First, costs and benefits can be either extrinsic or intrinsic in nature. Although each party is expected to weigh both extrinsic and intrinsic outcomes, it should be underscored that the parties are typically weighing apples and oranges. Management, for

instance, may be able to weigh (a) the perceived reduction in production costs attributable to increased productivity, improved product quality, and reduction in scrappage against (b) the incurred education and training costs for workers and supervisors (in, say, statistical control techniques, problem-solving, and team work methods). But how does management then compare those extrinsic costs and benefits to the intrinsic costs and benefits associated with, say, perceived loss of status for middle managers and supervisors, or improved communications between and among white collar and blue collar workers? The key point to be made here is that the literature addresses both extrinsic and intrinsic costs and benefits of collaboration, but it is silent in regard to how the parties go about weighing potential intrinsic costs and benefits. In part this is a measurement problem. How does one measure, for example, the benefits of improved communication? In addition, this is a valuation problem. How does one place a cost-benefit value on improved communication which can then be compared to other intrinsic costs and benefits and, moreover, to extrinsic costs and benefits?

Second, a distinction can be made between, what may be called for present purposes, primary and secondary outcome variables. Secondary outcome variables may have value in and of themselves, but they also lead to more tangible primary outcomes. An example may best illustrate this distinction. Improved communication or harmony between managers and employees (secondary outcomes) may be valued outcomes in and of themselves, but they may also lead to other outcomes such as fewer grievances, enhanced job security, or increased productivity (primary

outcomes). The literature on joint programs is again silent on how the perceived costs and benefits of primary outcomes are weighed or stack up against secondary outcomes. In most cases one can imagine that primary outcomes get closer to the "bottom-line" thinking of the parties and, hence, play a more important role in the decision to embark upon and/or maintain cooperative efforts. However, we have much to uncover with respect to what outcomes are primary or secondary in nature, how this distinction may differ between management, workers, and union leaders, and how much weight is given to each type of outcome as the parties go about deciding the fate of collaboration.

Third, some potential outcome variables reflect costs or benefits specific to a given party (e.g., increased employee commitment to the union primarily benefits the union leadership). Other outcome variables reflect costs or benefits to more than one party (e.g., a reduced grievance load saves both management and the union leadership lost time and resources in resolving grievances). Going one step further, what may be viewed as a benefit to one party can alternatively be perceived as a cost for another party. For instance, more rank-and-file autonomy may be viewed as a benefit by work units, but not by supervisors. Finally, the potential magnitude of any cost or benefit is bound to differ across organizations as circumstances differ. Take for illustration, an organization with a very low grievance rate. It has less to gain from reducing grievances through joint program activities than an organization with a very high grievance rate.

In summary, the salient variables identified in the existing literature that appear to be weighed by the parties (a) include both

extrinsic and intrinsic costs and benefits, which make comparisons of importance very difficult (b) represent what may be called primary and secondary outcomes, which may differ across parties and, again, make comparisons of importance very difficult and (c) may reflect costs and benefits specific to one party or shared by other parties, or may reflect costs to one party but benefits to another. Finally, the reader should bear in mind that the potential magnitude of any cost or benefit is bound to differ across employers, work forces, and union leaders.

C. Relative Power Options

Toward maximizing their own utility without collaboration, employers attempt to bolster their relative power, and, when possible increase total utility. Within our theoretical framework, these efforts are concentrated in altering organizational features (via the relative power function) and altering the human and technical capacity of the firm (via the total power function). From the vantage point of unions, pursuit of increases or maintenance of their own utility without collaboration, rests solely with reshaping organizational features (via the relative power function).

From a more practical plane of analysis, we need to examine the salient relative power options. Both the popular and more academic literature identify several key management options: concession bargaining, subcontracting out bargaining unit work, curtailing operations and closing plants, substituting computer-based automation for labor, and deunionizing. Except for improving organizing

activities, union options reflect, for the most part, defensive strategies to the above management options.

Other than in the broadest of terms, the literature has little to say about the estimated costs and benefits of the various relative power options. Assuming, however, that top management is driven to maximize profits for the company as a whole and that middle and lower management has been directed to minimize production and service costs, it follows that management decisions are viewed by managers as providing the greatest net benefit to the company. With regard to reducing labor costs, it is evident that except for concession bargaining, any option selected is not based strictly on reducing labor costs, albeit the reduction of labor costs may be an important if not a primary factor in selecting options.

In examining the perceived costs and benefits of relative power options, several dimensions of the subject are worth underscoring. First, most key options appear to be more aggressively pursued under increasingly competitive, if not adverse, economic circumstances. In theoretical terms, total organizational utility has diminished or is expected to diminish, short of some organizational adjustments. Second, although management may be able to estimate the direct net benefit from a selected option (e.g., the projected net savings in materials handling, inventory, labor costs, etc., from subcontracting), the indirect potential costs of lower employee morale, union-management hostility, and heightened insecurity are not readily ascertainable. One might even surmise that in an existing adversarial union-management relationship, indirect costs associated with relative power options may

have been given little if any consideration. Still, these are costs, which later may become apparent in higher grievance rates, absenteeism and tardiness, and in reduced productivity or product quality. Finally, any net gains or losses from any option differ across employers and unions, and are determined in part by certain controlling or intervening variables (e.g., market conditions).

D. Key Employment Issues Addressed by Cooperative Efforts

In addition to addressing the potential costs and benefits, much of the above referenced literature also reports the key purpose or foci of cooperative efforts. The only cross-sectional survey data I am aware of that asks the parties to report the primary purpose and foci of cooperative activities is Cooke (1989). The responses from 125 large unionized manufacturing plants engaged in joint activities are reported in Table 3.

Using an open-ended format, respondents were asked to describe the key problems that led to and are addressed by their program. The key purposes identified in this open-ended question were then categorized, and up to three purposes were coded for each respondent. Reported in Table 3 are the coded responses. Where responses were vague (e.g., "global competition", "new technology", "changing values of workers", "improved customer services", etc.), the purposes were coded as "Other." Among those facilities identifying team-based efforts as their most important programs, the most widely cited purposes were associated with improving quality of product (49 percent) and productivity (33 percent). Eleven percent or fewer of the respondents with team-based programs

identified any other specific key purposes. Among those facilities identifying committee-based efforts as their most important programs, the most widely cited purposes were improving productivity (37 percent), labor-management relations (29 percent) and product quality (20 percent). Fewer than 10 percent of the respondents with committee-based efforts identified any other specific key purpose.

In summary, the primary purposes of these joint efforts are to enhance organizational performance and improve various dimensions of the labor-management relationship and climate. These survey responses also appear to mirror well the primary problems and objectives reported in the testimonial and case literature. Within this literature, for instance, in his investigation of 33 firms engaged in cooperative efforts, Schuster (1984) reports that 79 percent placed priority on improving productivity and 48 percent placed priority on improving labor-management relations; whereas fewer than 10 percent of the firms placed priority on improving communications, working conditions (QWL), or job security. The one major inconsistency between Schuster's report and Table 3 is that in Schuster's sample only 6 percent of firms placed priority on improving product quality.

