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The Importance of Management Philosophy to the Success of Pay-for-Knowledge Systems: An Empirical Test

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THE IMPORTANCE OF MANAGEMENT PHILOSOPHY
TO THE SUCCESS OF PAY-FOR-KNOWLEDGE SYSTEMS:
AN EMPIRICAL TEST

THE IMPORTANCE OF MANAGEMENT PHILOSOPHY
TO THE SUCCESS OF PAY-FOR-KNOWLEDGE SYSTEMS:
AN EMPIRICAL TEST

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

By

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CHAPTER 1

REVIEW OF THE LITERATURE

In recent years, American businesses have found themselves operating in an environment radically different from the environment of earlier decades. The new environment is characterized by fierce international competition, rapid technological change, changing work force demographics and values, and new roles in management-labor relations.

At the same time, productivity has become a major concern for many U.S. businesses. Output per worker, a common measure of productivity, has been growing at an average rate of less than 1% per year since 1973, compared with an average rate of more than 2% in the 1960's (Berger, 1987).

In response to these problems, firms have been searching for ways to improve both productivity and quality of output, and hence, their competitive position. A number of organizations have experimented with work innovations such as quality of work life (QWL) programs, autonomous work groups, labor management teams, and quality circles, to name a few.

Many organizations have also redesigned their compensation systems in an attempt to use their compensation dollars more effectively. For instance, firms have experimented with cafeteria style benefits plans and lump-sum salary increases. Other organizations have altered their compensation systems in order to make them more consistent with principles of egalitarian work design, such

as a shift from hourly to salary pay. Companies are finding that by restructuring work and overhauling compensation administration practices they can create a work force that is more satisfied, committed, and competent, and at the same time increase productivity and improve quality of output (Walton, 1978a).

This study focuses on one particular innovation, pay-for-knowledge compensation. Unlike traditional compensation systems that base employees' wages on the specific jobs they do, pay-for-knowledge compensation bases employee wages on the repertoire of jobs an employee is capable of performing. Thus, pay-for-knowledge systems are designed to pay employees for acquiring new skills or knowledge.

Pay-for-knowledge systems have received serious attention from both practitioners and organizational researchers because of the numerous benefits realized from using these systems. Yet surprisingly little is known about the factors that contribute to or inhibit the success of pay-for-knowledge systems. Managers interested in using pay-for-knowledge compensation could benefit enormously from such information, as could those already using pay-for-knowledge compensation.

Most of our understanding about the factors that influence the success of pay-for-knowledge systems is based on speculation or personal experiences. One hypothesis is that the specific mechanics of pay-for-knowledge systems are complex, and that success is contingent upon how carefully one plans ahead when designing the mechanics of the system. This view holds that decisions such as how

many skill units to include in the plan, how to conduct performance appraisals, and which groups of employees to include in the plan will have a major impact on whether or not the organization is successful using pay-for-knowledge. Another hypothesis is that contextual factors influence whether or not pay-for-knowledge will work. The idea is that only certain types of individuals, technologies, regions of the country, etc., are compatible with the pay-for-knowledge approach to compensation.

Very few empirical studies of pay-for-knowledge systems have been conducted. The few studies that have focused on pay-for-knowledge systems were not particularly supportive of these hypotheses, suggesting that there is a need to look further for other possible determinants of success.

Management philosophy is discussed in the work innovation literature as a component critical to the successful implementation of work innovations. This suggests that management philosophy may be critical to the success of pay-for-knowledge systems as well. The management philosophy construct has been poorly defined, however, making it impossible to test this assertion empirically.

This study represents an initial attempt to remedy this problem by bridging the pay-for-knowledge and management philosophy literature. The purpose of this study is to test empirically the hypothesis that management philosophy is important to the success of pay-for-knowledge systems. In order to do this, the management philosophy construct is explicated in this study, and the components of the construct are identified. Once this is done, three major

questions are addressed: 1) Are the components that make up the management philosophy positively related to the successes experienced by organizations using pay-for-knowledge compensation?, 2) When the components are used together, do they predict success reasonably well?, and 3) Can the components of the management philosophy be used together with what we already know about the specific mechanics and contextual factors to improve predictions of success?

Chapter 2 is devoted to a discussion of the methodology employed in this study. The analysis strategy is also outlined in Chapter 2. The results of the analyses are presented in Chapter 3, and Chapter 4 provides a discussion of the findings in light of relevant theory, as well as discussions of the implications and limitations of the study.

The remainder of this chapter focuses on two bodies of literature. First, the literature that deals with factors contributing to the success of pay-for-knowledge systems is reviewed, and related findings from empirical research on pay-for-knowledge systems are summarized. Second, the management philosophy literature is discussed, and the management philosophy construct is explicated. The chapter concludes with the presentation of the research hypotheses for this study.

Factors Influencing the Success of Pay-for-Knowledge

Three factors are believed to affect the degree to which an organization using a pay-for-knowledge system experiences success: the specific mechanics of the pay-for-knowledge system, contextual factors, and the management philosophy. The hypothesized relationship between each of these factors and the success of pay-for-knowledge

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systems is discussed in detail below. Before discussing these
factors, however, pay-for-knowledge is defined.

<u>Definition of Pay-for-Knowledge</u>

Pay-for-knowledge compensation is known by a variety of other
labels including skill-based compensation, knowledge-based pay, and
multiskill compensation (Jenkins & Gupta, 1985; Lawler & Ledford,
1985; Tosi & Tosi, 1986). Pay-for-knowledge compensation involves
paying employees for the knowledge they possess or the number of jobs
they are trained to do. In a typical pay-for-knowledge plan,
employees start at a basic wage rate and receive wage increases as
they learn additional jobs or skills in the organization. Thus,
pay-for-knowledge differs from traditional, job-based methods of
compensation where employees are paid for the jobs they hold rather
than the particular skills they have developed in that organization.

Pay-for-knowledge systems encourage the development of a
multiskilled work force, thereby allowing organizations to use their
employees more effectively. Employees can be deployed in a number of
ways, depending on the skills or knowledge they have acquired and the
day to day needs of the organization. Organizations using
pay-for-knowledge have reported that pay-for-knowledge promotes a
number of positive outcomes including greater work force flexibility,
leaner staffing, improved employee satisfaction, more employee
commitment, enhanced employee motivation, and increased productivity
(Curington, Gupta & Jenkins, 1986; Gupta, Jenkins & Curington, 1986;
Lawler & Ledford, 1985; Poza, 1983; Silberstein, 1982; Walton, 1982).

Specific Mechanics

Pay-for-knowledge compensation systems are typically more complex than traditional compensation systems. As a result, designing a pay-for-knowledge compensation system requires greater effort and demands greater attention to detail. It is not surprising that companies report experiencing problems with the specific mechanics of their pay-for-knowledge systems when trying to implement them. This has led some writers to conclude that design issues and the specific mechanics of pay-for-knowledge systems are likely to have a big impact on whether the organization will be successful using this approach to compensation.

One of the first problems encountered when designing a pay-for-knowledge system is determining the appropriate number of jobs or skill units to include in the plan (Jenkins & Gupta, 1985). Too many skill units can make the plan unnecessarily complex, difficult to understand, and difficult to administer. Employees simply may not be able to stay competent in a large number of skills. Too few skill levels may minimize the benefits achieved by using the system since work force flexibility is limited and there are few incentives to learn additional skills.

A similar design issue is determining which groups of employees should be covered by the plan. In some cases, employees not covered by the plan may experience resentment, while in other cases, the wrong employees may have been included in the original design of the plan (Jenkins & Gupta, 1985).

The time frame for "maxing-out" (when an employee has learned all possible jobs) is a design issue unique to pay-for-knowledge companies that is believed to affect how well a pay-for-knowledge system works (Jenkins & Gupta, 1985; Lawler & Ledford, 1985; Silberstein, 1982). Employees in pay-for-knowledge companies grow accustomed to learning new skills and receiving corresponding increases in pay. When employees max-out, they may become discontented since new opportunities for learning and increases in pay are no longer available. In most cases, designing a system so that "maxing-out" does not occur is impossible. Attention is usually directed towards finding an "appropriate" time frame before "maxing-out" occurs rather than totally avoiding it. "Hold-ups" are also unique to pay-for-knowledge systems. "Hold-ups" occur when an employee is ready to move on to learn a new skill but there are no available openings (Jenkins & Gupta, 1985). Therefore, it is necessary for organizations to develop a policy to ensure that "hold-ups" are dealt with consistently across employees.

Training programs serve an important function in most organizations. The design of the training program is particularly critical to organizations using pay-for-knowledge because pay-for-knowledge employees are constantly learning new jobs. The success of the pay-for-knowledge system may hinge on whether or not the training program is adequate. This means that large investments in training are usually necessary for pay-for-knowledge to be successful (Feuer, 1987; Lawler & Ledford, 1985).

Performance appraisals also play a critical role in organizations using pay-for-knowledge systems. Since performance appraisals can involve tests of whether or not a skill has been learned, who will be involved in the performance appraisal process is a major decision. While some argue that co-workers must be involved in the performance appraisal and skill assessment process for the pay-for-knowledge concept to work, others argue that the use of peer evaluations is ineffective and that co-workers are too lenient when determining whether or not a skill has been learned (Lawler, 1981; Walton, 1978a). Regardless of whether or not peer evaluations are used, management still must decide whether and how to incorporate how well skills are learned into the compensation package.

In summary, there are many specific details that must be considered in order to implement a pay-for-knowledge system. It is desirable to work out the specific mechanics in the design stage to reduce the number of problems that surface during implementation. It is generally believed that the attention devoted to the specific mechanics is closely linked to whether or not an organization will be successful using pay-for-knowledge compensation.

Contextual Factors

Some have questioned the general applicability of work innovations such as pay-for-knowledge (Poza & Markus, 1980; Schrank, 1978). These doubts are usually rooted in the belief that contextual factors are largely responsible for determining whether or not pay-for-knowledge systems will succeed. These contextual factors

include the operating environment of the plant using pay-for-knowledge and the characteristics of the work force.

Plant size is one contextual factor that has received considerable attention (Lawler, 1981; Poza & Markus, 1980; Schrank, 1978; Walton, 1974; 1982). Skeptics argue that only plants with small work forces can utilize pay-for-knowledge systems effectively. The experiences of General Motors and Volvo suggest, however, that large plants can use pay-for-knowledge effectively.

Plant location is another highly publicized contextual factor. Small towns are believed to provide a better atmosphere for implementing pay-for-knowledge for many reasons (Poza & Markus, 1980; Walton, 1974, 1982). Cultural factors of the local community are thought to be directly related to the work ethic of the work force, and small towns are believed to encourage the development of a stronger work ethic. This point of view is closely linked to arguments that successful implementation of pay-for-knowledge may be dependent on the characteristics of the work force employed at a site (Jenkins & Gupta, 1985; Lawler & Ledford, 1985; Silberstein, 1982). Only certain types of employees have the attitude toward personal growth and development that allows them to accept the concept of pay-for-knowledge.

Some organizational researchers argue that pay-for-knowledge plans are more likely to be successful in "greenfield" plants than in established plants. "Greenfield" plants are plants in which the pay-for-knowledge system was installed during plant startup. The reasoning behind this belief is that new plants have no tradition or

plant history to overcome and do not experience problems associated with work rule changes (English, 1985; Lawler & Ledford, 1985; Poza & Markus, 1980; Walton, 1974, 1982). New plants may offer a better opportunity to establish a reward system congruent with the work system.

Non-union plants are often considered more suitable for pay-for-knowledge compensation (Poza & Markus, 1980; Walton, 1974, 1978b, 1982). This belief stems from the fact that pay-for-knowledge systems threaten many traditional organized labor issues such as job assignment rules and jurisdictional boundaries. The incompatibility between unions and pay-for-knowledge may be more imagined than real, however, since General Motors has used pay-for-knowledge successfully in several unionized settings (Jenkins & Gupta, 1985).

Others have argued that the benefits realized from pay-for-knowledge are governed by the type of production technology. Process production environments supposedly realize substantial gains due to the interdependence of the production process and the high costs associated with errors. Employees perform more effectively and cooperation is enhanced as employees learn more skills and gain greater understanding of the entire production process (Lawler & Ledford, 1985). Mass and batch production environments benefit by using the flexibility created by pay-for-knowledge to cover absenteeism and production bottlenecks. Highly interdependent technologies that use work teams also stand to benefit from pay-for-knowledge since employees often learn the entire set of skills

used within their respective teams (Lawler, 1977, 1981; Schweizer, 1986; Walton, 1985). More recently, it has been shown that pay-for-knowledge is not limited to production technology but is also used by service organizations (e.g., banks and insurance companies), so it is not clear that pay-for-knowledge does in fact favor any one particular process (Lawler & Ledford, 1985; Myers, 1985).

In summary, contextual factors are believed by some to have a significant impact on whether or not pay-for-knowledge systems can be implemented with success. These beliefs are largely due to the fact that the earliest and most publicized plants using pay-for-knowledge were somewhat atypical (e.g., the General Foods pet food plant in Topeka, Kansas). It appears that the differences between the early plants and more traditional plants were exaggerated and used to "explain" the successes experienced by these plants. Traditional plants (e.g., the large, unionized plants owned by General Motors) adopted these same practices later but received considerably less publicity.

Management Philosophy

The third major factor identified in the literature as important to the success of pay-for-knowledge systems is management philosophy. Unlike the specific mechanics of pay-for-knowledge plans and the contextual factors discussed earlier, management philosophy is difficult to pinpoint. It is not clear in this case precisely what practitioners and organizational researchers have in mind when they speak of the importance of management philosophy. Yet despite this apparent ambiguity, this section illustrates that there is agreement

among diverse sources that management philosophy is extremely important.

Tosi and Tosi (1986, p. 61) argue that the "human resources management philosophy" is critical to the successful use of pay-for-knowledge plans, and that organizations using pay-for-knowledge possess "...a very different philosophy from the one governing conventional worker compensation practices" (p. 52). Lawler and Ledford (1985, p. 36) suggest that pay-for-knowledge systems work particularly well in organizations with "participative management philosophies." Jenkins and Gupta (1985) highlight managerial philosophy as one of the critical subsystems affecting the successful implementation of pay-for-knowledge. In particular, they note the importance of "...the consistency between the compensation system and the <u>overall management philosophies</u> of the organization" (p. 125).

Poza and Markus (1980, p. 4) assert that the work restructuring program at a pay-for-knowledge plant in Richmond, Kentucky, represented a "significant change in managerial philosophy at Sherwin Williams." They argue that Sherwin Williams' projects have been "...guided by a philosophy that undoubtedly contributed to the Richmond plant's success: 'There has to be a better way'" (p. 5). They also discuss a new plant which incorporated "... more fully the managerial philosophy of teamwork and work restructuring" (p. 7).

Gupta, Jenkins, Curington, Clements, Doty, Schweizer, & Teutsch (1986) point out that managerial philosophy is important in pay-for-knowledge plants because the philosophy drives the overall management system and directly affects the design elements of the

organization. They also contend that the management philosophies in pay-for-knowledge plants are radically different from those found in traditional plants.

In summary, management philosophy is regarded by some as very important to the success of pay-for-knowledge systems. It is still not clear from these statements, however, exactly what management philosophy is. The task of clarifying the term "management philosophy" is undertaken later in this chapter.

Empirical Studies

Although specific mechanics, contextual factors, and management philosophy are hypothesized to be critical to the success of pay-for-knowledge, empirical research testing these relationships is almost non-existent. The few studies that do focus on factors related to success are reported below.

In an exploratory study of pay-for-knowledge systems, Gupta et al. (1986a) found that many widely held "truths" about pay-for-knowledge could be more appropriately labeled as myths. Their findings suggest that pay-for-knowledge is used in a variety of production technologies, thereby casting serious doubt on the hypothesis that pay-for-knowledge works only in certain production environments. The study also reveals that, while pay-for-knowledge is used quite often in start-up or "greenfield" sites, it is also installed successfully in existing plants.

In one phase of their study, Gupta et al. (1986a) used mail surveys to collect information from personnel directors at plants using pay-for-knowledge. Respondents considered the following factors

to be key determinants of success: an emphasis on employee growth and development, local management commitment, employee commitment, overall management philosophy, work force flexibility, employee selection procedures, emphasis on employee training, and employee participation in administering the pay-for-knowledge plan. Respondents reported that, to some extent, "kinks" in the pay-for-knowledge plan, insufficient training of employees, problems with performance appraisals, and inadequate training of supervisors were factors which produced difficulties for the pay-for-knowledge plan. Gupta et al. (1986a) found that, while nonunion pay-for-knowledge users viewed pay-for-knowledge and labor unions as incompatible, unionized pay-for-knowledge plants did not share this view. This casts doubt on the hypothesis that pay-for-knowledge will work only in nonunion environments. In further support of this position, findings from a study by Curington et al. (1986) show that while pay-for-knowledge is more common in nonunion environments, it can also be successfully implemented in union environments, given the proper labor-management cooperation.

In a different phase of their study, Gupta et al. (1986a) conducted interviews with senior personnel/human resources or compensation officers in a probability sample of U.S. corporations. Most of the organizations in the sample were not currently using pay-for-knowledge. Respondents were asked to identify conditions that they felt would contribute to the success or failure of pay-for-knowledge plans. Listed most often as contributors to success were favorable labor-management relationships, a "greenfield" site,

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suitable jobs in the plant, the "right kind" of employees, and the appropriate local culture. The conditions mentioned most often as inhibitors to success were employee resistance, lack of managerial support, and union resistance. Interestingly, while many of these comments are similar to those offered in the literature, they are not fully supported by the data from the actual users of pay-for-knowledge cited above. For instance, the belief in the importance of selecting "greenfield" and nonunion sites, while widely held, appears to be ill-founded.

A study by Gupta, Schweizer, and Jenkins (1987) focused primarily on identifying factors related to the success of pay-for-knowledge systems. They found little support for the hypothesis that the specific mechanics of a pay-for-knowledge system correlate with success. The only variable measuring the specifics of the plan that was significantly correlated with success was the number of skill units. Apparently, respondents at plants with a larger number of skill units viewed their pay-for-knowledge systems as less successful.