E. Factors Influencing Perceived Costs and Benefits

Based on the testimony of parties embarking on cooperative efforts to solve employment problems, it is the unusual unionized company that engages in cooperative efforts without clear evidence or signals that the market place is demanding substantial adjustment in the way business is conducted. Indeed, it appears that only if the company experiences

TABLE 3

TEAM-VERSUS COMMITTEE-BASED PROGRAMS:
KEY PROBLEMS THAT LED TO AND ARE ADDRESSED BY JOINT PROGRAMS*

Key Problems	Team-Based (N=90) %	Committee-Based (N=35) %
Quality of Product	49	20
Productivity	33	37
Cost Related	11	3
Labor-Management Relations	9	29
Absenteeism	8	6
Communications	7	9
Quality of Work Life	6	3
Job Security	6	6
Other	3	14

*Excludes joint programs in health and safety, employee assistance programs, and training activities.

or perceives long-run reduced profitability and the unionized workforce experiences or perceives long-run losses in employment and/or compensation, will the parties begin to explore the potential gains from cooperative activities. Perceptions of long-run market adversity, however, only triggers parties to rethink labor-management relations. Companies may opt for more aggressive relative power strategies, wherein the overriding objective is to become less unionized, if not ultimately a nonunion company. This company strategy of union-avoidance has been richly described in recent case study literature (e.g., see Kochan, McKersie, and Chalykoff, 1986, pp. 488-490; and Kochan, Katz, and McKersie, 1986, pp. 56-62). Given necessary market threats that trigger the rethinking of labor-management strategies, the question then becomes: What factors appear to the parties to lower or raise the costs and benefits of pursuing aggressive union-avoidance strategies vis-a-vis pursuing collaborative strategies?

The only existing empirical investigations of these factors I am aware of are reported by Cooke and Meyer (1989) and Kochan, McKersie, and Chalykoff (1986). Cooke and Meyer develop and test a discrete choice model of grand corporate strategies, wherein executives choose one of three strategies: Union-Avoidance, Collaboration, or a Mixed strategy encompassing both union-avoidance and collaboration. The Mixed strategy is depicted as a less aggressive strategy than either the Union-Avoidance or Collaboration strategies. In the Cooke-Meyer model, the strategy choice is shaped by market conditions and by collective bargaining structure, operational structure, and financial structure. Based on a set of propositions about how these factors influence the

perceived costs and benefits of pursuing one of the three grand strategies, the authors estimate a model of strategy choice using a sample of 59 large manufacturing corporations. The statistically significant results can be summarized as follows:

- The more severe becomes market conditions (depicted by rising import penetration and declining industry employment), the more likely companies choose either the more aggressive Union-Avoidance or Collaboration strategies over the Mixed strategy. On net, the choice is most likely to be the Union-Avoidance strategy.
- The greater the union strength (depicted by percent of company facilities unionized), the more likely companies choose the Collaboration strategy over both the Union-Avoidance and Mixed strategies.
- The lower the labor intensity of production (measured by labor cost/total value ratio and by the average value added per employee) and the smaller the average plant investment (proxied by plant sales), the more likely the Union-Avoidance or Collaboration strategy is chosen over a Mixed strategy; and the more likely the Union-Avoidance strategy is chosen over the Collaboration strategy.
- The greater the number of plants, the more likely companies choose the Mixed strategy, with a larger proportion moving away from choosing the Collaboration strategy than moving away from choosing the Union-Avoidance strategy.
- The higher the cost-to-sales ratio, the more likely companies choose the Collaboration strategy. As the cost-to-sales ratio rises, companies move away from choosing the Mixed strategy but not away from choosing the Union-Avoidance strategy.

In summary, the Cooke-Meyer investigation lends strong support to the general notion that company executives act in a manner consistent with a model of reacting to perceived costs and benefits of cooperative efforts to solve employment problems. The results also indicate that the decision to cooperate on solving employment problems is based on far

more than the extent to which a company is unionized, albeit percent unionized is an important determinant.

In their analysis of the 1983 Conference Board survey of large companies, Kochan, McKersie, and Chalykoff (1986) briefly report on a model of the determinants of the extent of "work place innovations" (see their Table 2, page 493). Although not described in detail in their report, the following factors are statistically significant in their regression estimation:

- When corporate executives have emphasized a union-avoidance strategy, the extent of work place innovations in unionized facilities is lower.
- The more the union(s) participates in work place innovations, the more extensive are these innovations.
- The greater the influence of line executives vis-a-vis industrial relations executives, the more extensive are work place innovations in unionized establishments. (Presumably, line executives are not as frozen in traditional labor relations practices as are industrial relations executives).
- Larger companies engage in more extensive work place innovations.

Just as interesting as the statistically significant estimates, are two insignificant estimates. First, Kochan et al., do not find a statistically significant relationship between "percentage of firm organized" and extent of work place innovations. Second, executive perceptions of "competitive pressures on the firm (foreign and domestic)" are not significantly related to extent of work place innovations. Generally speaking, these latter results are at odds with Cooke and Meyer's results, and as discussed by Kochan et al., (page 494) apparently at odds with their own expectations.

F. Area Labor-Management Committees

In about 110 communities nation-wide, community leaders have established area wide labor-management committees (ALMCS). ALMCs appear to have a fairly general underlying purpose: reduce community-wide adversarial relations between unions and businesses in an effort to improve the overall economic well-being of a community. In large part, the focus of most ALMCs is to keep businesses from failing and attracting new businesses to the community. There are several case reports that suggest these ALMCs can have a substantial impact on the overall economic well being of communities, with the Jamestown experience being widely cited (see Siegal and Weinberg, 1982; Whyte et al., 1983; Cutcher-Gershenfeld, 1984).

ALMCs sometimes engage directly in assisting local businesses and unions in their plant specific cooperative efforts to solve employment problems. Cooke's (1989,c) 1986 survey of plant managers and local union leaders asked respondents to indicate the extent to which their plant worked with ALMCs "in designing and/or implementing cooperative programs." Of the 140 large unionized establishments that had engaged in cooperative activities, 15 percent reported having received "some" assistance from ALMCs, and only 3 percent reported having received "very much" assistance. This latter figure suggests that ALMCs have had little overall nation-wide influence on establishment-level cooperative efforts. However, until more detailed data collection and empirical analysis of ALMCs is forthcoming, any assessment of ALMCs is surely premature.

IV. Intensity and Diffusion of Cooperative Efforts

A. Intensity of Cooperative Efforts

The intensity of cooperative efforts can be viewed as a function of the time, energy, commitment, and quality of input applied to joint activities. Intensity is in part shaped by program structure and in part conditioned by other factors. For example, programs that involve a larger proportion of employees, supervisors, managers and union officers, that schedule meetings more frequently, and provide greater and higher quality training are bound to be more intensive efforts than they would otherwise. Other factors that affect trust, commitment, or enthusiasm for cooperative activities, however, also condition the employees' willingness to volunteer, attend scheduled joint meetings, and give serious attention to identifying and resolving problems. See, for example, Hammer and Stern's (1986) chronology of events that appear to have affected the intensity of cooperative efforts by problem-solving work groups at Rath Packing Company. As will be examined later, the effect of cooperative efforts on solving problems is expected to be determined in large part by the intensity of the cooperative effort. First, however, the purpose of this subsection is to report on various objective parameters that provide a picture of the variation in the intensity of cooperative efforts. More subjective criteria that would help to better describe intensity (e.g., the quality of team-based training, and the quality of the input into problem identification and resolution), however, have not been addressed in the literature and are, hence, not addressable in this synthesis.

The objective criteria examined are: the frequency of team and committee meetings, the extent of formal training and reorientation sessions, the number of team or committee members, and the percent of the bargaining units engaged in cooperative activities. Although the descriptive case literature often describes the above parameters (see e.g., Verma and McKersie, 1987, and Lee, 1987) as they apply to specific cooperative efforts, here I will summarize the limited but more systematic survey data by Cooke (1988) and Cooke (1989,c).

Generally consistent with the case literature reports, teams meet on average, once every two weeks, with the great majority meeting more often than once every month, albeit some meet far less frequently. Committees generally meet half as often as teams; on average once a month but sometimes weekly or as infrequently as once every three months.

With respect to team based efforts in small to medium sized establishments, team members receive anywhere from no formal training to as many as 40 hours of training. On average, team members receive about 12 hours of training. Where training is provided, on average 50 percent of the rank-and-file have received training pertinent to team-based activities. The percent trained, however, ranges from 3 percent to 100 percent.

With respect to the proportion of blue-collar employees who have actively participated in team-based efforts (where, again, such activities exist), it appears that in large unionized facilities only about 20 percent have been involved. In smaller union and nonunion establishments, the comparable figure is about 40 percent.

The average committee size of committee-based efforts is approximately 10 members. Generally, the make-up of these committees is equally divided between management and union representatives. However, union leader representation ranges from a low of 20 percent to a high of 80 percent. Lastly, it is worth noting that about 40 percent of these committees establish short-lived ad hoc teams to investigate and attempt to resolve specific problems identified by the committees.

In summary, the literature indicates that there is considerable variation in the intensity of cooperative efforts. First, this variation in intensity is bound to be most noticeable between committee-based and team-based activities, wherein the team-based cooperative activities generally include a far greater proportion of employees and meet substantially more often. Second, we also must recognize the variation within team-based and committee-based programs as depicted by frequency of meetings, hours of training, percent of employees receiving training, the proportion of the work force actively involved, and the make-up of the committee. Lastly, although hardly addressed in the literature, it seems reasonable to conclude that there is much variation in (a) the type and quality of training and reorientation and (b) the informal problem-solving processes across cooperative efforts that make the identification and resolution of employment problems more or less intensive.

B. Factors Influencing Intensity and the Diffusion of Cooperative Efforts

As diagrammed in Figure 2, the literature addressing the factors that decrease or increase the intensity and diffusion of cooperative efforts are (a) the realization of the potential costs discussed earlier and (b) the exercise of relative power options. As these factors have been reviewed, we turn here to examining the key problems and barriers and discussing how these problems influence the level of intensity and diffusion of cooperative efforts.

Although the existing literature addressing these problems is rich, it is largely testimonial and descriptive. There appear to be no scientific investigations about the causes of these problems or their influence on the intensity and diffusion of cooperative activities. To avoid a lengthy recitation of the many examples of these problems, I will reference the applicable literature and lay out in table form the perceived extent of these problems as reported by Cooke (1989) in his survey of both plant managers and union leaders. The only other pertinent survey responses reported in the literature are found in Kochan, Katz and Mower (1984). I will integrate their findings in my discussion.

Reported in Table 4 are the responses of plant managers (N=110) and local union leaders (N=60) to questions about the extent of problems encountered. Respondents were asked: To what extent have the following problems affected the successful implementation and maintenance of your most important joint program? Respondents were given a choice of four answers: not a problem, somewhat a problem, very much a problem,

FIGURE 2

KEY PROBLEMS AND BARRIERS ARISING FROM COOPERATIVE ACTIVITIES
AND THE FACTORS THAT DETERMINE THESE PROBLEMS

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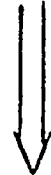
- Costs Incurred**
- Management:**
- High training cost
 - Loss of authority or status
 - Displacement
 - Wasted time in meetings
- Employees:**
- Production speed-ups
 - Displacement
 - Unwanted peer pressure
- Union Leaders:**
- Perceived cooptation
 - Heighten political conflict
 - Loss of influence over and commitment from membership
 - Uncertainty of re-election



- Key Problems**
- Distrust
 - Lack of commitment
 - Inadequate expertise and preparation
 - Disenchantment/Discouragement
 - Juxtaposing adversarial and cooperative activities



- Exercise of Relative Power Options**
- Concession bargaining
 - Subcontracting
 - Transfer of work
 - Technological displacement
 - Continued layoffs
 - Deunionization activities
 - Cooperation activities held hostage
 - Strikes, slow downs and other union disruptions



Intensity and Diffusion of Cooperative Activities

important factor in termination of program. For sake of simplicity, those few responses that the given problem was an "important factor in termination of program" will be included in the table under "very much" a problem.

1. Distrust:

Because distrust between employers and unions often has deep roots, the establishment of joint programs typically only signals that the parties are willing to experiment with joint programs. Existing literature and testimony make it clear that joint efforts reflect fairly uneasy partnerships in joint problem-solving. The widely shared conclusion of the literature and testimony is that sufficient trust must be developed over time, else joint efforts will wane and ultimately be undermined by distrust. (Schuster, 1984, p. 192; Fosow, 1986; Williams and Watts, 1986).

The first four problems identified in Table 4 address issues of trust. First, respondents were asked to what extent is the "lack of sufficient trust between parties" a problem. There appears to be close agreement to the extent of the problem of trust between managers and local union leaders. Only about 15 percent do not find the lack of trust to be a problem, whereas about 50 percent find it to be somewhat a problem, and roughly 35 percent find it to be very much a problem.

Several trust-related questions were asked only in the survey of local union leaders. The first question asked the extent to which "violation of trust by either party" is a problem. About 45 percent find it to be somewhat of a problem and another 25 percent find it to be

very much a problem. The second question asked the extent to which "perceived manipulation of program (or bonus formula) by management" was a problem. Here, about 35 percent find perceived manipulation to be somewhat of a problem and 25 percent find it to be very much a problem.

The literature indicates that union leaders often fear that collaboration with management will be perceived by union members as a form of cooptation. That is, union leaders want their members to trust them. To address this dimension of trust, union leaders were asked the extent to which "perceptions by workers that the union leadership has been coopted by management" was a problem. Over 65 percent report that perceptions of cooptation are somewhat of a problem, but only 7 percent find it to be very much of a problem.