Although pay-for-knowledge is hypothesized to work only with the "right" employees, Gupta et al. (1987) found that employee demographics were not correlated with the success of such plans. Likewise, no significant difference was found for length of time the plan had been in operation. As a result of their study, the authors concluded that the research focus should shift from the specifics to global issues, including managerial philosophy. They argue that it may not be the problems that surface, but rather how the problems are handled, that determines if the plan is successful.

Summary

The pay-for-knowledge literature identifies three major factors as important to the success of pay-for-knowledge systems: the specific mechanics of the pay-for-knowledge system, contextual factors, and the management philosophy. Empirical research testing these hypotheses is, however, quite limited. The few studies that have been done suggest that specific mechanics and contextual factors may be relatively unimportant. Instead, there is growing agreement that the important factors may be the more global issues, such as the management philosophy at a plant or facility. Empirical research testing this last hypothesis is nonexistent so far.

Management Philosophy and Work Innovations

Management philosophy is considered critical not only to the success of pay-for-knowledge systems, but to work innovations in general. It is one of the few determinants of success that spans the entire work innovation literature, regardless of the innovation being studied. One often finds management philosophy discussed by writers who focus on innovations such as sociotechnical systems, QWL programs, and work restructuring, to name a few.

Albert and Silverman (1984, p. 12) argue that companies experience problems establishing an effective organizational culture due to difficulties associated with "translating management philosophy into cultural reality." Lawler and Olsen (1977, p. 52) state that, "One of the first activities during any organization start-up should be the development of a management philosophy."

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The problem is not, however, whether or not an organization has a management philosophy, but rather, whether the philosophy that has been developed "fits" the organization well. The "appropriate" management philosophy differs across organizations depending on numerous factors, many of them unknown. Practitioners often point out that successful implementations take place in organizations with management philosophies that are radically different from those found in traditional organizations. Moreover, it appears that successful innovative organizations have management philosophies that are surprisingly similar in many ways.

Walton (1975) highlights the importance of understanding management philosophy when he notes that a work restructuring project at Shell U.K. was undertaken only after a great deal of time had been spent "...developing and affirming a supportive managerial philosophy" to which senior managers could be committed (1975, p. 10). He notes that an 18 month program was undertaken in order to secure acceptance of the philosophy throughout the organization, from the senior managers down to the hourly workers. Walton (1975) and Poza and Markus (1980) have argued that diffusion of work restructuring efforts can be aided by a management philosophy which values such diffusion.

There is evidence that having the appropriate management philosophy is important to the success of QWL programs as well. Changes in management philosophy accompanied workplace reforms at a large number plants at Dana Corporation, resulting in increases in both productivity and QWL (Wallace, 1980). The plant manager at one facility noted, "One of Dana's philosophies is to get away from the

general industry practice of treating adult employees like kids once they're inside the plant" (Wallace, 1980, p. 49). The change in management philosophy was so radical that the company disposed of the 22-inch thick manual used by plant managers and replaced it with a one-page manual (Wallace, 1980).

Other examples attesting to the importance of management philosophy and its fit with the rest of the organization are found scattered throughout the work innovation literature. For instance, in a study of the institutionalization of new forms of work organization, Goodman and Dean (1983, p. 289) noted, "In the cases studied by the present authors, congruence between the change program and pre-existing management philosophy led to higher degrees of institutionalization".

Cummings and Molloy (1977, p. 110) suggest that the supportive climate at Harwood Manufacturing (the site of the Coch and French studies) was partially the result of Harwood president Alfred J. Marrow's active commitment to a "...democratic, managerial philosophy". Katz and Kahn (1978) discuss the problems caused by a clash in the management philosophies when Harwood Manufacturing acquired Weldon. Harwood Manufacturing had a thirty year history of participative management, while Weldon had a thirty year history of authoritarian management. As a result, Alfred Marrow decided that organizational change would be necessary. Katz and Kahn (1978, p. 692) back Marrow's position and conclude, "The differences in managerial philosophy and style would almost certainly have created strain between the Harwood and Weldon groups sooner or later..."

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In his book on high involvement management, Lawler (1986, p. 192) also devotes several pages specifically to the issue of management philosophy and stresses the importance of "...clearly articulated guiding principles, philosophies, and core values."

Summary

Management philosophy has received considerable attention in the work innovation literature. Empirical efforts to test the relationship between management philosophy and the successful implementation of work innovations, however, are absent from the literature. This unfortunate situation is due, in part, to the fact that the management philosophy construct is not well-defined. Few writers attempt to explain what they mean by the term "management philosophy." In order to remedy this situation and lay the groundwork for empirical research, the following section is devoted to explicating the management philosophy construct.

Explicating the Management Philosophy Construct

Given that researchers and practitioners alike agree on the significance of management philosophy, it is necessary to begin delineating the elements of the concept. Only if "management philosophy" is rescued from the status of a "black hole" can its utility in organizational research be realized and costly implementation errors be avoided. The following discussion represents an explication of the construct, particularly as it relates to the work innovation literature.

Sources of Definition

Any attempt to define the construct "management philosophy" can follow myriad paths. In this study, the construct is clarified using three sources: dictionary definitions, viewpoints of organizational researchers, and actual philosophy statements. This triangulated approach yields a definition that is rooted in the language and the literature, and establishes a foundation for empirical research.

Dictionary Definitions of Philosophy

Although dictionaries focus on philosophy in general, rather than management philosophy in particular, they <u>are</u> useful in clarifying the concept. Accordingly, the first attempt at defining management philosophy involved examining dictionary definitions of philosophy. <u>Webster's II New Riverside University Dictionary</u> (1984, p. 882) defines philosophy in a number of ways including: 1) "a system of fundamental or motivating principles: basis of action or belief," 2) "a general viewpoint: theory," 3) "the overall values by which one lives." Definitions for philosophy in <u>Webster's Third New International Dictionary</u> (1981, p. 1698) include the following: 1) "a system of motivating beliefs, concepts, and principles," 2) "a basic theory concerning a particular subject, process, or sphere of activity," and 3) "the sum of an individual's ideas and convictions: personal attitude." Definitions for philosophy in <u>The Oxford English Dictionary</u> (1909, p. 782) include: 1) "a philosophical system or theory", and 2) "the system which a person forms for the conduct of life." Other dictionary definitions are obviously similar. An analysis of dictionary definitions suggests, therefore, that we must

consider the values, beliefs, and attitudes held by those holding management positions in the organization to understand the concept of management philosophy.

Organizational Literature

Another strategy for explicating the construct involves a look at what organizational researchers say about the construct. The evolution of the management philosophy construct has been strongly influenced by the writings of Taylor, Mayo, Argyris, McGregor, and Herzberg, to name a few. In The Human Side of Enterprise, McGregor (1960, p. 75) suggested that the tools for building managerial philosophy were "...attitudes and beliefs about people and about the managerial role..." McGregor believed that approaches to management were based on one's assumptions or embedded beliefs about human behavior and human nature. He argued that a manager's collection of assumptions dictates the type of managerial action he/she takes.

Lawler (1974, 1986) also suggested that the assumptions management makes about workers are reflected in the management philosophy of an organization. For instance, managers in high involvement organizations typically believe that 1) people can be trusted to make decisions concerning their work, 2) people can develop the knowledge necessary to make such decisions, and 3) organizational effectiveness will improve if people are making decisions about the management of their work. Other researchers (e.g., Michael & Mirvis, 1977; Rosow & Zager, 1982; Walton, 1985) have also argued that management philosophy is based on the assumptions about human nature and the role of people at all levels in the organization.

In summary, management philosophy is discussed in the organizational literature as a set of assumptions about human nature which are held by management. Thus, the importance of management's assumptions about human nature should be encompassed within any definition of management philosophy.

Actual Philosophy Statements

The third step in this triangulated approach to explicating the management philosophy construct involves examining actual, published statements of philosophy. These statements represent management's attempt to communicate the espoused philosophy of the organization's management. Philosophy statements taken from several high involvement organizations are presented in Table 1-1.

Statements such as "work should be satisfying," and "to create a great place to work" indicate that the management philosophy dictates, to some degree, the type of work environment in which people are asked to work. The references to "participative goal setting", "employee involvement," and allowing people "to do their jobs unhindered" reflect management's assumptions about workers' abilities as well as how management believes people should be managed.

In a discussion of the QWL program at a Shell Canada plant, Davis and Sullivan (1980) provide an outline of the "organization philosophy." The fact that it is referred to as an "organization philosophy" is meaningful in that it represents a joint philosophy developed by the union and management collectively. This philosophy statement is contained in Table 1-2.

Table 1-1
Management Philosophy Statements
Taken From High-Involvement Organizations

Forest Products Company

- Work should be satisfying and employees should feel they are making a contribution.

- We expect participative goal setting at all levels.

- By involving people we can achieve excellence.

Rolm

- To create a great place to work.

Signetics

- Managers (should) allow people to do their jobs unhindered.

GTE

- We will strive to make employee involvement an integral part of our management process.

Lawler (1986, p. 194)

Table 1-2
Philosophy Statement From
the Shell Canada, Ltd. QWL Program

Organization Philosophy:
Key Criteria to be Incorporated into Organization Design

1. (a) Employees are responsible and trustworthy.
    (b) Employees are capable of making proper decisions given the necessary training and information.
    (c) Groups of individuals can work together effectively as members of a team.

2. Advancement and growth to individual's fullest potential and capability.

3. Compensation on the basis of demonstrated knowledge and skill.

4. Direct, open and meaningful communications amongst individuals.

5. Information flow directed to those in position to most quickly act upon it.

6. "Whole jobs" to be designed to provide maximum involvement.

7. System that provides direct and immediate feedback in meaningful terms.

8. Maximum amount of self-regulation and discretion.

9. Artificial, traditional, or functional barriers to be eliminated.

10. Work schedules that minimize time spent on shift.

11. Early identification of problems and collaboration on solutions.

12. Errors reviewed from 'what can we learn' point of view.

13. Status differentials to be minimized.

(Davis & Sullivan, 1980, pp. 40-41)

Davis and Sullivan note that the philosophy charter was largely the result of the design team's search for answers to the question, "What kind of society are we going to build in the new plant?" (p. 32). Clearly, much of the management philosophy can be found within this organization philosophy statement. For instance, assumptions about people are found in the statements "employees are responsible and trustworthy," and "employees are capable of making proper decisions." The references to opportunities for "advancement and growth" and "compensation on the basis of demonstrated knowledge and skill" indicate that the management philosophy affects the types of opportunities made available to employees. Similarly, the references to "immediate feedback" and "self-regulation" reflect the way people are to be managed.

Excerpts taken from the charter of the Sherwin Williams plant in Richmond, Kentucky include references to "an open and trusting climate", "challenging and meaningful work", "opportunity for personal growth and development", "fair and equitable compensation", "respect for people", expectations that the plant will be "profitable", and expectations that the people employed will be "mature, responsible, and cooperative" (Poza & Markus, 1980, p. 11).

In summary, the analysis of the actual philosophy statements reveals that management philosophy is not only a collection of beliefs, attitudes, and values mixed with assumptions about the people at work, but also involves the way in which these people are to be managed and the opportunities which are to be provided for them at work.

Management Philosophy Defined

The aim of the preceding discussion was to help narrow the domain of the construct through the process of triangulation. Of particular interest is the degree to which these representations of philosophy converge and "hang together." To the extent that there is agreement among such sources, "circumstantial evidence" is said to exist for the construct components (Nunnally, 1978). The preceding analysis suggests that a degree of overlap does exist among the conceptualizations of management philosophy found in these three sources.

A common theme throughout all three sources is that management philosophy is a set or collection of assumptions and theories about the nature of people. There is also agreement among these three sources that such assumptions are reflected in the beliefs and attitudes held by those in management positions in the organization. The triangulation process indicates that these assumptions lead to "rules" about the way people are to be managed. Integrating these perspectives, management philosophy can be defined as <u>the set of principles, values, beliefs, and assumptions about human nature that are held by the management of the organization and that affect the way the organization and its people are managed</u>. Given this definition of management philosophy, one must now turn attention to mapping out the domain of observables for the construct.

Mapping Out the Domain of Observables

Mapping the domain of observables involves a search of the work innovation literature in order to identify the domain of principles,

values, beliefs, and assumptions about human nature that are held by the management of innovative organizations. The search uncovered a wide range of management principles, values, beliefs, and assumptions about human nature. These elements of the domain have been organized into eight general categories, as shown in Table 1-3.

Before discussing the domain of the management philosophy construct in more depth, two limitations should be addressed. First, because the construct is composed of attitudes, assumptions, etc., the domain mapped out in Table 1-3 is not composed of observable variables. It would be desirable if the construct could be operationalized using observable variables.

The second limitation is also related to the measurement of the construct. Argyris (1985) and Argyris and Schön (1974) have argued that managers possess both "espoused theories" and "theories in use." The espoused theories consist of the beliefs and values dear to the manager while the theories in use are the ones which actually govern behavior. Extending this framework, one can draw a distinction between "espoused management philosophy" and "management philosophy in use" in any organization. Both Lawler (1986) and Walton (1980) have advocated making such a distinction since there is often incongruence between the two philosophies.

In analyzing the impact of management philosophy, the espoused philosophy is irrelevant, for all practical purposes. Instead, one must focus on the philosophy actually being practiced in an organization (i.e., the philosophy in use). Directly measuring the

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Table 1-3
Components of the Construct "Management Philosophy" as Used
in the Work Innovation Literature

- Assumptions About People

- Attitude Toward Job Design

- Attitude Toward QWL and the Overall Work Environment

- Assumptions About Employee-Management Relationships

- Attitude Toward Work Innovations and Organization Change

- Attitude Toward Economic Outcomes

- Attitude Toward Congruence Among Organization Subsystems and Design
  Features

- Attitude Toward Organized Labor

philosophy in use is, however, extremely difficult, if not impossible, and therein lies the second problem.

One strategy for handling both of these problems is to focus on the manifestations of the philosophy being practiced. These manifestations can be used as indirect measures for the construct components. This strategy handles the first problem since the manifestations are often observable variables. Likewise, the second problem is addressed since the manifestations reflect a great deal about the management philosophy actually being practiced. For instance, if one observes high levels of employee participation in decision making, one can infer reasonably that the management philosophy being practiced is one composed in part by a belief in the importance of employee participation in decision making. In other words, a philosophy in use which values employee participation in decision making should manifest itself in high levels of employee participation in decision making.

The eight components of the management philosophy construct outlined earlier in Table 1-3 can be considered using this approach. In the following section, each of the eight components is discussed, and examples are provided to illustrate ways in which the component could be manifested.

Assumptions About People. The management philosophy in any organization is composed largely of assumptions management makes about people in general, and its own employees in particular. Tosi and Tosi (1986) point out that management makes assumptions about employees' competence and motivation. Davis and Sullivan (1980) discuss how

management's assumptions about employees' ability to exercise self-control affect the way the organization is managed. Management's assumptions also determine the degree to which employees are respected and recognized as an important part of the company (Wallace, 1980). While it is well documented that successful innovation efforts are often accompanied by a management philosophy that values employee participation and involvement in decision making (Davis & Sullivan, 1980; Katz & Kahn, 1978; Lawler, 1986; Rosow & Zager, 1982; Wallace, 1980; Walton, 1980, 1985), management's assumptions about its employees determine whether or not employee involvement in decision making is encouraged or allowed.

The assumptions management makes about people are manifested in many ways. For instance, the dominant leadership style in an organization reflects management's view of workers. The presence of democratic leadership styles suggests that management believes its employees can exercise self-control and make good decisions. Authoritarian leadership suggests that management feels that workers must be controlled. Similarly, the degree to which management relies on rules and regulations to control employee behavior reflects a great deal about the assumptions management makes about employee self-control.

The degree to which employees were involved in designing the facility, installing innovations, and modifying the work, reward or performance appraisal systems reflects whether management feels employees possess the ability and motivation to make good decisions. Thus, the degree of employee involvement in decision making and the

amount of input workers have in company decisions and policies are indirect measures of the management's assumptions about people. While the list of possible manifestations is unlimited, these examples do illustrate ways one might expect management's assumptions about people to be manifested.

Attitude Toward Job Design. Another component of the philosophy construct, management's attitude toward job design, represents the degree to which management believes in the importance of job design. Management's attitude toward job design is considered critical to successful implementation of many work innovations (Davis & Sullivan, 1980; Walton, 1979, 1982). Management's belief in the importance of building variety into the work is also seen as crucial (Jenkins & Gupta, 1985; Walton, 1980).

One of the many manifestations of management's attitude toward job design is the presence or absence of job variety and job enrichment. Another example is the presence or absence of autonomous work groups, which reflects management's view of the way work should be organized (Davis & Sullivan, 1980; Poza & Markus, 1980; Walton, 1972, 1980, 1985).

Attitude Toward QWL and the Overall Work Environment. Management's attitude toward QWL and the overall work environment comprises another component of the construct. Although the QWL concept has been defined in many ways, Walton (1973) has produced perhaps the most comprehensive definition. He outlines eight components by which one can assess QWL: adequate and fair compensation, safe and healthy working conditions, immediate opportunity to use and develop human

capacities, future opportunity for continued growth and security, social integration in the work organization, constitutionalism in the work organization, work and the total life space, and social relevance of work life. The degree to which management believes it is important to cultivate these factors in the work environment reflects its attitude toward QWL issues.

Elsewhere, Walton (1980, 1985) highlights the importance of developing a work culture characterized by high levels of employee commitment. Management's commitment to career development also affects QWL and the overall work environment (Davis & Sullivan, 1980; Jenkins & Gupta, 1985; Walton, 1973). Similarly, Davis and Sullivan (1980) point out that it is often critical whether management values employee learning. They note that this attitude affects management's commitment to create and/or maintain an environment promoting learning, growth, and development. The authors also discuss the importance of autonomy in the work place, which Walton views as part of the "opportunity to use and develop human capabilities" component of QWL.

Part of management's attitude toward QWL and the work environment is manifested in the presence or absence of the conditions outlined above. The presence of career development programs suggests that management values this aspect of QWL. Likewise, the layoff policy is one of many manifestations of management's attitude toward the importance of job security, part of the "opportunity for continued growth and security" component of QWL as outlined by Walton. Management's attitude toward the "adequate and fair compensation"

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component of QWL is manifested in the degree to which actual levels of pay are equitable. Levels of employee commitment are manifestations of the degree to which management believes in the importance of cultivating high levels of commitment. The degree to which employee autonomy is present reflects management's attitude toward this aspect of QWL. Levels of employee tardiness, absence, and turnover are among the manifestations of management's attention to these aspects of QWL.