2. Commitment:

Sufficient commitment by all parties to cooperative efforts is an essential ingredient to any long-run success. (Schuster, 1984, pp. 199-200; Cutcher-Gershenfeld, 1988; Wintergreen, 1986). The stronger the commitment, the more intensified and diffused these cooperative activities are likely to become. Furthermore, trust and commitment appear to be inextricably intertwined. Without sufficient trust, commitment is hard to attain; and without sufficient commitment, high levels of trust are unobtainable.

Table 4 reports management and union leader responses to questions that asked the extent to which "lack of commitment by upper management," "lack of broad commitment among plant managers," and "lack of broad commitment by union leaders" were problems.

TABLE 4
EXTENT OF KEY PROBLEMS ENCOUNTERED IN COOPERATIVE ACTIVITIES

Problem	Not a Problem		Somewhat a Problem		Very Much a Problem	
	Mgmt	Union	Mgmt	Union	Mgmt	Union
Lack of Trust	17%	12%	46%	52%	37%	36%
Trust Violated	---	29%	---	40%	---	26%
Management Manipulation	---	44%	---	35%	---	25%
Perceived Cooptation	---	26%	---	67%	---	7%
Upper Management Commitment	36%	41%	34%	21%	30%	39%
Plant Management Commitment	38%	25%	45%	39%	17%	37%
Union Leader Commitment	22%	51%	51%	36%	27%	14%
Lack of Experience/Expertise	41%	31%	50%	44%	9%	25%
Plant Management Preparation	34%	21%	41%	33%	25%	46%
Workforce Training/ Orientation	37%	25%	44%	49%	19%	26%
Insufficient Job Security	---	22%	---	38%	---	40%
Expected Gains Not Gotten	---	21%	---	50%	---	29%
Worker Skepticism/Lack of Interest	---	15%	---	53%	---	32%
Balancing Negotiations & Cooperation	37%	39%	42%	42%	21%	19%
Balancing Contract Administration & Cooperation	33%	41%	48%	47%	19%	12%

First, a majority of both plant managers and local union leaders find that the lack of upper management commitment to joint programs is a problem. Indeed, just under one-third of managers and just over one-third of union leaders perceive the lack of upper management commitment to be very much a problem. With regard to plant level management commitment, there is substantial disparity between management perceptions and union leader perceptions. In particular, note that only 17 percent of managers perceive that the lack of broad commitment among plant managers is very much a problem. In sharp contrast, 37 percent of union leaders perceive plant management commitment to be very problematic.

These perceptions of commitment are reversed when the parties are asked about the lack of broad union leader commitment. Nearly 80 percent of managers report union leader commitment to joint programs as a problem, whereas only 50 percent of union leaders report union leader commitment as a problem. Although, overall, local union leader commitment seems to be less of a serious problem than broad plant management commitment, 27 percent of managers find union leader commitment to be very much of a problem, and 14 percent of local union leaders report union commitment to be very much a problem.

In their survey of approximately 140 union representatives, Kochan, Katz, and Mower (1984), ask the extent to which "loss of union support" and "loss of plant management support" limit the expansion of the participation process. They report (see their Table 5-3, p. 147) that 43 percent of the respondents do not perceive loss of plant management support as a problem. About 37 percent perceive it to be

somewhat of a problem and 20 percent perceive it to be "quite a bit" or "a very great deal" of a problem. With respect to loss of union support, roughly 55 percent of the respondents report it to not be a problem, 37 percent report it to be somewhat of a problem, and about 20 percent report it to be a much more serious problem.

Although the questions asked by Kochan, Katz, and Mower differ from those asked by Cooke, there appears to be some general consensus between samples regarding "loss of union support" and "union leader commitment." In contrast, however, a much larger percentage of union respondents in Cooke's sample perceive the lack of plant management commitment as a substantial problem than do union respondents in Kochan, Katz, and Mower's sample.

3. Inadequate Expertise and Preparation:

As discussed, the intensity of orientation and training is wide ranging; ranging from what appears to be only a few hours of preparation to many hours of very extensive team-work training and leadership preparation. It is often reported that the parties find themselves ill-prepared in shifting to new management styles, employee involvement, and harmonious union-management relations. In short, the lack of experience and expertise can be a barrier for many parties, and inadequate training of employees in problem identification and resolution appears to be a significant roadblock for teams and committees to get beyond the more obvious problems and resolutions. (Rosow, 1986; Schuster, 1984, pp. 116, 200).

To address this issue, both plant managers and local union leaders were asked several questions about the extent to which inadequate expertise and preparation are problems in the successful implementation and maintenance of joint programs. Reported in Table 4 are the responses to these questions. The first set of responses pertain to "lack of experience or expertise in devising and implementing joint programs." As reported, the majority of both managers and union leaders report that the lack of experience or expertise has presented at least modest problems. Union leaders appear to find that lack of experience or expertise is more often a serious problem than do managers, with 25 percent of union leaders but only 9 percent of managers reporting this to be very much a problem.

The second set of responses pertain to "lack of adequate preparation of plant management for change." Again, the majority of both managers and union leaders find this to be at least a modest problem. However, a far greater proportion of union leaders see lack of plant management preparation as very much a problem than do plant managers, 46 percent and 25 percent, respectively.

The final set of responses pertains to "lack of adequate orientation and training for bargaining unit employees for change." Once again, a majority of both union leaders and managers see this to be a problem. At the extreme, approximately one-fifth of managers and one-fourth of unions leaders perceive the lack of adequate orientation and training for employees to be very much a problem.

4. Workforce Disenchantment and Discouragement:

Over time, enthusiasm for innovative joint activities is known to wane and under severe market conditions, the intensity of effort appears to decline. (Camens, 1986; Cutcher-Gershenfeld, 1988; Williams and Watts, 1986). In the survey to local unions, leaders were asked several questions about the extent to which demoralizing outcomes were problematic for the successful maintenance of joint activities. In the first question, union leaders were asked the extent to which "expected gains from programs not gotten" were a problem. As reported in Table 4, approximately 80 percent respond that not attaining expected gains was a problem. Nearly 30 percent report this factor to be very much a problem.

Secondly, nearly 80 percent of the respondents find that "insufficient job security" is problematic. Indeed 40 percent report that employment insecurity to be very much a problem. Lastly, it appears that "skepticism or lack of interest" by employees is perceived by local union leaders as highly problematic. As reported, 85 percent perceive it be a problem, with nearly one-third reporting it to be very much a problem.

Kochan, Katz, and Mower's (1984) survey of union representatives lends further support to the findings reported in Table 4. They report that over 60 percent of union respondents perceive that "worker disenchantment" is somewhat of a problem, and nearly 35 percent perceive disenchantment as "quite a bit" or "a very great deal" of a problem. Only 4 percent respond that disenchantment among workers is not a problem. In a second related question, Kochan, Katz, and Mower report

that 27 percent of the union respondents find "layoffs or other employment cutbacks" to be somewhat of a problem, whereas 53 percent find it to be a more serious problem limiting the expansion of cooperative activities. These data parallel fairly closely similar responses reported in Table 4.