Assumptions About Employee-Management Relationships. Management's assumptions about the type of relationship that should exist between management and employees include beliefs about the importance of cooperation between workers and management (Davis & Sullivan, 1980), the importance of open communication between employees and management (Davis & Sullivan, 1980; Wallace, 1980), and the importance of building trust with employees (Davis & Sullivan, 1980; Tosi & Tosi, 1986; Walton, 1980, 1985).

Obvious manifestations of management's attitude about employee-management relationships include the degree to which the climate is actually characterized by cooperation and the extent to which open communication between management and employees is present. The degree to which information is shared with workers and actual levels of trust between management and employees are manifestations of management's attitude toward the importance of building trust between employees and management.

Attitude Toward Work Innovations and Organizational Change. Management's attitude toward work innovations and organizational change is a multifaceted component of the management philosophy

construct. One element is the degree to which management believes strongly in a particular innovation. A second critical element is management's attitude toward diffusion of the innovation (Poza & Markus, 1980). Management's true attitude toward an innovation is often manifested symbolically by the commitment it shows to the innovation (Davis & Sullivan, 1980; Jenkins & Gupta, 1985; Rosow & Zager, 1982; Walton, 1985). Thus, corporate management's attitude toward the innovation is often manifested in part by levels of sponsorship of and involvement with the innovation. The same is true for local management's attitude toward the innovation.

The attitude toward organizational change and work innovations in general is affected by management's attitude toward risk taking and uncertainty, and management's willingness to make errors (Davis & Sullivan, 1980; Michael & Mirvis, 1977; Walton, 1985). Management's attitude toward organizational change can also be thought of as including beliefs about the importance of organizational self-diagnosis and renewal.

One of the many manifestations of management's attitude toward organizational change and work innovations in general is the presence or absence of innovations. Organizations with many innovations are likely to be associated with a management philosophy characterized by a positive attitude toward work innovations and a greater willingness to accept risk/mistakes. To the extent that diffusion of the innovation has taken place, there is evidence that management values diffusion, since management support is viewed as a condition necessary for diffusion (Walton, 1977).

Attitude Toward the Pursuit of Economic Outcomes. Just as management's attitude toward QWL issues is considered an important part of the philosophy, so is management's attitude toward economic outcomes. In fact, Walton (1973, 1979, 1980, 1982) has stressed that it is important for management to keep a commitment to the pursuit of both human outcomes and economic outcomes, and he suggests that directing too much attention to either outcome at the expense of the other will produce less than optimal results. Two economic outcomes commonly associated with work innovations are increased productivity and work force flexibility (Jenkins & Gupta, 1985; Walton, 1985).

Management's commitment to the pursuit of these outcomes is manifested partly in the degree to which management uses them to justify its actions, policies, and decisions. In particular, management's reasons for adopting an innovation are manifestations of the underlying management philosophy. To the extent that management installs an innovation to improve productivity, one can infer that the management philosophy is one which places high value on promoting economic outcomes.

Attitude Toward Congruence Among Organization Subsystems and Design Features. Management's belief in the importance of maintaining congruence among organizational subsystems and among the design features varies widely across organizations. Some have argued that it is critical for management to possess a belief in structuring the organization to fit and evolve with the needs, desires, and abilities

of the work force (Davis & Sullivan, 1980; Lawler, 1974; Walton, 1982). Management's attitude toward the use of sociotechnical design may reflect how important congruence among the subsystems is to management.

In many organizations, management's attitude is manifested in the presence or absence of egalitarian principles in the organization design. For example, an organization using participative management may try to minimize status differences among employees by eliminating time clocks and reserved parking spaces and changing from hourly pay to salary pay (Davis & Sullivan, 1980; Wallace, 1980; Walton, 1979).

Another manifestation of management's attitude toward the importance of congruence among subsystems is a reward system which has been redesigned to be more consistent with the work system (Davis & Sullivan, 1980; Jenkins & Gupta, 1985; Katz & Kahn, 1978; Lawler, 1974, 1981; McGregor, 1960; Poza & Markus, 1980; Tosi & Tosi, 1986; Wallace, 1980; Walton, 1979, 1980, 1985). Similarly, organizations may alter their employee selection system to fit the organization's philosophy (Jenkins & Gupta 1985; Lawler, 1974; Poza & Markus, 1980; Walton, 1980).

<u>Attitude Toward Organized Labor</u>. The final component of the management philosophy construct is management's attitude toward organized labor. This attitude is composed of beliefs about organized labor and the collective bargaining process, as well as beliefs about the role which organized labor should play in the day-to-day operation of the organization.

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This attitude can be manifested in numerous ways. One example is the presence or absence of organized labor, which may reflect a great deal about management's attitude toward organized labor. In union environments, the degree to which organized labor was involved in important organization decisions (e.g., installing and/or modifying the work innovation) is also an indirect measure of management's attitude toward organized labor. The degree to which joint labor-management committees and planning are present is an example of how management's attitude toward organized labor and management's view of the "proper" role of organized labor might be manifested.

Summary

Using the process of triangulation, a definition for management philosophy was developed. The definition was used to explicate the management philosophy construct, resulting in the identification of eight major components to the construct. Two limitations of the operationalization were discussed: 1) by definition, the components of the construct are principles, values, beliefs, etc., and are, therefore, not observable variables; and 2) the management philosophy in use, rather than the espoused management philosophy, should be the primary focus of attention. It was proposed that one way of handling both of these limitations is to focus on the manifestations of the construct components rather than the components themselves. It was argued that this approach often yields observable variables which also reflect the management philosophy in use. Each of the eight components was discussed and examples were given to illustrate a few

of the many ways that the components might be expected to manifest themselves.

Chapter Summary and Research Hypotheses

Little is known about the factors that contribute to the success of pay-for-knowledge compensation systems. One hypothesis is that the specific mechanics of the pay-for-knowledge system are critical to success or failure. The second hypothesis is that contextual factors, such as the types of employees or the plant location, determine whether or not the plan will be successful. The third hypothesis is that management philosophy has an impact on success, and that failures and successes can be attributed in part to this variable.

The few studies that have focused on pay-for-knowledge have not been particularly supportive of the first two hypotheses. The third hypothesis has not been tested empirically. Thus, while it is "generally accepted" that management philosophy is important, there is no empirical evidence supporting or refuting the claim.

A major obstacle to testing the management philosophy hypothesis has been that the management philosophy construct was inadequately defined. Given the explication provided in this study, testing the relationship between management philosophy and the success of pay-for-knowledge compensation systems is now possible.

In the process of explicating the management philosophy construct, it was shown that the construct domain is quite large. It seems unwise, therefore, to test the general hypothesis that management philosophy is important to the success of pay-for-knowledge systems. Rather, a more prudent approach is to focus on the different

components of the construct in order to isolate the dimensions that are most important. Identifying the best predictors of success will allow managers to direct attention to the most critical dimensions of the management philosophy construct.

Using this strategy, the hypotheses for the study are as follows:

Hypothesis 1: Each component of the management philosophy will be positively related to the success of the pay-for-knowledge system.

Hypothesis 2: When grouped together, the components of management philosophy will predict the success of the pay-for-knowledge system, and each component will contribute significantly to the prediction.

Hypothesis 3: Models using specific mechanics of pay-for-knowledge systems and contextual factors to predict success can be improved significantly by the addition of the management philosophy components.

CHAPTER 2

METHODOLOGY

Data for this study were collected as part of a larger,

exploratory study of pay-for-knowledge compensation systems. The

larger project developed data sources at three levels: corporate

data, plant data, and individual employee data. The corporate data

source involved a national probability sample of 154 corporations

listed on the New York and American stock exchanges. A major purpose

of the corporate data source was to generate information about the

frequency with which pay-for-knowledge plans are used. A second major

purpose was to generate information about corporate perceptions and

strategies with respect to compensation systems in general and

pay-for-knowledge systems in particular.

The individual employee data source contained attitudinal and

behavioral measures of rank-and-file employees at three separate

pay-for-knowledge plants. The major purpose of the employee data

source was to provide information about individual employees'

perceptions and reactions to pay-for-knowledge systems.

The plant data source involved data from a sample of thirty-five

plants that were currently using pay-for-knowledge plans or had used

pay-for-knowledge in the past. The purpose of the plant data source

was to provide in-depth information about the dynamics, effectiveness,

and constraints of pay-for-knowledge systems at the plant level.

Data for this study came from the plant data source, which is described in more detail below. A comprehensive discussion of all three data sources can be found in Gupta et al. (1986b).

Sample

The plant data source was obtained through mail surveys of thirty-five plants that had used or were using pay-for-knowledge compensation systems. Respondents were the compensation or personnel managers of the pay-for-knowledge plants. Some plants did not have a personnel or compensation manager per se. For these plants, the plant manager was considered the alternative respondent. The pay-for-knowledge plants were identified through the following sources:

- Interviews with corporate compensation officers (conducted for the corporate data source);

- A literature review of pay-for-knowledge systems;

- Personal knowledge of such plants by the research project staff and consultants;

- Communication with companies using pay-for-knowledge who were aware of the study;

- Questionnaires returned which listed other sites (i.e., snowball sampling).

These sources resulted in the identification of 55 pay-for-knowledge plants across the United States.

Data Collection

The data collection for the plant data source occurred over a 24 month period. Each respondent was contacted by mail through an introductory letter describing the study, emphasizing confidentiality,

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soliciting cooperation, and highlighting some benefits of cooperation. A brief description of the study was also enclosed. In addition, an effort was made to contact each respondent by phone to insure that there were no problems, and to solicit cooperation. Corporations known to have 10 or more pay-for-knowledge sites were initially contacted at the corporate rather than plant level. This procedure was used to insure that corporate approval and endorsement were obtained.

The questionnaire and a cover letter were mailed to each respondent, along with a stamped, self-addressed return envelope. A copy of the questionnaire is contained in the Appendix. Questionnaires were mailed back to the University of Arkansas after completion. Several efforts were made to contact non-responding plants to encourage their participation.

Thirty-five usable questionnaires were returned, providing a response rate of 63.6 percent. In some cases, the respondent left an item in the questionnaire blank, and therefore, the sample size for each particular question varied. The plants in the sample ranged in age from 2 to 60 years old, with the mean plant age being 12.9 years and the median plant age being 9 years (N = 31). The pay-for-knowledge plans installed at the facilities ranged in age from 1 to 16 years old (mean = 6.6 years, median = 5 years, N = 34). Seventy-seven percent of the plants were "greenfield" plants, meaning that the pay-for-knowledge plan was installed less than two years after the plant began operations (N = 30).

All of the plants were reported as manufacturing facilities (N = 34). In particular, of 32 plants, 50% reported that continuous process production was the predominant production process, while 37.5% and 12.5% reported themselves as predominantly involved in mass production and unit/small batch production, respectively.

The mean and median number of people employed at the pay-for-knowledge facilities were 758 and 306, respectively, while the size of the plants differed considerably, ranging from 60 to 5000 employees (N = 35). The number of employees covered by pay-for-knowledge at each facility ranged from 31 to 2200 employees (mean = 392, median = 218, N = 30). Of the thirty-five plants in the sample, 10 had employees covered by collective bargaining agreements. In all 10 cases, the facilities which had employees covered by collective bargaining agreements also had pay-for-knowledge employees who were covered by collective bargaining agreements.

The number of skill units at a facility ranged from 2 to 330 (mean = 33, median = 8, N = 33). The number of weeks required for an average employee to learn the maximum number of skill units (i.e., "max-out") ranged from 3 to 520 weeks (mean = 183 weeks, median = 200 weeks, N = 30).

<u>Measures</u>

<u>Dependent Variables</u>

The dependent variable of interest, success of the pay-for-knowledge system, is a multidimensional variable that can be examined from a variety of perspectives. In particular, one's own biases are instrumental in determining which organizational outcomes

are considered relevant to the measurement of success. For instance, some researchers might choose to focus solely on economic variables, while others might wish to consider "human" outcomes as well. As noted in Chapter 1, Walton (1973, 1979, 1980, 1982) has argued that management must be dually committed to both human and economic outcomes in order for an innovation to be successfully implemented.

In order to capture both aspects of success, the decision was made to use four separate measures of the degree to which the pay-for-knowledge system was successful. Two of the measures selected focused on economic issues. These two measures were intended to represent the degree to which 1) productivity and 2) quality of output were affected by the use of a pay-for-knowledge system. The other two dependent measures were selected to focus on relevant "human" outcomes. The first focused on whether critical employee attitudes were affected by the use of pay-for-knowledge and the other looked at the impact of pay-for-knowledge on employee withdrawal behaviors.

Each of these four success measures is discussed below in more detail. Descriptive statistics for the four measures are found in the tables below. All five point scales were expanded to seven point scales so that items could be combined and averaged. When necessary, scale items were reverse scored so that all scales would reflect positive or desirable levels of the success measure.

Productivity. The first dependent variable, productivity, was operationalized using a set of two items that were averaged (α = .78). These items appear in Table 2-1. The measure is not a direct measure of productivity, but rather, the respondent's perception of how

Table 2-1
Scale Items for the Dependent Variable: Productivity

1. To what extent has your pfk plan been successful in promoting the following outcomes?[a] Increased output per hour worked

2. Compared to non-pfk facilities similar to yours, have your experiences in the following areas been better, worse, or about the same?[b] Productivity

Means, Standard Deviations, and Intercorrelation Between Scale Items[c]

Variables	N	Means	Standard Deviations	1
1.	34	4.41	1.74	
2.	34	5.59	1.22	.68*** (33)

$\alpha = .78$

[a] This item used a seven point format with the following response options:
    1 = not at all
    2 =
    3 = to some extent
    4 =
    5 = to a large extent
    6 =
    7 = to a very great extent

[b] This item was expanded from a five point format to a seven point format. The original five point format contained the following response options:
    1 = ours are much worse
    2 = ours are somewhat worse
    3 = about the same
    4 = ours are somewhat better
    5 = ours are much better

[c] The N for the correlation is in parentheses

  * $p < .05$
 ** $p < .01$
*** $p < .001$

productivity was affected by the use of pay-for-knowledge. When designing the questionnaire, it was determined that asking respondents for actual productivity figures would be unreasonable and would negatively affect the response rate. In many cases, the time and cost associated with retrieving such data would be prohibitive, while in other cases, direct measures simply would not be available. Moreover, direct measures of productivity would not necessarily be comparable across sites. Using the productivity measures in Table 2-1 allowed the respondent to answer the question without retrieving the actual figures and made comparisons among the plants possible.

Quality of Output. The second dependent variable, quality of output, measures the respondent's perception of whether the pay-for-knowledge system had an impact on the quality of output at the facility. For the reasons cited above, actual measures of quality of output also were not used. Quality of output was operationalized by averaging the two items shown in Table 2-2 (α = .71).

Employee Attitudes. Numerous studies have shown that employee attitudes play an important role in most organizations. One measure of success, then, is the extent to which an innovation promotes positive employee attitudes. The scale developed focuses on three critical employee attitudes: employee satisfaction, employee commitment, and employee motivation. Table 2-3 contains the items that were used to create the scale. The three items were averaged to form an overall measure (α = .93) of the respondent's perception of the extent to which the pay-for-knowledge plan promoted positive employee attitudes. Employee motivation was measured by averaging two

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Table 2-2
Scale Items for the Dependent Variable: Quality of Output

1. Compared to non-pfk facilities similar to yours, have your experiences in the following areas been better, worse, or about the same?[a] Quality of product or service

2. Below is a list of common measures of organizational functioning. Do you think these measures are lower or higher at your facility than they would have been without a pfk plan?[b] [c] The percentage of defects in products or errors in services

Means, Standard Deviations, and Intercorrelation Between Scale Items[d]

Variables	N	Means	Standard Deviations	1
1.	33	5.91	1.20	
2.	34	5.65	1.23	.53** (32)

α = .71

[a] This item was expanded from a five point format to a seven point format. The original five point format contained the following response options:
    1 = ours are much worse
    2 = ours are somewhat worse
    3 = about the same
    4 = ours are somewhat better
    5 = ours are much better

[b] This item used a seven point format with the following response options:
    1 = much lower
    2 = somewhat lower
    3 = slightly lower
    4 = about the same
    5 = slightly higher
    6 = somewhat higher
    7 = much higher

[c] This item was reverse scored

[d] The N for the correlation is in parentheses

  * p < .05
 ** p < .01
*** p < .001

Table 2-3
Scale Items for the Dependent Variable: Employee Attitudes

1. To what extent has your pfk plan been successful in promoting the
    following outcomes?[a] Improved employee satisfaction

2. To what extent has your pfk plan been successful in promoting the
    following outcomes?[a] More employee commitment

3. Employee motivation subscale (see Table 2-4).

Means, Standard Deviations, and Intercorrelations Among Scale Items[b]

Variables	N	Means	Standard Deviations	1	2
1.	34	4.76	1.42		
2.	34	4.85	1.69	.81*** (34)	
3.	33	5.23	1.26	.80*** (33)	.89*** (33)

α = .93

[a] This item used a seven point format with the following response
options:
    1 = not at all
    2 =
    3 = to some extent
    4 =
    5 = to a large extent
    6 =
    7 = to a very great extent

[b] The N for each correlation is in parentheses

  * p < .05
 ** p < .01
*** p < .001

items, and therefore, is actually a subscale. The items used to form the employee motivation subscale are shown in Table 2-4 (α = .70).

Employee Withdrawal Behaviors. Tardiness and absenteeism are critical human outcomes that are monitored in many organizations. It has been shown that absenteeism can be very costly to an organization (Cascio, 1982; Mirvis & Lawler, 1977). To the extent that the use of pay-for-knowledge reduces the relative frequency of tardiness and absenteeism, an important criterion for success has been met. The respondent's perception of the impact of the pay-for-knowledge plan on employee withdrawal behaviors was measured by averaging the two items that appear in Table 2-5 (α = .89). An absenteeism subscale was created from the three items shown in Table 2-6 (α = .78).

Summary of the Dependent Variables. The means, standard deviations, and intercorrelations among the four success measures are provided in Table 2-7. In order to confirm that the four success measures were, in fact, distinct measures, the scale items were analyzed using ALSCAL, an alternating least squares scaling algorithm for multidimensional scaling (Young, Takane, & Lewyckyj, 1980). This method was employed to insure that the items visually clustered within their respective scales. The MDS analysis confirmed that the scale items clustered reasonably well within their respective scales.