5. Juxtaposing Cooperation and Collective Bargaining:

A fundamental thesis underlying our analysis of cooperative activities is that the successful implementation, maintenance, and expansion of joint activities requires that the parties find ways to juxtapose collaboration and more traditional collective bargaining. The multitude of problems that arise in attempting to mix and balance these two distinct processes has very recently been described in the literature. (Bluestone, 1986; Wever, 1988; Hammer and Stern, 1986; Smaby et al., 1988). Reported in Table 4 are responses to two questions which asked the parties the extent to which they have had difficulty "juxtaposing cooperation" or "balancing joint activities" with contract negotiations and contract administration. As reported, the majority of managers and union leaders find that juxtaposing joint activities with contract negotiations and administration presents problems. About 20 percent of all respondents report juxtaposing collaboration and contract negotiations as very much a problem. Likewise, about 20 percent of managers find juxtaposing collaboration and day-to-day contract administration very much a problem; but only 12 percent of union leaders report this to be very much a problem.

V. Outcomes of Cooperative Efforts to Solve Employment Problems

Discussed in Section III,B were the potential costs and benefits (i.e., outcomes) of cooperative efforts. The largely case literature cited provides observation and testimony addressing either actual or perceived outcomes. This case and testimonial literature, however, is based only on the observation of the author(s) as to what appears to have occurred. However, cooperative efforts do not occur in isolation of other key factors. It would be naive to think that one can infer which factors determine selected outcomes. Except for the studies reviewed next, the literature is generally void of scientific investigations testing the effect of cooperative efforts on the various outcomes. This is not to say that case reports are not valuable in understanding cooperative efforts to solve employment problems. Indeed they provide a rich set of potential general propositions and specific hypotheses for attempting to develop meaningful theories and testable models. Moreover, as Mark Twain once said, "there is nothing harder to put up with than a good example." This poignant statement may be especially pertinent to a scientific community. Nevertheless, nearly all the cases fall seriously short of fundamental canons of scientific inquiry, as that inquiry applies to uncovering cause-effect relationships; an understanding that is the heart of serious scientific inquiry. Furthermore, parties involved in cooperative efforts are desperately seeking to understand the salient cause-effect relations that impede and improve the success of their cooperative efforts. This interest has become less of a question about whether cooperative efforts

pay off and more of a question of why some are clearly successful while others are not. Hence, we turn to a synthesis and critique of the more scientifically based investigations.

The scientifically grounded studies of interest fall within two broad methodologies: those that are largely intervention or quasi-experimental in design and those employing a probabilistic statistical methodology. Among the former is Schuster's interrupted time-series studies. Schuster (1983) reports on his study of nine unionized manufacturing sites, in which he examined productivity and employment trends prior to formal implementation of gainsharing and joint labor-management committees. In 6 of 8 establishments, Schuster finds statistically significant increases in productivity and in 8 of 9 establishments no statistically significant changes in employment.

The handful of published and recently completed but yet unpublished reports (that I have knowledge of) are presented in abbreviated form in Table 5. In all investigations the authors engaged in some form of original data collection, with an eye to statistical modeling and estimation of the effect of selected independent (supposedly exogenous) variables on selected outcomes. The observations were either plant-level or company-wide observations. In the three articles by Katz and his co-authors, the data are from UAW represented plants in one domestic auto company. Voos's sample is drawn from Wisconsin companies, and the remaining studies use nation-wide samples.

The dependent variables were performance related or labor-management relations outcomes. These outcomes were either direct measures of performance or perceived changes in selected outcomes. With

TABLE 5
SUMMARY OF NON-EXPERIMENTAL PROBABILISTIC STUDIES

Author(s)/ Publication	Sample	Dependent Variable(s)	Independent Variables	Key Statistical Findings
A. Analysis of Plant Level Outcomes				
1. Katz, Kochan, Gobeille <u>Industrial & Labor Relations Review</u> , 1983	18 GM plants pooled over 1970-1979	<ul style="list-style-type: none"> • Product quality index • Direct labor-efficiency index 	<ul style="list-style-type: none"> • QWL ratings • overtime • total hours • absenteeism • grievance-rate 	<ul style="list-style-type: none"> • more extensive QWL activities improve quality but not efficiency
2. Katz, Kochan, Weher <u>Acad. of Man. Journal</u> , 1985	1 auto company, 25 plants pooled over 1978-1980	<ul style="list-style-type: none"> • Product quality index • Direct labor-efficiency index 	<ul style="list-style-type: none"> • % QWL involvement • suggestion program participation • absenteeism • grievance rate • discipline rate • size • inmanagement attitudes 	<ul style="list-style-type: none"> • greater QWL involvement has no effect on efficiency and a negative effect on quality • greater participation in suggestion program has positive effect on quality and no effect on efficiency
3. Katz, Kochan, Keefe <u>Brookings Papers on Economic Activity</u> , 1987	1 auto company, 53 plants, pooling 1979 and 1986 data	<ul style="list-style-type: none"> • No. of supervisors per production worker • Labor hours in production • Product quality index 	<ul style="list-style-type: none"> • composite index of team-related activity • composite indices of worker/union participation in group decisions and in technology decisions • composite index of managerial discretion • absenteeism • grievance rate • relative wages • unemployment rate • controls for type of production and start-up phase 	<ul style="list-style-type: none"> • extent of team related activities increases labor hours, and has no effect on number of supervisors and quality • worker/union participation in group decisions has no effect on any outcome • worker/union participation in technology decisions has inconsistent effects on number of supervisors and quality; and generally positive effects on reducing hours of labor • greater managerial discretion reduces labor hours, number of supervisors; has no effect on quality
4. Voos, <u>Industrial & Labor Relations Review</u> , 1987	343 unionized companies in Wisconsin, 1984	<ul style="list-style-type: none"> • Managerial perceptions of program effect on: <ul style="list-style-type: none"> • quality • productivity • labor costs • profits 	<ul style="list-style-type: none"> • gain sharing/profit sharing • ESOP • employee involvement • general and specific joint plant committees • 28 organizational controls (results not reported) 	<ul style="list-style-type: none"> • all programs perceived as having positive impact on nearly all performance outcomes. Gain sharing/profit sharing and EI programs have greatest effect

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TABLE 5 (continued)