Independent Variables

In Chapter 1, the management philosophy construct was viewed as having two separate components: 1) the espoused management philosophy and 2) the management philosophy in use. It was argued that, in order to test hypotheses concerning the impact of management philosophy on

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Table 2-4
Employee Motivation Subscale Items

1. To what extent has your pfk plan been successful in promoting the following outcomes?[a] Enhanced employee motivation

2. Compared to non-pfk facilities similar to yours, have your experiences in the following areas been better, worse, or about the same?[b] Employee motivation

Means, Standard Deviations, and Intercorrelation Between Scale Items[c]

Variables	N	Means	Standard Deviations	1
1.	34	4.68	1.66	
2.	34	5.85	1.17	.56*** (33)

$\alpha = .70$

[a] This item used a seven point format with the following response options:

    1 = not at all
    2 =
    3 = to some extent
    4 =
    5 = to a large extent
    6 =
    7 = to a very great extent

[b] This item was expanded from a five point format to a seven point format. The original five point format contained the following response options:

    1 = ours are much worse
    2 = ours are somewhat worse
    3 = about the same
    4 = ours are somewhat better
    5 = ours are much better

[c] The N for the correlation is in parentheses

  * p < .05
 ** p < .01
*** p < .001

Table 2-5
Scale Items for the Dependent Variable: Employee Withdrawal

1. Compared to non-pfk facilities similar to yours, have your
    experiences in the following areas been better, worse, or about the
    same?[a] Tardiness

2. Absenteeism subscale (see Table 2-6).

Means, Standard Deviations, and Intercorrelation Between Scale Items[b]

Variables	N	Means	Standard Deviations	1
1.	34	5.41	1.52	
2.	35	5.02	1.38	.80*** (34)

$\alpha = .89$

[a] This item was expanded from a five point format to a seven point
format. The original five point format contained the following
response options:
    1 = ours are much worse
    2 = ours are somewhat worse
    3 = about the same
    4 = ours are somewhat better
    5 = ours are much better

[b] The N for the correlation is in parentheses

  * $p < .05$
 ** $p < .01$
*** $p < .001$

Table 2-6
Absenteeism Subscale Items

1. To what extent has your pfk plan been successful in promoting the following outcomes?[a] Lowered absenteeism

2. Compared to non-pfk facilities similar to yours, have your experiences in the following areas been better, worse, or about the same?[b] Absence rates

3. Below is a list of common measures of organizational functioning. Do you think these measures are lower or higher at your facility than they would have been without a pfk plan?[c] [d] Absenteeism rate

Means, Standard Deviations, and Intercorrelations Among Scale Items[e]

Variables	N	Means	Standard Deviations	1	2
1.	34	3.85	2.09		
2.	34	5.59	1.38	.46** (33)	
3.	35	5.54	1.36	.55*** (34)	.80*** (34)

α = .78

[a] This item used a seven point format with the following response options:
    1 = not at all
    2 =
    3 = to some extent
    4 =
    5 = to a large extent
    6 =
    7 = to a very great extent

(Table Continued on Next Page)

Table 2-6 (Continued)
Absenteeism Subscale Items

[b] This item was expanded from a five point format to a seven point format. The original five point format contained the following response options:

        1 = ours are much worse
        2 = ours are somewhat worse
        3 = about the same
        4 = ours are somewhat better
        5 = ours are much better

[c] This item used a seven point format with the following response options:

        1 = much lower
        2 = somewhat lower
        3 = slightly lower
        4 = about the same
        5 = slightly higher
        6 = somewhat higher
        7 = much higher

[d] This item was reverse scored

[e] The N for each correlation is in parentheses

    * p < .05
  ** p < .01
*** p < .001

Table 2-7
Means, Standard Deviations, and Intercorrelations
Among the Success Measures[a]

	Variables	N	Means	Standard Deviations	1	2	3
1.	Productivity	33	4.95	1.36			
2.	Quality of Output	32	5.76	1.08	.70*** (31)		
3.	Employee Attitudes	34	4.96	1.37	.89*** (33)	.66*** (31)	
4.	Employee Withdrawal	34	5.22	1.38	.64*** (33)	.64*** (32)	.56*** (33)

[a] The N for each correlation is in parentheses

   * p < .05
  ** p < .01
*** p < .001

the success of pay-for-knowledge plans, the philosophy in use would serve as the appropriate domain from which to operationalize the construct. Directly measuring the philosophy in use with observable variables is, however, impossible. The strategy proposed in this study is to focus on the manifestations of the philosophy being practiced. The manifestations, then, would serve as indirect measures of the management philosophy in use.

The procedure for this study involved using the eight components of the management philosophy construct outlined in Chapter 1 (see Table 1-3) as a guide to selecting the scale items. Each item in the questionnaire was examined to determine whether or not the item represented a manifestation of one of the eight components. The items selected were then organized a priori into groups for the purpose of forming scales to represent the manifestation measures. For instance, items that dealt with the work group climate were grouped together to form the work group climate scale. In order to confirm the scales empirically, the intercorrelations within each set of scale items were analyzed. Items which appeared to "hang together" within their a priori theoretical dimension were retained.

This procedure resulted in the development of fifteen manifestation measures or scales. Table 2-8 lists these scales and shows how they can be used to measure different dimensions of the eight components of the management philosophy construct. The scales are discussed in more detail in the next section. Because the questionnaire was not designed specifically to tap the management philosophy construct, many dimensions of the construct components

Table 2-8

Fifteen Manifestation Measures Developed to Measure the
Management Philosophy Construct

- Assumptions About People
    1. Employee Involvement in Developing and Installing the Innovation
    2. Employee Autonomy in Decision Making
    3. Reliance On Rules

- Attitude Toward Job Design
    4. Job Variety

- Attitude Toward QWL and the Overall Work Environment
    5. QWL Concerns Affecting the Decision to Use Pay-for-Knowledge
    6. Employee Withdrawal Concerns Affecting the Decision to Use Pay-for-Knowledge
    7. Work Group Climate
    8. External Pay Equity

- Assumptions About Employee-Management Relationships
    9. Open Communication Between Management and Employees

- Attitude Toward Work Innovations and Organizational Change
    10. Local Management Involvement in Developing and Installing the Innovation
    11. Corporate Management Involvement in Developing and Installing the Innovation
    12. Innovation Index

- Attitude Toward Economic Outcomes
    13. Productivity Concerns Affecting the Decision to Use Pay-for-Knowledge

- Attitude Toward Congruence Among Organization Subsystems and Design Features
    14. Concerns About Consistency Among Management Systems Affecting the Decision to Use Pay-for-Knowledge

- Attitude Toward Organized Labor
    15. Union Concerns Affecting the Decision to Use Pay-for-Knowledge

were not measured by items in the questionnaire. This made it virtually impossible to develop an analysis strategy in which the eight components could be used as predictors of the success measures. The components of the construct simply were not measured in enough depth to allow for valid conclusions to be drawn about each component. For instance, the only measure of management's attitude toward organized labor was the extent to which union concerns affected the decision to use pay-for-knowledge at the facility. While this clearly reflects one aspect of management's attitude toward organized labor, this measure alone is insufficient to allow one to draw valid conclusions about the importance of management's attitude toward organized labor. Moreover, regressing the four success measures separately on the eight categories would require 32 regressions, clearly undesirable due to the probability that "significant" findings might emerge by chance alone.

An alternative method for organizing the manifestation scales that would better lend itself to analyses was sought. Upon viewing the entire collection of scales, it became clear that they could be reorganized for analysis purposes into the following four categories: Concerns Affecting the Decision to Use Pay-for-Knowledge, Involvement in Developing and Installing the Pay-for-Knowledge System, Characteristics of the General Work Climate, and Organization System Variables. This reorganization of the scales is provided in Table 2-9.

Table 2-9

Fifteen Manifestation Measures Reorganized
Into Four Categories

<u>Concerns Affecting the Decision to Use Pay-for-Knowledge</u>
  5. QWL Concerns Affecting the Decision to Use Pay-for-Knowledge
  6. Employee Withdrawal Concerns Affecting the Decision to Use Pay-for-Knowledge
  13. Productivity Concerns Affecting the Decision to Use Pay-for-Knowledge
  14. Concerns About Consistency Among Management Systems Affecting the Decision to Use Pay-for-Knowledge
  15. Union Concerns Affecting the Decision to Use Pay-for-Knowledge

<u>Involvement in Developing and Installing the Pay-for-Knowledge System</u>

  1. Employee Involvement in Developing and Installing the Innovation
  10. Local Management Involvement in Developing and Installing the Innovation
  11. Corporate Management Involvement in Developing and Installing the Innovation

<u>Characteristics of the General Work Climate</u>

  2. Employee Autonomy in Decision Making
  7. Work Group Climate
  9. Open Communication Between Management and Employees

<u>Organization System Variables</u>

  3. Reliance On Rules
  4. Job Variety
  8. External Pay Equity
  12. Innovation Index

The scale items grouped into the first category, <u>concerns</u> <u>affecting the decision to use pay-for-knowledge</u>, represent manifestations of four of the eight management philosophy construct components: attitude toward QWL and the overall work environment, attitude toward economic outcomes, attitude toward congruence among management systems and design features, and attitude toward organized labor. <u>Involvement in developing and installing the pay-for-knowledge system</u> is a collection of manifestation measures taken from two components of the management philosophy construct: assumptions about people, and attitude toward work innovations and organizational change. <u>Characteristics of the general work climate</u> is a collection of manifestation measures taken from three components of the construct: assumptions about people, attitude toward QWL and the overall work environment, and assumptions about employee management relationships. Assumptions about people, attitude toward job design, attitude toward QWL and the overall work environment, and attitude toward work innovations and organizational change are the construct dimensions represented by the manifestations measures grouped into the <u>organization system variables</u>.

The multidimensional scaling routine was employed for all scale items within each of the four categories to obtain visual clusters of the scale items. Those items that appeared to cluster within their scale were again retained. Items which did not cluster around their respective scales were dropped from the analysis.

The four categories of independent variables and their respective scales are discussed in more detail below. Descriptive statistics for the scales are found in the tables accompanying the discussion. All five point scales were expanded to seven point scales so that items could be combined and averaged. When necessary, scale items were reverse scored so that all manifestations would be expected to correlate positively with the success measures.

Category 1: Concerns Affecting the Decision to Use Pay-for-Knowledge. This category contains five scales, each of which taps a different dimension of the question, "To what extent did a particular concern affect management's decision to use pay-for-knowledge?" These concerns reflect some of the underlying reasons management chose to use pay-for-knowledge and are manifestations of the philosophy in use at the facility. To the extent that an issue affected the decision to adopt pay-for-knowledge, we can infer that the management philosophy in use is one holding relatively strong beliefs about that issue. It may also reflect the degree to which management is committed to the issue.

The first scale, QWL concerns, measures the extent to which improving QWL was a major consideration affecting the decision to use pay-for-knowledge (see Table 2-10). This scale represents an indirect measure of management's beliefs about the importance of QWL issues. The scale was constructed from a set of 4 items (α = .95).

Table 2-10
QWL Concerns[a]

To what extent did the following considerations affect the <u>decision to use</u> PFK in your facility?

1. Better quality of work life

2. Higher employee commitment

3. Improved employee motivation

4. Greater employee satisfaction

Means, Standard Deviations, and Intercorrelations Among Scale Items[b]

Variables	N	Means	Standard Deviations	1	2	3
1.	33	5.85	1.42			
2.	33	6.15	1.12	.86*** (33)		
3.	33	6.12	1.24	.81*** (33)	.90*** (33)	
4.	33	5.88	1.34	.88*** (33)	.82*** (33)	.80*** (33)

α = .95

[a] These items used a seven point format with the following response options:

        1 = not at all
        2 =
        3 = to some extent
        4 =
        5 = to a large extent
        6 =
        7 = to a very great extent

[b] The N for each correlation is in parentheses

   * p < .05
  ** p < .01
 *** p < .001

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Table 2-11 shows the three items used to construct the scale measuring employee withdrawal concerns ($\alpha = .83$). Management's concern to lower rates of tardiness, absenteeism, and voluntary turnover is a manifestation of a management philosophy which is composed, in part, of strong beliefs about the importance of reducing withdrawal behaviors.

The union concerns scale measures the extent to which the decision to use pay-for-knowledge was affected by concerns about organized labor. The scale indirectly measures an important part of the philosophy in use, namely, management's attitude toward organized labor. The scale was constructed from the two items shown in Table 2-12 ($\alpha = .85$).

Single item scales were used to measure the extent to which productivity concerns (mean = 5.85, s.d. = 1.50, N = 33) and concerns about consistency among management systems (mean = 2.53, s.d. = 1.80, N = 32) affected the decision to use pay-for-knowledge at the facility. Both items used a seven point response format ranging from (1) not at all to (7) to a very great extent. Each item represents manifestations of management's attitude toward the importance of the issue.

Category 2: Involvement in Developing and Installing the Pay-for-Knowledge System. This second category of independent variables reflects the degree to which different constituencies participated or were involved in developing and installing the pay-for-knowledge system. To the extent that employees were involved, the management philosophy can be thought of as including beliefs in

Table 2-11

Employee Withdrawal Concerns[a]

To what extent did the following considerations affect the <u>decision to use</u> PFK in your facility?

1. Lower absenteeism

2. Reduced voluntary turnover

3. Lower tardiness

Means, Standard Deviations, and Intercorrelations Among Scale Items[b]

Variables	N	Means	Standard Deviations	1	2
1.	33	4.42	1.82		
2.	33	4.21	1.95	.52** (33)	
3.	33	3.64	1.98	.78*** (33)	.58*** (33)

α = .83

[a] These items used a seven point format with the following response options:

     1 = not at all
     2 =
     3 = to some extent
     4 =
     5 = to a large extent
     6 =
     7 = to a very great extent

[b] The N for each correlation is in parentheses

  * $p < .05$
 ** $p < .01$
*** $p < .001$

Table 2-12

Union Concerns[a] [b]

To what extent did the following considerations affect the <u>decision to use</u> PFK in your facility?

1. A desire to keep company non-unionized

2. A desire to reduce union influence

Means, Standard Deviations, and Intercorrelation Between Scale Items[c]

Variables	N	Means	Standard Deviations	1
1.	32	4.34	2.50	
2.	31	5.35	2.29	.73*** (31)

α = .85

[a] Items were reverse scored

[b] These items used a seven point format with the following response options:

    1 = not at all
    2 =
    3 = to some extent
    4 =
    5 = to a large extent
    6 =
    7 = to a very great extent

[c] The N for the correlation is in parentheses

  * $p < .05$
 ** $p < .01$
*** $p < .001$

the importance of employee involvement in the development and installation of the innovation. Furthermore, this reflects a belief that employee input into the design of the organization's work system is valuable and important. Including employees in the development and installation stages is symbolic of a management philosophy which values employee participation in major organizational decisions. Levels of local and corporate management involvement are manifestations of management's commitment to the innovation at those levels of the organization.

The scale for employee involvement in the development and installation of the pay-for-knowledge system was constructed from 2 items (α = .78). The items and their means, standard deviations, and intercorrelations appear in Table 2-13. Both local management involvement (mean = 6.66, s.d. = 1.14, N = 35) and corporate involvement (mean = 3.74, s.d. = 2.09, N = 35) in the development and installation of the pay-for-knowledge system were represented by single item scales. Using a response format ranging from (1) not at all involved to (7) very heavily involved, respondents were asked how involved local management and corporate management were in the development and installation of the pay-for-knowledge plan.

A closely related issue is the extent to which organized labor was involved in the development and installation of the pay-for-knowledge system. A measure of organized labor's involvement would reflect management's attitude toward the "proper" role of organized labor and management's willingness to work jointly with organized labor. Due to the small number of unionized firms in the

Table 2-13

Employee Involvement in Developing and Installing the Innovation

1. How involved were the following groups in the development and installation of your PFK plan?[a]   Employees

2. Our employees participated in developing the specifics of the PFK plan[b]

Means, Standard Deviations, and Intercorrelation Between Scale Items[c]

Variables	N	Means	Standard Deviations	1
1.	34	4.26	2.36	
2.	35	4.49	2.03	.65*** (34)

α = .78

[a] This item used a seven point format with the following response options:

    1 = not at all involved
    2 =
    3 =
    4 = somewhat involved
    5 =
    6 =
    7 = very heavily involved

[b] This item used a seven point format with the following response options:

    1 = strongly disagree
    2 = disagree
    3 = slightly disagree
    4 = neither agree nor disagree
    5 = slightly agree
    6 = agree
    7 = strongly agree

[c] The N for the correlation is in parentheses

    * $p < .05$
   ** $p < .01$
  *** $p < .001$

sample, however, constructing an organized labor involvement scale was necessarily abandoned.

Category 3: Characteristics of the General Work Climate. The third category contains items that measure the respondent's perception of the general work climate of the organization. Management's beliefs about and commitment to the importance of cultivating a pleasant work group climate should be manifested in the type of work group climate actually present in the organization. The five items in Table 2-14 were used to assess the work group climate in the organization (α = .86).

Table 2-15 contains the three items used to assess the degree to which open communication between management and employees is characteristic of the general work climate (α = .73). This measure is a manifestation of management's beliefs about the importance of maintaining open communication between management and employees. The employee autonomy in decision making scale reflects the assumptions management makes about employees' ability to make good decisions. The scale was constructed from the 2 items found in Table 2-16 (α = .63).

Category 4: Organization System Variables. The final group of measures are classified as organization system variables. These items reflect the way work is organized and the types of systems which management uses to organize work.