SUMMARY OF NON-EXPERIMENTAL PROBABILISTIC STUDIES

Author(s)/ Publication	Sample	Dependent Variable(s)	Independent Variables	Key Statistical Findings
A. Analysis of Plant Level Outcomes				
5. Voos, <u>Journal of Labor Research</u> , in press, 1989	343 unionized companies in Wisconsin, 1984	Managerial perceptions of program effect on: <ul style="list-style-type: none"> • union-management relations • grievance rates • ability to resolve grievances informally • flexibility • absenteeism • turnover 	<ul style="list-style-type: none"> • same independent variables as Voos (1987) above 	<ul style="list-style-type: none"> • all efforts have positive effect on changes in flexibility, absenteeism, and turnover • only general plant committees have consistent positive effects on union-management relations, grievance rates, and ability to resolve grievances informally • profit sharing + ESOP programs have negative effects on union-management relations
6. Cooke, <u>Industrial Relations</u> (1989)	87 large unionized manufacturing plants with joint programs, nation-wide, 1986	<ul style="list-style-type: none"> • Managerial perceptions of changes in quality and productivity since joint programs began 	<ul style="list-style-type: none"> • active v. less active team-based joint programs • joint committee-based programs • union leader participation on steering committee • program duration • capital displacement, subcontracting, concession bargaining • % union representation • layoff experience • size, average years experience, and % female as controls 	<ul style="list-style-type: none"> • highly active team-based programs lead to greater improvements; less active teams do not • committee-based programs as effective as active teams • greater % unionized and greater union leader participation lead to greater improvements • program success begins to drop after 4 years • capital displacement improves productivity • subcontracting and continued layoffs impede improvements
7. Cooke, unpublished, 1989	95 large unionized manufacturing plants with joint programs, nation-wide, 1986	<ul style="list-style-type: none"> • Managerial perceptions of changes in adversarial supervisor-employee relations since joint programs began 	<ul style="list-style-type: none"> • same variables as Cooke above, except no control for % female 	<ul style="list-style-type: none"> • more active teams improve relations, but less active teams and committees do not affect relations • greater union leader participation improves relations, but % unionized has no effect • program effect begins to drop after 3 years • subcontracting reduces success, but concession bargaining and technological displacement have no effect • relations improve more under severe decline and substantial increase in plant employment

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TABLE 5 (continued)

SUMMARY OF NON-EXPERIMENTAL PROBABILISTIC STUDIES

Author(s)/ Publication	Sample	Dependent Variable(s)	Independent Variables	Key Statistical Findings
Analysis of Corporate Financial Outcomes				
8. Delaney, Ichniowski, and Lewin, Proceedings of Industrial Relations Research Assoc., 1988	178 business units, nation-wide, 1986	• Return on assets (ROA) in 1986	<ul style="list-style-type: none"> • any EI programs • high/low authority for EI groups • totally unionized, double breasted, or non-union business unit • interaction terms for EI, authority, and union status • 6 industry-wide controls (education, experience, gender, race, concentration ratio, durable goods) 	<ul style="list-style-type: none"> • EI programs with high or low authority have no effect on ROA • totally union companies with high authority EI programs reduce ROA
9. Meyer and Cooke, unpublished, 1989	56 unionized manufacturing corporations, 1986	<ul style="list-style-type: none"> • Change in return-on-sales (ROS); 1986-1975 • Change in added value per employee (Δ value); 1986-1975 	<ul style="list-style-type: none"> • percent of unionized plants with joint programs • extent of non-union facilities opened since 1975 • extent of unionized facilities closed since 1975 • change in number of plants and employees since 1975 • decertification of unions • controls for changes in industry import penetration and industry shipments 	<ul style="list-style-type: none"> • companies with > 50% of plants with joint programs increases both ROS and Δ value • more non-union facilities opened increases ROS • more union facilities closed reduces ROS • decertification of unions reduces both ROS and Δ value • greater import penetration reduces ROS, whereas growth in industry shipments increases both ROS and Δ value

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respect to the independent variables, there is little direct comparability between studies, except authors employ similar models across their own investigations. With respect to the overall effects of cooperative efforts on performance and labor-management relations, the statistically significant findings are mixed.

Katz et al. generally find no statistically significant support for the inference that cooperative efforts have, on average, positive effects on quality or efficiency. Delaney et al. come to the same conclusion about cooperative efforts as they effect return-on-assets. Voos, on the other hand generally finds that all plant-level cooperative efforts have positive effects on nearly all performance and labor-management relations outcomes. Cooke finds statistical evidence that depending on various factors, joint efforts have greater or lesser effect on quality, productivity, and supervisor-employee relations. In particular, more positive outcomes are realized with teams are more active, there is greater union leader participation, the cooperative effort is in its first 3 - 4 years of activity, when there is no or little employment loss, when management does not engage in subcontracting, when the work force is not highly senior, and in smaller establishments. Finally Meyer and Cooke find statistical support for concluding that extensive joint activity has positive effects on return-on-sales and changes in added-value-per-employee. These financial returns to cooperative efforts are further enhanced when corporations avoid the decertification of local unions and the closing of unionized plants (unless in this latter case, the closing of

unionized facilities is coupled with the opening of sites that become unionized).

Clearly there are a number of problems underlying these studies that limits our confidence about generalization of any findings. In all studies the authors face measurement problems, raising a host of questions about measurement validity. However, obtaining the kind of sensitive and highly guarded data invariably preferred by the research community is a dilemma yet resolved. Second, as none of the final data bases reflect a random selection of cooperative efforts (and in turn reflect a random treatment), each potentially suffers from selection bias. Given that there are likely to be important factors that (a) induce parties to engage (or keep them from engaging) in cooperative efforts and (b) determine the intensity of cooperative efforts, this potential selection bias may not be minor.

Third, the most serious limitation, in my judgement, centers around omitted variable biases. Here, except for Cooke and Meyer and Cooke, none of the authors seem to even attempt to build a sufficiently complete model of changes in performance and labor-management relations. Instead, the authors have formulated a few key hypotheses and estimated statistical association without controlling for the many potentially confounding variables. Voos may be an exception as she controls for numerous variables, although no theoretical justification for the variables included is presented. Potential omitted variable bias is especially high in any analysis of cooperative efforts since nearly all efforts appear to be accompanied by one or more of the following: substantial changes in competition and market conditions, the exercise

of various relative power options (such as technological displacement, subcontracting and concession bargaining), internal union dissension about cooperative efforts, and significant organizational change within given establishments and in parent organizations.

To date, the scientific empirically based literature has not addressed the cause-effect relations between cooperative efforts and union leader and membership outcomes. Some preliminary responses from local union leaders and activists who have been involved in cooperative efforts at the plant level, however, provide some limited comparable responses among union leaders across manufacturing establishments. For illustration, I have drawn selectively from Kochan, Katz, and Mowers' 1982 survey of union leaders in the auto industry and Cooke's 1986 nation-wide survey of local union leaders. Among the outcomes reported in Table 6, those for which union leaders perceive cooperative efforts are yielding the greatest improvements are:

- job satisfaction
- work conditions/safety and health
- ability of union representatives to resolve member problems/grievances
- information shared by management
- member-committeemen relations

However, it appears that there is also a relatively high likelihood (20 percent) that member-committeemen relations can sour.

Among outcomes for which many union leaders perceive cooperative efforts are having negative effects are:

- job security
- member commitment to and identification with the union

Finally, it is worth noting that although 70 percent of the respondents in Cooke's survey report management has shared greater pertinent

information about business conditions, only 24 percent report they have had greater input into business decisions.

Overall it appears that union leaders and members are able under some circumstances to obtain desired outcomes from cooperative efforts, yet many have not; turning potential benefits into perceived costs. Key to our future research agenda is a rigorous examination of the factors that explain these differences.