Each respondent's perception of the amount of variety present in the work performed by the pay-for-knowledge employees is measured by the job variety scale. The items for the scale are shown in Table 2-17 (α = .63). Levels of job variety are manifestations of

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Table 2-14
Work Group Climate[a]

1. Our employees always help each other out when they have problems

2. There is a strong feeling of fellowship among our employees

3. Our employees seem to have no respect for each other[b]

4. Employees look forward to being with one another each day

5. There are lots of hard feelings among our employees[b]

Means, Standard Deviations, and Intercorrelations Among Scale Items[c]

Variables	N	Means	Standard Deviations	1	2	3	4
1.	35	5.23	0.97				
2.	35	5.46	1.04	.56*** (35)			
3.	35	6.06	1.11	.45** (35)	.54*** (35)		
4.	35	5.20	0.96	.48** (35)	.58*** (35)	.62*** (35)	
5.	34	5.97	0.97	.55*** (34)	.55*** (34)	.58*** (34)	.50** (34)

$\alpha = .86$

[a] These items used a seven point format with the following response options:

    1 = strongly disagree
    2 = disagree
    3 = slightly disagree
    4 = neither agree nor disagree
    5 = slightly agree
    6 = agree
    7 = strongly agree

[b] This item was reverse scored

[c] The N for each correlation is in parentheses

    * $p < .05$
   ** $p < .01$
  *** $p < .001$

Table 2-15
Open Communication Between Management and Employees[a]

1. Our employees feel free to discuss their mistakes with management

2. When employees don't like the way things are being done, they tell management about it

3. When employees and management disagree, they feel free to talk to each other about it

Means, Standard Deviations, and Intercorrelations Among Scale Items[b]

Variables	N	Means	Standard Deviations	1	2
1.	35	5.51	1.01		
2.	35	5.97	0.57	.44** (35)	
3.	34	5.91	0.67	.60*** (34)	.49** (34)

α = .73

[a] These items used a seven point format with the following response options:

    1 = strongly disagree
    2 = disagree
    3 = slightly disagree
    4 = neither agree nor disagree
    5 = slightly agree
    6 = agree
    7 = strongly agree

[b] The N for each correlation is in parentheses

    * p < .05
   ** p < .01
  *** p < .001

Table 2-16
Employee Autonomy in Decision Making[a]

1. People here can make their own decisions without checking with anybody else

2. At our facility, people are encouraged to make decisions for themselves

Means, Standard Deviations, and Intercorrelation Between Scale Items[b]

Variables	N	Means	Standard Deviations	1
1.	35	4.57	1.69	
2.	35	5.80	0.93	.54*** (35)

α = .63

[a] These items used a seven point format with the following response options:

    1 = strongly disagree
    2 = disagree
    3 = slightly disagree
    4 = neither agree nor disagree
    5 = slightly agree
    6 = agree
    7 = strongly agree

[b] The N for the correlation is in parentheses

    * p < .05
  ** p < .01
*** p < .001

Table 2-17
Job Variety[a] [b]

1. PFK employees do the same things all day long

2. In general, our PFK employees have very routine jobs

Means, Standard Deviations, and Intercorrelation Between Scale Items[c]

Variables	N	Means	Standard Deviations	1
1.	35	5.40	1.29	
2.	35	4.66	1.61	.47** (35)

α = .63

[a] These items were reverse scored

[b] These items used a seven point format with the following response options:

      1 = strongly disagree
      2 = disagree
      3 = slightly disagree
      4 = neither agree nor disagree
      5 = slightly agree
      6 = agree
      7 = strongly agree

[c] The N for the correlation is in parentheses

  * p < .05
 ** p < .01
*** p < .001

management's attitude toward the importance of building variety into jobs.

A scale was constructed from the 2 items in Table 2-18 to measure the degree of reliance on rules (α = .63). The extent to which rules are relied on to organize work and control employee behaviors is a manifestation of management's beliefs about employees' ability to exercise self-control. Furthermore, it reflects management's beliefs about whether or not employees can be trusted.

The presence or absence of work innovations is a manifestation of management's attitude toward work innovations in general. An innovation index was constructed from a list of 25 work innovations to measure this variable (see Table 2-19). For each item in the list, respondents were asked to indicate whether their facility used the innovation for its non-managerial employees. The response format consisted of yes and no options. A value of 0 was assigned to those not using the innovation, and a score of 1 was given to those using an innovation. The innovation index was computed by summing the scores, with all items weighted equally. The mean score for the sample was 14.26 and the standard deviation was 4.33 (N = 35).

External pay equity was measured with a single item scale. Respondents were asked how wage and/or salary rates in their plants compared with other employers in the same geographical area doing similar work. The item used a five point response format ranging from (1) considerably lower than others to (5) considerably higher than others. After expanding the scale to a seven point scale, the mean response was 5.77 and the standard deviation was .95 (N = 33).

Table 2-18
Reliance on Rules[a] [b]

1. At this facility, it is very important to follow all the rules

2. Compared to other organizations, we have a lot of rules

Means, Standard Deviations, and Intercorrelation Between Scale Items[c]

Variables	N	Means	Standard Deviations	1
1.	35	3.60	1.48	
2.	35	5.77	1.31	.47** (35)

$\alpha = .63$

[a] These items were reverse scored

[b] These items used a seven point format with the following response options:

    1 = strongly disagree
    2 = disagree
    3 = slightly disagree
    4 = neither agree nor disagree
    5 = slightly agree
    6 = agree
    7 = strongly agree

[c] The N for the correlation is in parentheses

  * $p < .05$
 ** $p < .01$
*** $p < .001$

Table 2-19
Work Innovation Index

Team approach to management
Enriched jobs
Open architectural design
Open door policies
Formal suggestion systems
An assessment center type of approach for selection
Quality circles
Autonomous work groups
Management by objectives
Lump sum salary increases
Interpersonal skills training
Life and career planning programs
Matrix organizational design
Human resources planning
Alternative work schedules (flextime)
All salary work force
Job sharing
Two-tier wage systems
Permanent part-time employment
Employee stock ownership plan
Employee participation in major personnel decisions
        (hiring, terminations, performance appraisals, etc.)
Employee participation in major organizational decisions
        (excluding collective bargaining issues)
Organization-wide bonus systems
Profit sharing
Cafeteria style benefit plan

External pay equity is a manifestation of management's attitude concerning the importance of maintaining external pay equity.

Summary of the Independent Variables. The means and standard deviations of the fifteen independent variables as well as the Pearson correlations among them are provided in Table 2-20. A summary of the variables (organized by category) is provided in Table 2-21.

Analysis Strategy

As noted in Chapter 1, the hypotheses for this study were as follows:

Hypothesis 1: Each component of the management philosophy will be positively related to the success of the pay-for-knowledge system.

Hypothesis 2: When grouped together, the components of management philosophy will predict the success of the pay-for-knowledge system, and each component will contribute significantly to the prediction.

Hypothesis 3: Models using specific mechanics of pay-for-knowledge systems and contextual factors to predict success can be improved significantly by the addition of the management philosophy components.

Pearson correlations were computed in order to test Hypothesis 1. To test Hypothesis 2, multiple regression analyses were performed. The multiple regression analyses consisted of sixteen regressions in which each of the four dependent variables was regressed separately on each of the four categories of independent variables.

Additional analyses were necessary to test Hypothesis 3 and are discussed below.

Method

First, factors hypothesized to be critical to the success of pay-for-knowledge were identified from the literature. Second, items

Table 2-20
Means, Standard Deviations, and Intercorrelations Among the Independent Variables[a]

Item Code	Variables	N	Means	Std Dev	1	2	3	4	5	6
1	Concern for QWL	33	6.00	1.20						
2	Employee Withdrawal Concerns	33	4.09	1.66	.45** (33)					
3	Union Concerns	31	4.90	2.21	-.18 (31)	-.12 (31)				
4	Productivity Concerns	33	5.85	1.50	.58*** (33)	.16 (33)	.00 (31)			
5	Concerns about Congruence Among Mgmt. Systems	32	2.53	1.80	-.32 (32)	-.22 (32)	-.09 (30)	-.08 (32)		
6	Employee Involvement	34	4.38	2.01	.23 (32)	.10 (32)	.05 (30)	-.13 (32)	-.14 (31)	
7	Local Mgmt. Involvement	35	6.66	1.14	-.04 (33)	-.12 (33)	-.08 (31)	.02 (33)	-.13 (32)	.10 (34)
8	Corp. Mgmt. Involvement	35	3.74	2.09	-.07 (33)	.32 (33)	-.27 (31)	-.18 (33)	.12 (32)	.15 (34)
9	Work Group Climate	35	5.58	0.81	.38* (33)	.36 (33)	-.11 (31)	.39* (33)	-.12 (32)	.07 (34)
10	Open Communication	35	5.79	0.63	.12 (33)	.15 (33)	-.15 (31)	.25 (33)	-.20 (32)	.33 (34)
11	Employee Autonomy	35	5.19	1.16	.20 (33)	.18 (33)	-.02 (31)	-.06 (33)	-.38* (32)	.21 (34)
12	Job Variety	35	5.03	1.24	.04 (33)	.09 (33)	-.08 (31)	.05 (33)	.02 (32)	-.03 (34)
13	Reliance on Rules	35	4.69	1.20	-.24 (33)	-.29 (33)	-.22 (31)	.04 (33)	.12 (32)	.17 (34)
14	Innovation Index	35	14.26	4.33	.13 (33)	.03 (33)	-.07 (31)	-.07 (33)	.13 (32)	.08 (34)
15	External Pay Equity	33	5.77	0.95	.05 (31)	.09 (31)	-.07 (29)	-.06 (31)	-.23 (30)	-.12 (32)

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Table 2-20 (Continued)

Item Code	7	8	9	10	11	12	13	14
8	.25 (35)							
9	-.07 (35)	-.01 (35)						
10	.38* (35)	.16 (35)	.62*** (35)					
11	-.07 (35)	-.12 (35)	.41* (35)	.34* (35)				
12	-.12 (35)	.04 (35)	.59*** (35)	.52** (35)	.32 (35)			
13	.13 (35)	-.09 (35)	.11 (35)	.51** (35)	.28 (35)	.36* (35)		
14	.13 (35)	-.19 (35)	.15 (35)	.27 (35)	.36* (35)	.30 (35)	.23 (35)	
15	.34* (33)	.00 (33)	.06 (33)	.16 (33)	.09 (33)	.19 (33)	.10 (33)	.53** (33)

a The N for each correlation is in parentheses

   * p < .05
  ** p < .01
*** p < .001

Table 2-21

Independent Variables Grouped by Category

<u>Concerns Affecting the Decision to Use Pay-for-Knowledge</u>

QWL Concerns

Employee Withdrawal Concerns

Union Concerns

Productivity Concerns

Concerns About Congruence Among Management Systems

<u>Involvement in Developing and Installing the Pay-for-Knowledge System</u>

Employee Involvement

Local Management Involvement

Corporate Management Involvement

<u>Characteristics of the General Work Climate</u>

Work Group Climate

Open Communication

Employee Autonomy

<u>Organization System Variables</u>

Job Variety

Reliance On Rules

Innovation Index

External Pay Equity

measuring these factors were located in the questionnaire. This process led to the selection of seven variables that met the following criteria: 1) the variables were identified in the literature as being important in accounting for the success or failure of pay-for-knowledge plans; and 2) the variables were relatively easy to obtain through the questionnaire. The seven variables focus on contextual factors and the specific mechanics of the pay-for-knowledge system at each facility.

The first variable, age of the facility, indicates the number of years the facility had been in operation. The second variable, age of the pay-for-knowledge plan indicates the number of years the pay-for-knowledge plan had been in operation at the facility. Size of the facility was operationalized as the total number of employees at the facility. The variable startup indicates whether or not the facility was a "greenfield" site. If the number of years between the age of the facility and the age of the pay-for-knowledge plan was less than two years, the facility was coded as a startup facility and given a value of 1. If the difference was greater than or equal to two years, the facility was coded as a non-startup facility and given a value of 2. Number of skill units reflects the number of skill units included in the facility's pay-for-knowledge plan. Length of time before employees max-out is measured in weeks and was taken from each respondent's answer to the question, "How long should it take an average employee to learn the maximum number of skill units allowed?" Type of technology indicates the facility's predominant production process. Unit or small batch production was coded as 1, mass

production coded as 2, and continuous process production coded as 3.

In summary, seven variables were selected for the purpose of testing Hypothesis 3. The variables represent contextual factors and the specific mechanics of the pay-for-knowledge systems. The means, standard deviations, and intercorrelations among the seven variables are provided in Table 2-22. Because type of technology is a categorical variable with three categories, the correlation ratio, η, was computed instead of the Pearson correlation to indicate the strength of the relationship between type of technology and the other variables.

The seven variables were correlated with the success measures, and the best correlates of success were entered together into a multiple regression model. The four success measures were regressed separately on this "reduced" model. In order to test Hypothesis 3, the most consistent management philosophy predictors identified in the earlier analyses were added to the "reduced" model to create the "full" model. The four success measures were regressed on the "full" model to determine whether the addition of the management philosophy variables significantly improved the total variance explained.

Table 2-22
Means, Standard Deviations, and Intercorrelations Among
Contextual Factors and Specific Mechanics of the Pay-for-Knowledge System[a]

Item Code	Variables	N	Means	Std Dev	1	2	3	4	5	6
1	Age of the Facility	31	12.87	12.68						
2	Age of Pay-for-Knowledge Plan	34	6.62	4.38	.26 (30)					
3	Size of the Facility	35	758.29	1102.87	.17 (31)	-.29 (34)				
4	Startup	30	1.23	.43	.64*** (30)	-.32 (30)	.20 (30)			
5	Number of Skill Units	33	32.94	61.27	-.09 (30)	-.12 (32)	-.15 (33)	.25 (29)		
6	Time Before Employees Max-out	30	182.87	142.86	-.38 (27)	-.07 (29)	-.41* (30)	-.16 (26)	.20 (29)	
7	Type of Technology[b] [c]	32	–	–	.28 (28)	.23 (31)	.51* (32)	.14 (27)	.22 (31)	.41 (28)

[a] The N for each correlation is in parentheses

[b] Relationship between Type of Technology and the other variables are calculated as η's

[c] The frequencies for Type of Technology are as follows: unit/small batch production (N = 4), mass production (N = 12), continuous process production (N = 16)

* $p < .05$
** $p < .01$
*** $p < .001$

CHAPTER 3

RESULTS

This chapter describes the results obtained from the analyses.
The chapter is divided into three sections, one for each of the
hypotheses tested in the study. A summary of the results is provided
at the end of the chapter.

Results for Test of Hypothesis 1

Table 3-1 gives Pearson correlations between the success measures
and the independent variables. Hypothesis 1 stated that each
component of the management philosophy will be positively related to
the success of the pay-for-knowledge system. In partial support of
Hypothesis 1, most correlations between the four success measures and
the management philosophy manifestation measures were positive, though
many were non-significant.

Negative correlations were found in the first two categories of
independent variables: concerns affecting the decision to use
pay-for-knowledge and involvement in developing and installing the
pay-for-knowledge system. In particular, concerns about congruence
among management systems was negatively correlated with all four
success measures while corporate management involvement was negatively
correlated with productivity, employee attitudes, and employee
withdrawal. Both concern for QWL and employee withdrawal concerns
were negatively correlated with quality of output. The correlation
between employee involvement and employee attitudes was negative as
was the correlation between union concerns and employee attitudes.

Table 3-1
Pearson Correlations Between Success Measures and Independent Variables[a]

	Success Measures			
Independent Variables	Productivity	Quality of Output	Employee Attitudes	Employee Withdrawal
Concerns Affecting the Decision To Use Pay-for-Knowledge				
Concern for QWL	.35 (31)	-.02 (30)	.23 (32)	.25 (32)
Employee Withdrawal Concerns	.19 (31)	-.09 (30)	.21 (32)	.24 (32)
Union Concerns	.15 (29)	.14 (28)	.27 (30)	-.03 (30)
Productivity Concerns	.38* (31)	.20 (30)	.24 (32)	.28 (32)
Concerns about Congruence Among Mgmt. Systems	-.13 (30)	-.09 (29)	-.12 (31)	-.29 (31)
Involvement in Developing and Installing the Pay-for-Knowledge System				
Employee Involvement	.11 (32)	.19 (31)	-.04 (33)	.01 (33)
Local Mgmt. Involvement	.06 (33)	.26 (32)	.09 (34)	.08 (34)
Corp. Mgmt. Involvement	-.03 (33)	.00 (32)	-.12 (34)	-.08 (34)
Characteristics of the General Work Climate				
Work Group Climate	.69*** (33)	.49** (32)	.67*** (34)	.45** (34)
Open Communication	.48** (33)	.61*** (32)	.42* (34)	.44* (34)
Employee Autonomy	.33 (33)	.12 (32)	.35* (34)	.27 (34)
Organization System Variables				
Job Variety	.54** (33)	.53** (32)	.50** (34)	.49** (34)
Reliance on Rules	.09 (33)	.29 (32)	.07 (34)	.20 (34)
Innovation Index	.48** (33)	.31 (32)	.52** (34)	.46** (34)
External Pay Equity	.32 (31)	.19 (30)	.37* (32)	.49** (32)

[a] The N for each correlation is in parentheses

* p < .05
** p < .01
*** p < .001

The negative correlations between the success measures and the management philosophy manifestation measures were not strong, and many were near zero, thereby casting serious doubt on the significance of these patterns. Furthermore, none of these negative correlations was statistically significant.

In summary, the results showed only partial support for Hypothesis 1. Most of the management philosophy manifestation measures were positively related to the success measures, though many were non-significant. The few negative relationships found between the success and manifestation measures were also considered very weak.

Results for Test of Hypothesis 2

Hypothesis 2 stated that, when grouped together, the components of management philosophy will predict the success of the pay-for-knowledge system, and each component will contribute significantly to the prediction. Sixteen separate multiple regression analyses were used to test this hypothesis.

The results of the regression of the four success measures on the concerns affecting the decision to use pay-for-knowledge variables can be found in Table 3-2. In each case, the proportion of variation in the success measure explained by the model is not significant.

Regressing the success measures on the involvement in developing and installing the pay-for-knowledge system variables yielded similar results (See Table 3-3), explaining almost none of the variation in productivity (R^2 = .02, n.s.), quality of output (R^2 = .11, n.s.), employee attitudes (R^2 = .05, n.s.), and employee withdrawal (R^2 = .01, n.s.).