Summary: Although this and any overly brief summary and critique of the literature examining the effect of cooperative efforts to solve employment problem is, on one hand, an injustice to the various authors' endeavors to uncover key cause-effect relations, on the other hand it is clear that we have only begun to rigorously address this critical activity. At best we have barely scratched the surface toward understanding the complex cause-effect relations underlying cooperative activities and their outcomes. With this caveat in mind, let me summarize what we have learned from the more scientifically based literature by making the following tentative conclusions.

1. Cooperative efforts, on average, have had modest but important effects on resolving employment problems associated with productivity, quality, and labor-management relations. Some efforts have been enormous successes along these lines, yet others have had little or no effect, and some cooperative efforts have had negative "back fire" effects.
2. A certain level of intensity in cooperative activities is required before positive effects on performance and labor relations are realized. Those efforts that provide sufficient reorientation and training, schedule problem identification and resolution meetings frequently, encompass a sufficiently large proportion of employees, and in which the union leadership is relatively secure and actively involved in cooperative activities have rewarding outcomes. Most cooperative efforts to date have failed to satisfy these key ingredients.

TABLE 6

EFFECT OF JOINT ACTIVITIES ON LOCAL UNION LEADER/MEMBER OUTCOMES

Outcome*	Cooke (1986, N=65)			Kochan, Katz, Mower (1982, N=110)		
	Better	Same	Worse	Better	Same	Worse
1. Job satisfaction (and morale)	41%	51%	8%	72%	13%	15%
2. Work conditions (safety and health)	45%	47%	8%	55%	39%	6%
3. Job security	30%	45%	26%	39%	36%	25%
4. Ability to resolve members problems (grievances)	43%	43%	14%	64%	26%	10%
5. Member commitment to (identification with) union	33%	49%	18%	37%	40%	23%
6. Member-committeemen relations	NA	NA	NA	46%	24%	20%
7. Information shared by management	70%	28%	2%	NA	NA	NA
8. Union input into business decisions	24%	72%	4%	NA	NA	NA

Taken from Kochan, Katz, Mower (1984), Chapter 5, and Cooke (forthcoming), Chapter 4.

*Questions asked are for the most part very similar between the two surveys (with respect to selected outcomes reported here). Outcomes in parentheses depict Kochan et al.'s question to local union officers and activists in the auto industry. Kochan et al.'s survey responses were originally coded as very positive effect, somewhat positive effect, no effect, somewhat negative effect, and very negative effect. Cooke's survey responses were originally coded much higher, modestly higher, about the same, modestly lower and much lower.

3. The exercise of relative power options occur simultaneously with and/or sequentially to cooperative efforts. Where the parties cannot juxtapose (or resolve the inherent dilemmas underlying) their relative power and collaborative power activities, the effect of cooperative efforts is diminished. In particular, subcontracting away bargaining unit work and aggressive anti-union activities within the company (such as closure of unionized facilities and decertifications) severely diminishes the intensity of cooperative efforts and generally worsens overall company performance.
4. In general, the positive effects of cooperative efforts begin to diminish after only a few years.

VI. Policy Implications and Recommendations

A. General Policy Implications

I begin by highlighting general implications for government involvement and/or assistance to the private parties. Subsequently, limited policy recommendations are provided. To identify the key policy implications, I draw on the theoretical framework presented in Section II, and recapitulate pertinent conclusions from each component of the analytical framework.

As discussed in Section III, roughly one-half of the larger unionized manufacturing facilities nation-wide have embarked on cooperative efforts; efforts aimed primarily at improving company performance and labor-management relations. An examination of corporate strategies strongly suggests that the fundamental decision to collaborate (or not) has already been made. Hence, it is doubtful that we will see any substantial increases in the extent of cooperative efforts across larger organizations. One policy implication, therefore, is not to target government policies or assistance toward these larger

organizations. If per chance, these corporations decide that aggressive adversarial union-avoidance or deunionization strategies reduce their long-run competitiveness, they have sufficient knowledge and resources to construct and implement collaborative strategies.

Our limited knowledge suggests there is still sufficient room for government assistance (and perhaps demand for assistance) to make a difference in the diffusion of cooperative activities across smaller organizations. Make a difference, that is, in assisting these smaller organizations in their decision to engage in cooperative efforts and, if so decided by the private parties, assist them in the initial implementation of cooperative efforts.

As discussed in Sections IV and V, few cooperative efforts at the establishment level enlists or encompass a majority of employees. On one hand, the apparent slow diffusion of cooperative efforts within facilities can be expected and is probably healthy since the parties are adapting to substantial organizational change. On the other hand, however, serious problems and barriers (e.g., lack of sufficient trust and commitment) are encountered, which can severely limit if not undermine these cooperative efforts. In addition, it appears that efforts of limited intensity have little or no effects on improving performance, labor-management relations, and other sought-after gains. Also bear in mind that historically the few instances of labor-management cooperation have been short-lived (see Jacoby, 1983, and Hammer and Stern, 1986). As emphasized in the theoretical framework presented, herein, I am convinced that the key to the success and longevity of cooperative efforts is finding mechanisms or processes by

which the parties can juxtapose relative power activities and cooperative activities. The recent history of Eastern Airlines and its unions dramatically underscores this central theme. I think there is good reason to believe, therefore, that if the current widespread experimentation with cooperative efforts is to be institutionalized (Kochan and Cutcher-Gershenfeld, 1988), the parties must find ways to resolve the inherent problems, and in turn, intensify and expand their cooperative efforts (at least to that point where the net return to cooperative efforts are maximized). The overriding policy implication, consequently, is that any government assistance should be focused on helping private parties make the transition from experimentation to institutionalization of cooperative efforts to solve employment problems.

B. Policy Recommendations

I have limited my policy recommendations to government provision of information, education, and modest support for consultative services. It seems reasonable to conclude that successful cooperative efforts to solve employment problems must be based on a voluntary recognition by the parties that the net benefit derivable from such activities is greater than the net benefit derivable from strictly relative power adversarial relationships. Any kind of government mandate for cooperative activities or forced participation I do not believe are workable in our democratic capitalistic system. Nor can I imagine that Congress would embrace any such notions of government intervention. In addition, I have ruled out any kind of tax policies that would act as

incentives for the parties to cooperate. The competitive market place is sufficient incentive. As I have not been asked to comment on existing labor laws, I make one general recommendation pertinent to the limited scope of this report. It is imperative that the true intent of the National Labor Relations Act be vigorously upheld and applied, especially as it applies to the guiding principles of the duty to bargain in good faith, union organizing, and decertification of unions. As global and domestic non-union competition have placed enormous demands and unforgiving pressures on unionized companies to become competitive, many companies have chosen highly aggressive union-avoidance and deunionization strategies. It seems plausible to conclude that a lax interpretation and/or enforcement of pertinent labor law increases the likelihood of union-management conflict and reduces the likelihood that cooperative efforts to solve employment problems will be embraced by American businesses.