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Table 3-2
Results of Multiple Regression[a]
Concerns Affecting the Decision to Use Pay-for-Knowledge

Independent Variables	Productivity	Quality of Output	Employee Attitudes	Employee Withdrawal
Qwl Concerns	.13	-.26	.08	-.05
Employee Withdrawal Concerns	.07	-.08	.13	.26
Union Concerns	.17	.06	.27	-.04
Productivity Concerns	.26	.30	.14	.23
Concerns About Congruence Among Management Systems	-.14	-.23	-.09	.21
R^2	.21	.10	.16	.21
F	1.14	.46	.88	1.20
N	28	27	29	29

[a] Coefficients are standardized regression coefficients

  * $p < .05$
 ** $p < .01$
*** $p < .001$

Table 3-3
Results of Multiple Regression[a]
Involvement in Developing and Installing the Pay-for-Knowledge System

Independent Variables	Productivity	Quality of Output	Employee Attitudes	Employee Withdrawal
Employee Involvement	.11	.18	-.02	.01
Local Management Involvement	.06	.26	.14	.10
Corporate Management Involvement	-.03	-.14	-.20	-.07
R^2	.02	.11	.05	.01
F	.15	1.08	.46	.12
N	32	31	33	33

[a] Coefficients are standardized regression coefficients

  * $p < .05$
 ** $p < .01$
*** $p < .001$

Table 3-4 contains the regression results for the <u>general work</u> <u>climate</u> variables. For each of the four success measures, the general work climate variables explained a substantial portion of the variation. Forty-eight percent of the variance in the productivity measure was explained by work group climate, open communication, and employee autonomy (p<.001). Work group climate was the only significant predictor (β = .62, p<.01) of productivity.

The regression of employee attitudes on the same independent variables yielded a significant model explaining 45% of the variation (p<.001). Again, work group climate was the only significant predictor (β = .63, p<.01) of the success measure, employee attitudes.

Quality of output was regressed on the three independent variables yielding an R^2 of .42 (p<.01). Open communication was the only significant predictor (β = .52, p<.01) in the model. The regression of employee withdrawal on the general work climate measures also yielded a significant model (R^2 = .25, p<.05), but none of the independent variables showed significant coefficients.

Overall, this set of analyses provided partial support for Hypothesis 2, since general work climate explained significant proportions of the variance in all four success measures. Also, work group climate and open communication showed significant coefficients for some of the success measures. Employee autonomy failed to be a significant predictor for any measure of success.

The interpretation of the individual regression coefficients is uncertain, however, due to the presence of multicollinearity among work group climate, open communication, and employee autonomy (See

Table 3-4
Results of Multiple Regression[a]
Characteristics of the General Work Climate

Independent Variables		Productivity	Quality of Output	Employee Attitudes	Employee Withdrawal
Work Group Climate		.62**	.25	.63**	.28
Open Communication		.10	.52**	.01	.25
Employee Autonomy		.02	-.17	.07	.07
	R^2	.48	.42	.45	.25
	F	9.01***	6.76**	8.20***	3.38*
	N	33	32	34	34

[a] Coefficients are standardized regression coefficients

  * $p < .05$
 ** $p < .01$
*** $p < .001$

Table 2-20). Because of the multicollinearity, the estimated regression coefficients could vary widely from one sample to another, and the tests of significance for the individual regression coefficients are unstable. Multicollinearity also makes it unrealistic to assume that one can change one variable while holding the others constant. Therefore, the interpretation of the regression coefficients as measuring the change in the expected value of the dependent variable when the corresponding independent variable is increased by one unit (while holding all other independent variables constant) is unrealistic (Neter, Wasserman, and Kunter, 1985).

As can be seen in Table 3-5, when productivity was regressed on the organization system variables, the only significant predictor was the innovation index (β = .49, p<.05). The overall model was significant (p<.01) and explained 41% of the variation in the productivity measure. Similarly, when the employee attitudes index was regressed on the same variables, the model explained 45% of the variance (p<.01) and the innovation index was again the sole significant predictor (β = .51, p<.01). The regression of the employee withdrawal measure on the model yielded a significant model (R^2 = .38, p<.05), although none of the individual coefficients was statistically significant. Job variety, reliance on rules, the innovation index, and external pay equity were found to be of little use in predicting the quality of output measure (R^2 = .24, n.s.). The strength of the correlations between job variety and reliance on rules and between the innovation index and external pay equity (See Table 2-20) suggest that multicollinearity is also present among this set of

Table 3-5
Results of Multiple Regression[a]
Organization System Variables

Independent Variables		Productivity	Quality of Output	Employee Attitudes	Employee Withdrawal
Job Variety		.31	.34	.29	.29
Reliance on Rules		-.22	.07	-.23	-.03
Innovation Index		.49*	.20	.51**	.22
External Pay Equity		.01	.02	.06	.31
	R^2	.41	.24	.45	.38
	F	4.43**	1.95	5.49**	4.09*
	N	31	30	32	32

[a] Coefficients are standardized regression coefficients

  * $p < .05$
 ** $p < .01$
*** $p < .001$

predictors, making interpretations of the individual regression coefficients difficult.

In summary, these results lend partial support to Hypothesis 2. The models representing concerns affecting the decision to use pay-for-knowledge and involvement in developing and installing the pay-for-knowledge system were of little use in predicting the success measures. In contrast, general work climate explained significant proportions of the variance in all four success measures, while the organization system variables explained significant proportions of the variance in three of the four success measures. For the general work climate and organization system variables, the presence of multicollinearity among the predictors makes it difficult to interpret the individual regression coefficients with any degree of confidence.

Results for Test of Hypothesis 3

The preceding analyses identified several measures representing manifestations of the management philosophy as reasonable predictors of the four success measures. Of particular interest is the question of whether these predictors of success can be used to improve on the predictions based on other models. Hypothesis 3 stated that models using specific mechanics of pay-for-knowledge systems and contextual factors to predict success can be improved significantly by the addition of the management philosophy components.

To test Hypothesis 3, seven variables representing contextual factors and the specific mechanics of the pay-for-knowledge system were correlated with the four success measures used earlier in the study. Correlations between the success measures and the seven

variables are provided in Table 3-6. Because type of technology is a categorical variable with three categories, the correlation ratio, η, was computed instead of the Pearson correlation to indicate the strength of the relationship between type of technology and the success measures.

An analysis of Table 3-6 suggests that, although these variables are often considered to be important to success, few show any significant relationship with the success measures. The two strongest and most consistent correlates of the success measures are size of the facility and length of time before employees max-out. Size of the facility correlates with productivity ($r = -.44$, $p<.05$), while length of time before employees max-out correlates with productivity ($r = .41$, $p<.05$) and employee attitudes ($r = .40$, $p<.05$). Size of the facility and length of time before employees max-out are themselves correlated ($r = -.41$, $p<.05$; see Table 2-22). Only these two variables were retained in further analyses.

Using multiple regression, each success measure was regressed against size of the facility and length of time before employees max-out. The results of these regressions are shown in Table 3-7 as the "reduced" model. For productivity, the reduced model explained 23% of the variation ($p<.05$). The model was not significant, however, for predicting quality of output ($R^2 = .18$), employee attitudes ($R^2 = .17$), or employee withdrawal ($R^2 = .09$).

To test whether or not the management philosophy manifestation measures improve on the predictions of this model, the most consistent

Table 3-6
Pearson Correlations Between
Measures of Success and the Contextual Factors and
Specific Mechanics of the Pay-for-Knowledge Plan[a]

Contextual Factors and Specific Mechanics	Productivity	Success Measures Quality of Output	Employee Attitudes	Employee Withdrawal
Age of the Facility	-.18 (29)	-.39* (28)	-.16 (30)	-.22 (30)
Age of the Pay-for-Knowledge Plan	.31 (32)	.07 (31)	.29 (33)	.21 (33)
Size of the Facility	-.44* (33)	-.29 (32)	-.31 (34)	-.24 (34)
Startup	-.01 (28)	-.04 (27)	.01 (29)	.00 (29)
Number of Skill Units	.22 (31)	.08 (30)	.28 (32)	.00 (32)
Length of Time Before Employees Max-out	.41* (29)	.32 (28)	.40* (29)	-.09 (30)
Type of Technology[b]	.37 (30)	.10 (29)	.30 (31)	.14 (31)

[a] The N for each correlation is in parentheses

[b] Relationship between Type of Technology and the success measures are calculated as η's

* p < .05
** p < .01
*** p < .001

Table 3-7
Results of Multiple Regression for Reduced and Full Models

Dependent Variables	Reduced Model (Size, Max-out)			Full Model (Size, Max-out, Work Group Climate, Innovation Index)					
	R^2	F	N	R^2	F	N	ΔR^2	$F \Delta R^2$	df
Productivity	.23	3.82*	29	.56	7.64***	29	.33	9.09**	2,24
Quality of Output	.18	2.71	28	.29	2.35	28	.11	1.82	2,23
Employee Attitudes	.17	2.70	29	.64	10.46***	29	.46	15.26***	2,24
Employee Withdrawal	.09	1.32	30	.44	4.96**	30	.35	7.92**	2,25

  * p < .05
 ** p < .01
*** p < .001

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predictors from the earlier analyses were entered into the "full" model. Work group climate and the innovation index were selected, therefore, and added to the model containing size of the facility and length of time before employees max-out to create the full model. The results of the regressions of the success measures on the full model are shown in Table 3-7.

For productivity, the incremental contribution to the variance accounted for by the full model was significant ($F_{2,24}$ = 9.09, p<.01). Examining the full model, the improvement in prediction was also significant for employee attitudes ($F_{2,24}$ = 15.26, p<.001) and employee withdrawal ($F_{2,25}$ = 7.92, p<.01). The incremental contribution of the management philosophy variables to the prediction of quality of output, however, was not significant ($F_{2,23}$ = 1.82, n.s.). In summary, the improvement in explanation resulting from the addition of the management philosophy manifestation measures was significant for three of the four success outcomes, lending support for Hypothesis 3.

<div align="center">Chapter Summary</div>

The results from this study lend partial support to all three hypotheses. In partial support of Hypothesis 1, most of the management philosophy manifestation measures were positively related to the success measures, though many were non-significant. The few that were negatively related to the success measures also showed very weak relationships, suggesting their importance to success is minimal.

Hypothesis 2 received partial support from the sixteen multiple regression analyses. The model composed of <u>general work climate</u>

variables explained a substantial portion of the variation in all four success measures. The model composed of _organization system_ variables explained a substantial portion of the variation in three of the four success measures. Two other groups of variables were tested: _concerns affecting the decision to use pay-for-knowledge_, and _involvement in developing and installing the pay-for-knowledge system_. For the four success measures, the proportion of variation explained by these models was not significant.

Hypothesis 3 stated that models using specific mechanics of pay-for-knowledge and contextual factors to predict success could be improved by the addition of the management philosophy measures. In order to test this hypothesis, seven measures representing contextual factors and the specific mechanics of the pay-for-knowledge system were correlated with the success measures. The two best correlates were combined to form a "reduced" multiple regression model. Two management philosophy measures were then added to this model, forming the "full" model. The improvement in explanation resulting from the addition of the management philosophy manifestation measures was significant for three of the success outcomes (productivity, employee attitudes, and employee withdrawal) giving strong support for Hypothesis 3.

CHAPTER 4

DISCUSSION, IMPLICATIONS,
DIRECTIONS FOR FUTURE RESEARCH AND CONCLUSION

Discussion

Management philosophy was defined in Chapter 1 as <u>the set of</u>
<u>principles, values, beliefs, and assumptions about human nature that</u>
<u>are held by the management of the organization and that affect the way</u>
<u>the organization and its people are managed</u>. From this definition,
eight components of the management philosophy construct were
identified:

- Assumptions about people
- Attitude toward job design
- Attitude toward QWL and the overall work environment
- Assumptions about employee-management relationships
- Attitude toward work innovations and organizational change
- Attitude toward economic outcomes
- Attitude toward congruence among organization subsystems and
  design features
- Attitude toward organized labor

The important question to be answered in this study then is what
the results reveal about the importance of these principles, values,
beliefs and assumptions to the success of pay-for-knowledge systems.

The results of this study provide only limited support for the
hypotheses. As predicted, most of the management philosophy
manifestation measures were positively related to the success outcomes
experienced by the firms in the sample, although in many cases, the
relationships were not strong. The manifestations having the
strongest and most consistent linear relationship with the success

measures were work group climate, open communication, job variety, and the innovation index.

The work group climate index measures the interpersonal climate among employees at work, including intragroup conflict, internal fragmentation, and group cohesiveness. Although the work group climate may be a function of several factors, it is argued here that one important factor affecting the work group climate is the management philosophy being used. From this perspective, the work group climate is viewed as a manifestation of management's <u>attitude toward QWL and the overall work environment</u>. To the extent that management is truly concerned about QWL and the work environment, management is likely to be concerned with promoting a desirable work group climate.

Given the important role played by groups in most organizations (Hackman, 1976; Katz & Kahn, 1978), it is not surprising that these elements of the work group climate were correlated with the success measures. Two other factors should also be considered. First, many pay-for-knowledge plants organize employees into work teams (Gupta et al., 1986b). Second, peer groups are sometimes used to conduct performance appraisals and assess whether a fellow employee has satisfactorily learned a new skill (Lawler, 1982; Tosi & Tosi, 1986). Interestingly, DeNisi, Randolph, and Blencoe (1983) found that negative peer ratings had a significant negative impact on group cohesiveness. Given these circumstances, it is easy to see how work group climate could be related to the success measures.

The fact that open communication between management and employees was related to the four success measures is consistent with expectations. Open communication between management and employees creates a work environment in which information is used proactively. Expanding the dialogue between management and employees creates opportunities to improve both economic and human outcomes. Open communication is a manifestation of management's <u>assumptions about employee-management relationships</u>. It is difficult to imagine the presence of open communication without the presence of a management philosophy composed of strong beliefs about the importance of open communication to employee-management relationships and the need to foster open communication.

The relationship between job variety and each of the success measures provides evidence that job variety is very important. Job variety and other aspects of the way work is organized are manifestations of management's <u>attitude toward job design</u>, although job design is also influenced by the nature of the task. The results suggest that management's <u>attitude toward job design</u> may be a very important part of management philosophy.

The innovation index measures the extent to which work innovations are being used in the organization. The results suggest that organizations using <u>more</u> innovations were more successful in terms of productivity, employee attitudes, and employee withdrawal than were organizations with fewer innovations in place. Again, the underlying assumption is that management's <u>attitude toward work innovations and organizational change</u> is manifested in part by the

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presence or absence of work innovations. An organization with many innovations in place is likely to be driven by a management philosophy in practice characterized by a commitment to the concepts of work innovations and organizational change, and a willingness to take risks.

It is also likely that truly innovative organizations are more successful with pay-for-knowledge because they "believe" in the work innovation concept. Other firms with fewer innovations in place may be looking for "quick fix" innovations (Silberstein, 1982), suggesting that management may not be seriously committed to the innovation.

The results of the multiple regression analyses revealed that when the manifestations were grouped together, the set of general work climate measures and the set of organization system variables were reasonable predictors of the success measures. The general work climate measures consisted of the work group climate, open communication, and employee autonomy measures. The organization system variables consisted of job variety, reliance on rules, the innovation index, and external pay equity.

An important component of the management philosophy, management's assumptions about people, was represented in the multiple regression analyses by three manifestation measures: employee involvement in developing and installing the innovation, employee autonomy in decision making, and reliance on rules. It was argued that, to some extent, management's assumptions about people would be reflected in these measures. The results show that employee autonomy in decision

making and reliance on rules were components of significant regression models.

Manifestations of management's <u>attitude toward work innovations and organizational change</u> included local management involvement in developing and installing the innovation, corporate management involvement in developing and installing the innovation, and the innovation index. Again, the assumption was that some dimensions of management's <u>attitude toward work innovations and organizational change</u> would be reflected in these measures. The results reveal that only the innovation index was useful for prediction purposes.

One cannot conclude from these mixed results that management's <u>assumptions about people</u> are not important, since two of the three manifestation measures used to measure this component of the construct were a part of useful regression models. One is tempted to conclude, however, that certain dimensions of management's <u>assumptions about people</u> may not be important. The dimension manifested by employee involvement in developing and installing the innovation would appear suspect. Similarly, one might argue that the dimensions of management's <u>attitude toward work innovations and organizational change</u> manifested in local management involvement in developing and installing the innovation and corporate management involvement in developing and installing the innovation are unimportant.

It may be premature to arrive at these conclusions, however. Upon closer inspection of the results, what emerges is a pattern suggesting that the development and installation issues do <u>not</u> appear

to be important, regardless of what component they are intended to represent. The manifestation measures that were organized into the categories <u>concerns affecting the decision to use pay-for-knowledge</u> and <u>involvement in developing and installing the pay-for-knowledge system</u> proved to be of little use in predicting the success outcomes.

Alternatively, the important manifestations appear to be related to the <u>day-to-day</u> operations of the firm. This is consistent with Gupta et al. (1987) who suggest that it may not be the mechanics of pay-for-knowledge that are important, but rather how problems are handled as they develop. This interpretation suggests, for example, that involvement in <u>modifying</u> the pay-for-knowledge plan may be far more important than involvement in developing or installing the plan. Had employee involvement in the <u>day to day</u> operations been measured rather than employee involvement in the development and installation of the pay-for-knowledge system, this manifestation of the philosophy would likely have been important.

The same is true for the manifestations of management's <u>attitude toward QWL and the overall work environment</u>. The QWL and employee withdrawal concerns affecting the decision to use pay-for-knowledge were not important while work group climate and external pay equity were included in the better regressions models. The argument can also be made for the manifestations of management's <u>attitude toward job design</u>, <u>assumptions about employee-management relationships</u>, <u>attitude toward economic outcomes</u>, <u>attitude toward congruence among organization subsystems and design features</u>, and <u>attitude toward organized labor</u>.

Additional insight is gained if the results are viewed in terms of management philosophy in use versus espoused management philosophy. In this study, the decision to use manifestations of the management philosophy was made in part to insure that the focus would be on the management philosophy <u>in use</u> rather than the <u>espoused</u> management philosophy. This strategy may not have been completely successful. It is easy to argue that the day-to-day manifestations reflect the management philosophy in use. It is more difficult to defend the position that the manifestations during the design and planning stages of the innovation definitely reflect the management philosophy <u>in use</u>. They are more distant from the <u>day-to-day</u> operations of the organization and perhaps reflect something closer to the espoused management philosophy.

During the development of the pay-for-knowledge system, management can take steps to put the espoused philosophy into practice, but unless those steps are subsequently followed through in the day-to-day operations, the management philosophy in use will not reflect these principles. The categories <u>concerns affecting the decision to use pay-for-knowledge</u> and <u>involvement in developing and installing the pay-for-knowledge system</u> may not have been useful in predicting the success measures simply because they are not closely linked to the management philosophy in use on a day-to-day basis.