The synthesis of the literature points to one overriding conclusion. Our knowledge is severely limited and for the most part of superficial benefit to the parties seeking to maintain and expand cooperative efforts. My first recommendation, therefore, is that the Department of Labor commit resources for in-depth and rigorous scientific investigations. A \$500,000 annual allocation of competitive funding to support scientifically rigorous investigations over the next three to four years would yield enormous benefit to the parties. Furthermore, the Bureau of Labor-Management Relations and Cooperative Programs should likewise allocate their limited research monies to rigorous scientific investigations instead of funding additional case

reports. It is my opinion (albeit not necessarily that of others) that those case studies have effectively fulfilled their original purpose and currently are not adding sufficiently to our understanding of key underlying cause-effect relations; an understanding critical to the practicing world. These investigations should focus on the full scope of issues addressed herein, involve researchers from a variety of scientific disciplines and fields of study, and should encompass the full range of research methodologies (ranging from experimental, to intervention studies with naturally occurring experiments, and non-experimental probabilistic analyses of survey data).

To insure that projects of the highest scientific standards are funded, single-blind reviews of proposals in the spirit of NSF funding procedures should be established. That is, reviewers of proposals would provide their critical assessment of the scientific merits of proposals and provide constructive comment on proposals recommended for funding. Bureau staff would weigh these assessments against their own assessment of the proposal, the proposed funding levels, and the credentials of investigators.

My second fundamental recommendation calls for a centralized coordination of the dissemination of this body of knowledge. This dissemination would be provided through three outlets.

1. The Bureau (BLMR) would provide edited reports, highlighting the key findings and implications in a practical and meaningful way and where applicable, identifying the parties reflected in the research. These reports would be substituted for the current BLMR case descriptions.
2. A nation-wide consortium--like program offering 2-3 day seminars to the public would be established. Host colleges, universities, and other not-for-profit organizations would disseminate the new body of knowledge through workshop settings. These workshops

would be financially self-supporting. The Bureau would provide leadership and assistance in coordinating and publicizing these offerings.

3. More effective use of ALMCs and the FMCS should be fashioned. The personnel in these existing networks would share and disseminate the new body of knowledge as they provide consultative services.

In closing, obviously only an outline of recommendations has been prescribed. The details of these recommendations can be devised later. In any case, however, the synthesis and critique of our current working knowledge hopefully provides impetus to go to the next and more critical stage of understanding the complexity of cooperative efforts to solve employment problems.

NOTES

- ¹See Voos (1986); Schuster (1984, ch. 6); Cohen-Rosenthal and Burton (1987, pp. 32-33); Rosenberg and Rosenstein (1986); Continio (1986); Boyle (1986); Douty (1975); Pearlstein (1988); Cooke (1989a).
- ²See Camens (1986); Voos (1986); Boyle (1986); Katz, Kochan, and Gobeille (1983); Katz Kochan, and Weber (1985); Smith (1986); Cooke (1989a).
- ³See McIntosh (1988).
- ⁴See Roadley (1988); Cutcher-Gershenfeld (1988).
- ⁵See Boylston (1986); Katz, Kochan, and Gobeille (1983); Camens (1986).
- ⁶See Dulworth (1985); Lazes and Costanza (1984).
- ⁷See Guest (1979); Goodman (1980); Lawler, Ledford and Seashore (1984, p. 110); Goodman and Lawler (1979); Siegel and Weinberg (1982).
- ⁸See Guest (1979); Watts (1982); U.S. Department of Labor (1982); Smith (1988).
- ⁹See Boyle (1986); Goodman (1980); U.S. Department of Labor (1982); Walton (1985); Verma and McKersie (1987).
- ¹⁰See Driscoll (1979); Boyle (1986); Siegel and Weinberg (1982); U.S. Department of Labor (1982 and 1983); Smith (1988).
- ¹¹See Cohen-Rosenthal and Burton (1987, p. 31); U.S. Department of Labor (1982 and 1983); Lawler and Drexler (1978).
- ¹²See Fuller (1981); Boyle (1986); Burck (1981a); Kochan, Katz and Mower (1984, pp. 134-138); Cooke (1986b).
- ¹³See Jick, McKersie, and Greenblugh (1982); Lawler and Drexler (1978); Siegel and Weinberg (1982); U.S. Department of Labor (1982); Lee (1987).

- ¹⁴See Lawler and Drexler (1978); Guest (1979); Schlesinger and Walton (1977); Shrank (1978); Rosow (1979); Jacoby (1983); Siegel and Weinberg (1982); Rosow (1986).
- ¹⁵See Schlesinger and Walton (1977); Simmons and Mares (1985, ch. 13).
- ¹⁶See Cutcher-Gershenfeld (1988).
- ¹⁷See Guest (1979); Goodman (1980); Work in America Institute, Inc. (1982, ch. 3); Parker (1985, ch. 2).
- ¹⁸See Kochan, Katz and Mower (1984, ch. 4).
- ¹⁹See U.S. Department of Labor (1983); Ruttenberg (1988).
- ²⁰See U.S. Department of Labor (1983); Work in America Institute, Inc. (1982, ch. 3); McIntosh (1988).
- ²¹See Burck (1981); Fuller (1981); Boyle (1986); Kochan, Katz, and Mower (1984, pp. 134-138); Cooke (1989b).
- ²²See Schuster (1984, ch. 6); Cummings and Molloy (1977, ch. 21, 22); Dulwoith (1985); Pearlstein (1988); Ross and Ross (1986).
- ²³See Burck (1981a); Kochan, Katz, and Mower (1984, pp. 134-138); Smith (1988).
- ²⁴See Oswald (1986); Simmons and Mares (1985, ch. 14).
- ²⁵See Zager (1977); Schuster (1984, ch. 6); Simmons and Mares (1985, ch. 14); Work in America Institute, Inc. (1982, ch. 3); Cahans (1986).
- ²⁶See Burck (1981); Cammann, Lawler, Ledford, and Seashore (1984, pp. 11, 21-22); Greenberg and Glaser (1980); Dyer, Lipsky, and Kochan (1977); Burck (1981b).
- ²⁷See Fraser (1981); Cohen-Rosenthal and Burton (1987, p. 20); Simmons and Mares (1985, ch. 14); Work in America Institute, Inc. (1982, ch. 4).

²⁸See Cohen-Rosenthal and Burton (1987, pp. 16-17); Kochan, Katz, and Mower (1984, pp. 134-146); Watts (1982).

²⁹See Burck (1981a); Kochan, Katz, and Mower (1984, pp. 138-146).

³⁰See Driscoll (1979); Smith (1988).

³¹See Goodman (1980, p. 490); Cohen-Rosenthal and Burton (1987, pp. 17-18); U.S. Department of Labor (1982, 1983); Work in America Institute, Inc. (1982, ch. 4); Hoyer and Huszczo, (1988).

³²See Hammer and Stern (1986).

³³See Schlesinger and Walton (1977); Kochan, Katz, and Mower (1984, pp. 134-146); Guest (1979); Watts (1982).

³⁴See Hoyer and Huszczo (1988).

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