What all of this suggests is that the dimensions of the management philosophy components represented by the manifestations that were <u>not</u> important, probably <u>are</u> important. They must be measured, however, in ways they are manifested in the day-to-day

operations of the organization rather than in the design or installation stages.

Perhaps the most important finding in this study was the additional explanatory power gained through the use of the management philosophy manifestation measures along with size of the facility and length of time before employees max-out. The addition of the two predictors, work group climate and the innovation index, led to significant improvements in explaining the variation in productivity, employee attitudes, and employee withdrawal. This is particularly important in light of earlier research by Gupta et al. (1987), which found that neither the specific mechanics of pay-for-knowledge plans nor the contextual factors was particularly useful in predicting success of pay-for-knowledge systems. The present study suggests that management philosophy manifestations are linked to success and capable of improving predictions of whether or not an organization using pay-for-knowledge will experience these positive outcomes.

In summary, some of the management philosophy manifestation measures were related to the success measures, although many were not. The set of general work climate measures and the organization system variables were reasonable predictors of the success measures. The results suggest that the management philosophy practiced during the day-to-day operations may be closely linked to the successes experienced by the organization. More importantly, by adding two management philosophy manifestation measures to the model containing size of the facility and length of time before employees max-out,

significant improvements were made in explaining variations in productivity, employee attitudes, and employee withdrawal.

Implications for Managers

The results of this study have important implications for managers using pay-for-knowledge systems and those considering the use of pay-for-knowledge systems. The relationship between the success measures and the innovation index implies that using other work innovations in conjunction with pay-for-knowledge compensation is not a problem, and in fact, may actually improve chances of experiencing success. A strong argument can be made for implementing work innovations as a system, rather than on a piecemeal basis. It is quite possible that combining pay-for-knowledge with other work innovations has a synergistic effect, and that using a number of work innovations together conveys management's commitment to the work innovation concept. Another implication is that companies currently involved with other work innovations may wish to consider pay-for-knowledge as a viable method for compensating their employees.

Managers of organizations using pay-for-knowledge must assess their current management philosophy using the eight components as a guide. Managers must begin to ask themselves questions such as, "What are my assumptions about people? What is my attitude toward job design? What is my attitude toward QWL and the overall work environment?" Once these questions are answered, managers must identify the philosophy that is being communicated on a day-to-day basis. Where discrepancies exist, managers must make appropriate

changes and take steps to insure that the new philosophy will be communicated on a day-to-day basis.

For instance, a management philosophy which encourages open communication between management and employees is suggested by this study. Management must take steps to open the lines of communication and may find it useful to share more information with employees, including information typically reserved for management in traditional organizations (World of Work Report, 1984). Management must provide mechanisms for open communication between itself and the employees. A method commonly used to improve employee-management communication involves the elimination of status barriers. Many firms have eliminated time clocks and reserved parking for management, and changed to an all-salary work force, one cafeteria for both management and employees, and a flatter organizational structure (Engel, 1985; Lawler, 1978). This egalitarian approach to structuring the work environment suggests that the management philosophy is one that truly values open communication between employees and management.

The data also suggest that work group climate and job variety are important issues for having a successful pay-for-knowledge system. Management may want to give special attention to developing its philosophy in these areas. In the area of work group climate, the philosophy should be one characterized by strong beliefs in the importance of developing a positive work group climate, where the negative consequences of intragroup conflict are minimized. Management may wish to consider offering work groups training on ways to manage conflict effectively. Management may also decide to allow

employees to choose their own work group members, especially in cases where employees are organized into work teams. Including present employees in the selection process for new employees may facilitate work group cohesiveness and compatibility among group members (Lawler, 1980), although management must take precautionary steps to insure that hiring practices do not violate federal guidelines. It appears that anything management can do to encourage fellowship among employees and a "team" culture is well advised.

In the area of job variety, management would be wise to develop a philosophy consistent with the concept job variety in the work place. Managers may want to organize the skill units or jobs in their pay-for-knowledge system so that job variety is a natural outcome of the plan. As workers learn additional jobs or skills, they will not only be rewarded with increases in pay, but job variety as well.

In summary, managers may want to view work innovations as a work innovation system rather than a collection of different innovations. Treating the innovations as a system may allow managers to receive maximum benefits from the innovations. Management would also be well advised to assess its current management philosophy, and make changes as necessary to create a philosophy more consistent with the eight components, paying particular attention to the philosophy as it is communicated on a day-to-day basis.

Limitations of the Study

The results reported in this study must be interpreted with caution due to several limitations of the study. The strategy selected for this study, secondary data analysis, resulted in using

data from a questionnaire that was not designed specifically for the purpose of measuring the management philosophy construct. As a result, not all dimensions of the management philosophy construct were represented, placing limitations on the operationalization of the construct. The issue of methods variance must also be addressed. All of the items used in the study came from a questionnaire, and most items were of the same format (Likert-type scales).

Another limitation is that the measures used in this study are not objective measures, but rather rely on the perceptions of the respondents. For example, each respondent's perception of whether productivity had improved, stayed the same, or worsened was used rather than actual measures of productivity change. The study also assumes measurement of alpha change with respect to the success measures and does not control for beta or gamma change (Golembiewski, Billingsley, & Yeager, 1976). Moreover, the employees' perceptions were not measured in this study. For instance, a plant personnel director's perception of whether the organization had a lot of rules might differ considerably from the employees' perceptions. Clearly, the employees' perceptions are more likely to govern the employees' behavior and have a resulting impact on the success outcomes.

The three necessary conditions for causal inference (Campbell & Stanley, 1963) have not been met in this study, and therefore, causal inferences drawn must be treated with caution. It is entirely possible that the success "outcomes" are actually responsible for some of the "predictors" found in this study. A positive work group climate could be the result of the successes experienced at the

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facility rather than the cause. Furthermore, there was limited control for spurious effects.

The generalizability of the findings reported in this study may be limited. Due to the nature of the sample, the results may be relevant only to successful pay-for-knowledge plants.

There is also no way of insuring that the manifestation measures used in this study are indeed manifestations of the philosophy in use. Theoretically, external pay equity could exist without any conscious effort on the part of management.

In summary, the limitations present in this study necessitate that the results be interpreted with caution. The study relied on a strategy of secondary data analysis, thereby limiting the operationalization of the management philosophy construct. Conditions necessary to draw causal inferences were not met, and the extent to which the findings are influenced by methods variance is unknown. Most of the measures used in this study relied on the accuracy of respondents' perceptions, rather than "hard" measures. The generalizability of the findings may be limited to successful pay-for-knowledge plants.

Directions for Future Research

The results of this study suggest several possible directions for future research. More research focusing on both pay-for-knowledge systems and the management philosophy construct is warranted. One area for future research is to continue efforts to explicate and operationalize the management philosophy construct. Because this study was limited to those components of the management philosophy

that were available in the questionnaire, other important dimensions

of the management philosophy which were not measured in this study

must be included in future studies to determine their relative

importance. A logical next step is to develop and refine an

instrument that measures all critical components of the management

philosophy construct. A related area of research would involve the

explication and operationalization of the union philosophy construct,

with later work devoted to isolating the critical elements and their

relative importance to the success of an organization.

Smith, Mitchell, and Summer (1985) found support for the

hypothesis that management priorities change during different stages

of an organization's life cycle. The operationalization provided in

this study, however, treats the management philosophy construct as

relatively static. As our understanding of the management philosophy

construct improves, it may eventually be possible to determine whether

the management philosophy changes in different stages of the

organization's life cycle, and if so, in what ways.

Cross validation with another sample of pay-for-knowledge firms

would lend further support to the substantive results reported in this

study. Another important step is to look at organizations that use

work innovations other than pay-for-knowledge to determine whether or

not the results found in this study are generalizable to organizations

using work innovations in general. Given that organizations are

systems, it is likely that different philosophies will be required for

different types of organizations and that achieving the appropriate

"fit" may be difficult. Efforts should be undertaken to determine the

ways that management philosophy differs for companies using pay-for-knowledge systems, companies using innovations other than pay-for-knowledge systems, and traditional organizations and how these differences affect organizational success.

Future research should take steps to allow for comparisons between respondents and nonrespondents. Mitchell (1985) suggests that one include a postcard with each questionnaire requesting that, if the subject decides not to complete the questionnaire, he/she check the items on the postcard. This would allow for checks to determine if respondents differed from nonrespondents on a few critical variables (e.g., union/nonunion, facility size).

In summary, future research should focus on gaining a better understanding of both pay-for-knowledge systems and the management philosophy construct. Researchers must continue efforts to isolate the factors that are most critical to the success of pay-for-knowledge plans. Replications of this study would be useful, and steps should be taken to overcome some of the limitations of this study. Research on management philosophy must be aimed towards developing and refining an instrument that measures all critical components of the management philosophy construct.

Conclusion

This study advances our understanding of both the management philosophy construct and pay-for-knowledge compensation systems. The results of this study are intriguing, and it is hoped that this study will encourage more conceptual and empirical research in these two areas.

The findings suggest that management philosophy can indeed serve an important role in organizations using pay-for-knowledge systems. Management must take steps to develop a philosophy that promotes positive outcomes for the organization and its members. Particular attention must be paid to the philosophy as it is communicated through management's day-to-day actions.

The explication of the management philosophy construct provided in this study lays the groundwork for future research with the construct. The management philosophy in any organization is made up of many components, and it is likely that future research will uncover how these components differ with respect to their impact on the organization.

As the search for ways to improve organizational functioning continues, pay-for-knowledge will receive attention from practitioners and organizational researchers. Efforts aimed at gaining a better understanding of the dynamics of pay-for-knowledge will be well received. Much still remains to be discovered about pay-for-knowledge compensation and the management philosophy construct, and until more research is done, a substantial inadequacy will exist in our understanding of these concepts.

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APPENDIX

QUESTIONNAIRE

P
F
K
The University of Arkansas
Study of Pay-for-Knowledge Compensation Systems

Personnel Directors' Questionnaire

GENERAL INSTRUCTIONS

The questionnaire is divided into eight parts. Each part addresses a different set of issues about your Pay-for-Knowledge (PFK) plan, the features of your organization, and how your organization functions. Some questions ask about matters of fact; others ask for your perceptions, feelings, and evaluations. For matters of fact, please be as accurate as possible, without spending too much time searching records, computing new statistics, and so forth. For matters of perception, feelings, and evaluation, please be as honest and forthright as possible. The opinions of people like you who are intimately involved with Pay-for-Knowledge systems are extremely important to us as we examine how these systems work, their impact on organizations and their members, and their overall effectiveness.

In this questionnaire, we have adopted a standard terminology for features frequently associated with these kinds of compensation systems. The terms we use may be different from those you use in your organization. The term "Pay-for-Knowledge," as we use it throughout the questionnaire, refers to a compensation system wherein workers are paid a rate based on the repertoire of jobs they can perform, that is, their knowledge and mastery of different jobs in the organization. These compensation systems are known by a variety of labels such as Pay-for-Knowledge, Knowledge-Based-Pay, Skill-Based Pay, etc. For the sake of brevity, we refer to these and similar compensation systems as Pay-for-Knowledge or PFK in the questionnaire. Other terms such as facility or skill unit are defined in the questionnaire when they are first used. Please think of the features in your organization that most closely match these definitions when you are answering questions about them.

Special instructions are contained in boxes that appear before a set of questions. Please be sure to read the instructions and all the answers before choosing your own. If you feel that a question does not completely capture the essence of your reactions, please feel free to write additional comments in the margins, on extra sheets, or at the end of the questionnaire.

The number below is your unique identification number. It will be used only by our staff to identify your questionnaire and any comments you make. All your responses and your participation in the study will be held in the strictest confidence. No one outside our research staff will know your name, the name of your organization, or any of your specific answers and comments. All information will be presented in summary form only.

When you have completed the questionnaire, please put it in the enclosed postage-paid envelope, and return it to us.

Thank you very much for your cooperation. Your participation in this study makes it much more valuable and interesting.

•   •   •   •

This is your unique identification number:

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┌─────────────────────────────┐
│                             │
│                             │
│                             │
│                             │
└─────────────────────────────┘
```

What is your title? _____

Major product or service of your company: _____

PART I

The following information is needed to help us with the statistical analysis of the data. This information will allow comparisons among different organizations in the study and with other similar organizations.

All of your responses are strictly confidential. We appreciate your help in providing this important information.

Throughout the questionnaire, we will be using the term *facility* to refer to the specific plant, unit, or operation where you are employed.

> PLEASE ANSWER EACH OF THE QUESTIONS BELOW BY WRITING IN THE APPROPRIATE INFORMATION IN THE SPACES PROVIDED.

1. What is the total number of employees at the facility?

   _____

2. Please indicate the percent of employees at the facility that are in the following categories:

   Female .... _____ %
   Male .... _____ %

   _____
   100%

   American Indian or Alaskan Native _____ %
   Black non-Hispanic .... _____ %
   Asian or Pacific Islander .... _____ %
   Hispanic .... _____ %
   White non-Hispanic .... _____ %
   Other .... _____ %

   _____
   100%

3. What is the total number of employees at your facility who are covered under your Pay-for-Knowledge (PFK) plan(s)?

   _____

4. Please indicate the percent of PFK and non-PFK employees at the facility that are in the following categories:

Kinds of employees:	PFK Employees	Non-PFK Employees
Production	_____ %	_____ %
First line supervisors	_____ %	_____ %
Clerical	_____ %	_____ %
Skilled Trades	_____ %	_____ %
Professional/Technical ..	_____ %	_____ %
Managerial	_____ %	_____ %
Other (please specify)		
_____	_____ %	_____ %

   _____ _____
   100% 100%

Highest level of education completed:

	PFK Employees	Non-PFK Employees
No high school diploma	_____ %	_____ %
Completed high school or GED	_____ %	_____ %
Some college or technical school beyond high school (1-3 years)	_____ %	_____ %
College degree	_____ %	_____ %

   _____ _____
   100% 100%

5. Is this a service or a manufacturing facility? (Please check one)

   [1] service   [2] manufacturing

   > 5a. Which of the following would best describe the predominant production process?
   >
   > [1] unit or small batch production. The product is custom-made to individual customer specifications (for example, airplanes, locomotives, and printing jobs). Operations performed on each unit are typically nonrepetitive in nature.
   >
   > [2] mass production. The product is manufactured in assembly line fashion (for example, automobiles). Operations performed are repetitious, routine, and predictable.
   >
   > [3] continuous process production. The product is transformed from raw material to a finished good using a series of process transformations (for example, chemicals and oil refining).

6. Are any of your employees covered by collective bargaining agreements?

   [1] no   [2] yes ——► Go to Question 6a

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6a. For each of the following types of employees at your facility, please list the names of all unions with collective bargaining agreements covering this type of employee, and the percent of the PFK and non-PFK employees covered. (Please list all unions representing a given type of employee and provide the appropriate percentages for each).

Employee Type	Union name (please use the national/international union names, e.g., UAW)	% of PFK work force belonging to union	% of non-PFK work force belonging to union
Production	_____	_____ %	_____ %
First Line Supervisors	_____	_____ %	_____ %
Clerical	_____	_____ %	_____ %
Skilled Trades	_____	_____ %	_____ %
Professional/Technical	_____	_____ %	_____ %
Managerial	_____	_____ %	_____ %
Other (please specify)			
_____	_____	_____ %	_____ %

7. How many levels are there on the organizational chart for *your facility*?

_____ levels

8. On average, how many people report to a first line supervisor?

_____ people

9. What is the average length of service (in years) at your facility for the following groups of employees?

	PFK Employees		Non-PFK Employees	
Production	_____	years	_____	years
First line supervisors	_____	years	_____	years
Clerical	_____	years	_____	years
Skilled Trades	_____	years	_____	years
Professional/Technical	_____	years	_____	years
Managerial	_____	years	_____	years
Other (please specify)				
_____	_____	years	_____	years

10. PLEASE ANSWER THE QUESTIONS BELOW BY CHECKING THE APPROPRIATE NUMBER.

No changes in the past decade   Very frequent changes

a. In the last decade, how frequently have the major operating processes and technologies used in the industry changed? .... [1] [2] [3] [4] [5] [6] [7]

b. In the last decade, how frequently have the major operating processes and technologies used in your facility changed? .... [1] [2] [3] [4] [5] [6] [7]

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c. In the last decade, how frequently have there been major changes in products or services in your industry? .... [1] [2] [3] [4] [5] [6] [7]

d. In the last decade, how frequently have there been major changes in products or services at your facility? .... [1] [2] [3] [4] [5] [6] [7]

11. In what year did your facility begin operations?
_____

THE QUESTIONS BELOW CONCERN THE OVERALL COMPENSATION POLICY AT YOUR FACILITY FOR YOUR NON-MANAGERIAL PERSONNEL. PLEASE INDICATE THE ANSWERS TO EACH QUESTION BY CHECKING THE APPROPRIATE NUMBER.

---

12. How do your wage and/or salary rates compare with other employers in the same geographical area doing similar work?

[1] Considerably lower than others
[2] Somewhat lower than others
[3] About the same as others
[4] Somewhat higher than others
[5] Considerably higher than others

13. How much say do each of the following have in determining your overall compensation policies?

a. Corporate management .... [1] [2] [3] [4] [5] [6] [7]
b. Local management .... [1] [2] [3] [4] [5] [6] [7]
c. Employees .... [1] [2] [3] [4] [5] [6] [7]
d. Local union representatives .... [1] [2] [3] [4] [5] [6] [7] [8]
e. National/international union representatives .... [1] [2] [3] [4] [5] [6] [7] [8]
f. External consultants .... [1] [2] [3] [4] [5] [6] [7]
g. Internal consultants .... [1] [2] [3] [4] [5] [6] [7]
h. Other (please specify) .... [1] [2] [3] [4] [5] [6] [7]
_____

14. How important is each of the following in determining *pay raises*?

a. Education, training, and experience................. [1] [2] [3] [4] [5] [6] [7]
b. Responsibility and pressure on the job .... [1] [2] [3] [4] [5] [6] [7]
c. Quality of job performance......................... [1] [2] [3] [4] [5] [6] [7]
d. Productivity....................................... [1] [2] [3] [4] [5] [6] [7]
e. Amount of effort expended .... [1] [2] [3] [4] [5] [6] [7]
f. Working conditions................................. [1] [2] [3] [4] [5] [6] [7]
g. Seniority.. [1] [2] [3] [4] [5] [6] [7]
h. Number of skills possessed......................... [1] [2] [3] [4] [5] [6] [7]
i. Overall performance of the facility................. [1] [2] [3] [4] [5] [6] [7]
j. Total labor costs.................................. [1] [2] [3] [4] [5] [6] [7]
k. Work group performance .... [1] [2] [3] [4] [5] [6] [7]
l. Attendance .... [1] [2] [3] [4] [5] [6] [7]
m. Attitude .... [1] [2] [3] [4] [5] [6] [7]
n. External labor market .... [1] [2] [3] [4] [5] [6] [7]
o. Other (please specify) .... [1] [2] [3] [4] [5] [6] [7]
_____

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15. In general, how often are performance appraisals conducted for the following kinds of employees?

			Never
a. Production	every	_____ months	(0)
b. First line supervisors	every	_____ months	(0)
c. Clerical	every	_____ months	(0)
d. Skilled trades	every	_____ months	(0)
e. Professional/Technical	every	_____ months	(0)
f. Managerial	every	_____ months	(0)

16. In general, how often are wage and salary surveys conducted for the following kinds of employees?

			Never
a. Production	every	_____ months	(0)
b. First line supervisors	every	_____ months	(0)
c. Clerical	every	_____ months	(0)
d. Skilled trades	every	_____ months	(0)
e. Professional/Technical	every	_____ months	(0)
f. Managerial	every	_____ months	(0)

17. In general, how often are job evaluations conducted for the following kinds of employees?

			Never
a. Production	every	_____ months	(0)
b. First line supervisors	every	_____ months	(0)
c. Clerical	every	_____ months	(0)
d. Skilled trades	every	_____ months	(0)
e. Professional/Technical	every	_____ months	(0)
f. Managerial	every	_____ months	(0)

18. In general, how often are cost-of-living adjustments given to the following kinds of employees?

			Never
a. Production	every	_____ months	(0)
b. First line supervisors	every	_____ months	(0)
c. Clerical	every	_____ months	(0)
d. Skilled trades	every	_____ months	(0)
e. Professional/Technical	every	_____ months	(0)
f. Managerial	every	_____ months	(0)

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PART II

In this section, we would like to obtain some details about the Pay-for-Knowledge (PFK) plan(s) in use at your facility. Please answer these questions as accurately as you can. Some questions contained in this section ask for very specific and detailed information. If this information is not readily available, please give us your best estimate.

> PLEASE ANSWER EACH OF THE QUESTIONS BELOW BY CHECKING THE NUMBER WHICH BEST DESCRIBES YOUR ANSWER OR BY WRITING IN THE NECESSARY INFORMATION.

1. How many *different* PFK plans do you have at your facility?
   _____ plan(s)

2. What do you call your PFK plan(s)?
   _____
   _____
   _____

   • If you have only one PFK plan at your facility, please answer the following questions with respect to that plan.

   • If you have more than one PFK plan at your facility, think of the plan that *covers the most employees.* For the remainder of this part of the questionnaire, please answer the questions with *that* PFK plan in mind.

3. In what year was your PFK plan installed?
   _____

4. Was your facility the first one in the corporation to use PFK?

   [1] yes   [2] no   [8] don't know

5. Which *one* person or group first suggested using PFK at your facility?

   [01] Corporate management
   [02] Local management
   [03] Employees
   [04] Local union representatives
   [05] National/international union representatives
   [06] External consultants
   [07] Internal consultants
   [08] Somebody else (please specify) _____
   [98] Don't know whose idea it was

6. How involved were the following groups in the development and installation of your PFK plan?

	Not at all involved			Somewhat involved			Very heavily involved	No union
a. Corporate management	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
b. Local management	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
c. Employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
d. Local union representatives	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
e. National/international union representatives	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
f. External consultants	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
g. Internal consultants	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
h. Other (please specify) _____	[1]	[2]	[3]	[4]	[5]	[6]	[7]	

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7. In what ways have you substantially modified your PFK plan?

_____

_____

_____

8. How involved were the following groups in modifying the PFK plan?

	Not at all involved			Somewhat involved			Very heavily involved	No union
a. Corporate management	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
b. Local management	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
c. Employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
d. Local union representatives	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
e. National/international union representatives	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
f. External consultants	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
g. Internal consultants	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
h. Other (please specify)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	

_____

Common to almost all PFK plans is the notion of some *unit* of skill, knowledge, training, etc., that forms the basis for determining an employee's pay, either directly or indirectly. These units are called different things in different organizations. Some common terms are skill blocks, skills, tasks, jobs, knowledge units, and skill units.

9. What term does your facility use for these "units of knowledge?"

_____

* For simplicity, in the remainder of this questionnaire, we will use the term *skill units* to refer to these basic components of PFK plans.

10. How many skill units does your PFK plan include?
_____ skill units

11. What is the *maximum* number of skill units an employee is allowed to learn in the PFK plan?
_____ skill units

12. What is the *minimum* number of skill units an employee *must* learn in the PFK plan?
_____ skill units

13. What is the average number of weeks required to learn a skill unit?
_____ weeks

13a. What is the minimum number of weeks?
_____ weeks

13b. What is the maximum number of weeks?
_____ weeks

14. How long should it take an average employee to learn the maximum number of skill units allowed?
_____ weeks

15. How many skill units do employees *typically* learn under your PFK plan?
_____ skill units

16. After employees have completed one skill unit, how many weeks must they perform that skill unit before being eligible to begin learning a new skill unit?
_____ weeks

17. Not including learning time, how many weeks may employees perform one skill unit before they *must* move on to another skill unit?
_____ weeks

18. How many skill units can employees typically *stay competent* in?
_____ skill units

19. How do you determine when an employee has learned a skill unit?

_____

_____

_____

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20. How much say do the following people have in determining if an employee has completed a skill unit successfully?

	No say at all			A moderate amount of say			Makes final decision	No union
a. The employee	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
b. Coworkers	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
c. First line supervisor	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
d. Higher management	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
e. Union representatives	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
f. Other (please specify)	[1]	[2]	[3]	[4]	[5]	[6]	[7]	

21. How is compensation for skill units determined?

[1] skill units are tied to points (accumulated points lead to wage increases)
[2] skill units are tied directly to wage increases
[3] other (please specify) _____

22. Are all skill units worth the same in the overall PFK system?

[1] yes, they're worth the same
[2] no, they're worth different amounts

The following questions concern compensation rates *for your PFK employees*. As with all answers in the questionnaire, the information you provide will be kept strictly confidential.

23. What is the wage rate for newly hired employees?

$ _____ /hour

23a. Is this more than, less than, or about the same as they would be able to earn elsewhere for a comparable job?

[1] more   [2] about the same   [3] less

24. What is the hourly wage rate for employees while they are learning the first skill unit?

$ _____ /hour

24a. Is this more than, less than, or about the same as they would be able to earn elsewhere for a comparable job?

[1] more   [2] about the same   [3] less

25. What is the hourly rate for employees who have completed the *maximum number* of skill units allowed?

$ _____ /hour

25a. Is this more than, less than, or about the same as they would be able to earn elsewhere?

[1] more   [2] about the same   [3] less

26. To what extent is an employee's pay affected by the following factors?

	Not at all			To some extent			Completely
a. The number of skill units learned	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. How well each skill unit is performed	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. How well each skill unit is retained	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Other factors (please specify)							
_____	[1]	[2]	[3]	[4]	[5]	[6]	[7]
_____	[1]	[2]	[3]	[4]	[5]	[6]	[7]
_____	[1]	[2]	[3]	[4]	[5]	[6]	[7]

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27. What happens when an employee is ready to move to a new skill unit, but there is no vacancy to move to?

[1] employee must wait, but receives temporary compensatory pay.

[2] employee must simply wait for an opening with no change in pay.

[3] other. (Please describe) _____

_____

28. When more than one person is ready to learn a skill unit but only one position is vacant, what criteria are used to determine which individual gets the job?

_____

_____

29. How would an employee's pay be affected if a technological change eliminated one or more of an employee's skill units?

[1] No change in hourly wage rate

[2] Hourly wage rate is frozen until an alternative skill unit is completed

[3] Hourly wage rate is adjusted downward

29a. What other adjustments to your PFK plan would a technological change cause?

_____

_____

30. When is training for new skill units conducted?

[1] training is conducted during employees' regular work hours and the employees are paid for this time

[2] training is conducted on employees' own time (not regular work hours), but employees are paid for this time

[3] training is conducted on employees' own time (not regular work hours), and employees are not paid for this time

[4] other (please specify) _____

31. Does your PFK plan . . .

	Yes	No
a. . . . require that skill units must be learned in a specific order?	[1]	[2]
b. . . . provide refresher training for skill units already mastered?	[1]	[2]
c. . . . require refresher exams for skill units previously mastered?	[1]	[2]

32. Do you have a formalized procedure for ensuring that employees *retain* proficiency in previously completed skill units?

[1] no   [2] yes

32a. What is the procedure?

_____

_____

33. Organizations include many different dimensions in their performance appraisal systems. What dimensions does your organization include in its performance appraisal of PFK employees and what formal weight (as a percentage) is given to each dimension?

Dimension	Percentage of Overall Evaluation
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
	100%

34. Performance appraisals for PFK employees occur . . .

[1] . . . when a new skill unit is acquired

[2] . . . at a specified time interval, independent of skill acquisition What time interval? _____

[3] . . . After a combination of skill acquisition and time interval (please describe) ___

[4] . . . other (please specify) _____

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35. Who can initiate a performance appraisal for a PFK employee?

	Cannot Initiate	Can initiate	
a. The employee's supervisor............	[1]	[2]	
b. The employee's coworkers............	[1]	[2]	
c. The employees themselves...........	[1]	[2]	No union
d. Higher management	[1]	[2]	
e. Union representatives	[1]	[2]	[8]
f. Other (please specify)...............	[1]	[2]	

35a. Of the above, who typically makes the final decision about the outcome of an employee's performance appraisal?

_____

36. Please *briefly* **describe your layoff policy for PFK employees in an economic downturn.**

_____
_____
_____

36a. How does the policy differ from what it would be if you did not have a PFK plan?

_____
_____

36b. How does it differ from the layoff policy for employees who are not part of the PFK plan?

_____
_____

● If you have *only one* PFK plan, please skip Question 37 and go to Part III, page 12.

● If you have *more than one* PFK plan, please answer the next question.

37. HOW SIMILAR ARE YOUR DIFFERENT PFK PLANS ALONG THE FOLLOWING DIMENSIONS?

	Not at all similar			Somewhat similar			Virtually identical
a. Extent of unionization.................................	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. Kinds of employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Kinds of jobs...	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Number of skill units an employee can learn..........	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. Length of time it takes an employee to learn a skill unit..	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. Relative emphasis on mastery of the skill.............	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Length of time an employee must stay in a skill unit before moving to a new one..........................	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Whether employees must show mastery of previously learned skills...	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. The extent to which employees are involved in the day to day administration of the PFK plan.................	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. The speed with which employees can progress through the skill units...	[1]	[2]	[3]	[4]	[5]	[6]	[7]
k. The pay rates associated with each new skill unit.....	[1]	[2]	[3]	[4]	[5]	[6]	[7]
l. The reactions of first line supervisors to the use of PFK..	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. The problems encountered using the PFK plan.......	[1]	[2]	[3]	[4]	[5]	[6]	[7]
n. Employee attitudes towards the PFK plan............	[1]	[2]	[3]	[4]	[5]	[6]	[7]
o. The overall success of the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]

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PART III

Organizations decide to adopt PFK plans for many reasons, and attach different degrees of importance to these reasons. In this section, please think back to the time *your facility* decided to use a PFK plan.

1. TO WHAT EXTENT DID THE FOLLOWING CONSIDERATIONS AFFECT THE DECISION TO USE PFK IN YOUR FACILITY?	Not at all	To some extent		To a large extent		To a very great extent	
a. Dollar savings	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. Smaller workforce size	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Increased productivity	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Flexibility in placing employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. Better quality of work life	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. Higher employee commitment	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Improved employee motivation	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Greater employee satisfaction	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. Lower absenteeism	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. Fewer layoffs	[1]	[2]	[3]	[4]	[5]	[6]	[7]
k. Reduced voluntary turnover	[1]	[2]	[3]	[4]	[5]	[6]	[7]
l. Lower tardiness	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. Improved employee performance	[1]	[2]	[3]	[4]	[5]	[6]	[7]
n. A desire to keep company non-unionized	[1]	[2]	[3]	[4]	[5]	[6]	[7]
o. A desire to reduce union influence	[1]	[2]	[3]	[4]	[5]	[6]	[7]
p. Pressure from organized labor	[1]	[2]	[3]	[4]	[5]	[6]	[7]
q. Better labor-management relationships	[1]	[2]	[3]	[4]	[5]	[6]	[7]
r. Corporate policies about using PFK	[1]	[2]	[3]	[4]	[5]	[6]	[7]
s. Corporate directive to use PFK	[1]	[2]	[3]	[4]	[5]	[6]	[7]
t. Corporate policies about the use of innovative management techniques	[1]	[2]	[3]	[4]	[5]	[6]	[7]
u. Employee growth and development	[1]	[2]	[3]	[4]	[5]	[6]	[7]
v. To be consistent with other management systems	[1]	[2]	[3]	[4]	[5]	[6]	[7]
w. A desire to pay employees competitive wages	[1]	[2]	[3]	[4]	[5]	[6]	[7]
x. A desire to increase the pay rates for employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
y. A desire to reduce the external marketability of the workforce	[1]	[2]	[3]	[4]	[5]	[6]	[7]
z. Other (please specify)	[1]	[2]	[3]	[4]	[5]	[6]	[7]

2. How would you rate the overall success of your PFK plan?

Very unsuccessful   [1] [2] [3] [4] [5] [6] [7]   Very successful

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PART IV

Part IV of the questionnaire concerns the impact of your PFK plan on organized labor, their involvement with the plan, and their reactions to it.

● Are any of your PFK employees covered by collective bargaining agreements?
[1] No ——► Please skip Part IV and go to Part V, page 17.
[2] Yes ——► Please answer the questions in this part of the questionnaire.

---

1. THE FOLLOWING ARE POSSIBLE CONCERNS THAT ORGANIZED LABOR COULD HAVE ABOUT A PFK PLAN. WERE THE FOLLOWING MAJOR CONCERNS OF THE UNION(S) REPRESENTING YOUR PFK EMPLOYEES AT THE TIME YOUR PLAN WAS BEING DEVELOPED?

		Yes	No
a.	The length of time to learn a skill unit	[1]	[2]
b.	Jurisdictional disputes as workers move across skill units	[1]	[2]
c.	Who decides when a skill unit has been learned	[1]	[2]
d.	How one decides when a skill unit has been learned	[1]	[2]
e.	How much say the union would have in who learned which skill unit	[1]	[2]
f.	How much say the union would have in the job assignment process	[1]	[2]
g.	The pay increment associated with each skill unit	[1]	[2]
h.	Potential conflicts between pay for seniority and pay for knowledge	[1]	[2]
i.	Implications of PFK for layoff policies	[1]	[2]
j.	How much say the union would have in who gets to work overtime	[1]	[2]
k.	The implications of PFK for the size of the workforce	[1]	[2]
l.	Other (please specify)	[1]	[2]

---

2. ARE THE FOLLOWING MAJOR CONCERNS OF YOUR UNION(S) NOW THAT THE PFK PLAN IS IN OPERATION?

		Yes	No
a.	The length of time to learn a skill unit	[1]	[2]
b.	Jurisdictional disputes as workers move across skill units	[1]	[2]
c.	Who decides when a skill unit has been learned	[1]	[2]
d.	How one decides when a skill unit has been learned	[1]	[2]
e.	How much say the union has in who learned which skill unit	[1]	[2]
f.	How much say the union has in the job assignment process	[1]	[2]
g.	The pay increment associated with each skill unit	[1]	[2]
h.	Conflicts between pay for seniority and pay for knowledge	[1]	[2]
i.	Implications of PFK for layoff policies	[1]	[2]
j.	How much say the union would have in who gets to work overtime	[1]	[2]
k.	The implications of PFK for the size of the workforce	[1]	[2]
l.	Other (please specify)	[1]	[2]

PLEASE ANSWER THE FOLLOWING QUESTIONS.

3. How involved were unions in developing the *broad objectives* of your PFK plan?

[1] not at all
[2] kept informed
[3] actively consulted
[4] heavily involved
[5] jointly developed by union and management

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4. How involved were unions in developing the *details* of your PFK plan?

[1] not at all
[2] kept informed
[3] actively consulted
[4] heavily involved
[5] jointly developed by union and management

5. In the past year, about how many times (excluding contract negotiations and grievances) have you met with union representatives to discuss the PFK plan?
_____ times

5a. To what extent did these meetings affect the PFK plan?

Not at all [1] [2] [3] [4] [5] [6] [7] To a very great extent

6. How much say do you think each of the following had in contract negotiations about the PFK plan?

	No say at all		A moderate amount of say			A great deal of say	
a. Union rank and file	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. Shop stewards	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Local union leadership	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. National/international union leadership	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. Local management	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. Corporate management	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Consultants/lawyers	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Mediators/arbitrators	[1]	[2]	[3]	[4]	[5]	[6]	[7]

> THE FOLLOWING QUESTIONS CONCERN THE EFFECT OF PFK ON CONTRACT ADMINISTRATION.

7. How many grievances *in total* have been filed in the past year?
_____ grievances

7a. How many of these were settled at the first step?
_____ grievances

7b. How many went to arbitration?
_____ grievances

8. How many grievances have been filed *on PFK issues* in the past year?
_____ grievances

8a. How many were settled at the first step?
_____ grievances

8b. What were the issues involved in grievances settled at the first step?
_____
_____
_____

8c. How many went to arbitration?
_____ grievances

8d. What were the issues involved in grievances that went to arbitration?
_____
_____
_____

9. Other than the grievance procedure, are there mechanisms for union-management interaction around PFK-related problems?

[1] no   [2] yes

9a. What are they?
_____

9b. Are these mechanisms specified in the collective bargaining agreement?

[1] yes   [2] no

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10. Have you or the union filed any unfair labor
practice charges in the past year?

[1] no   [2] yes

10a. How many? _____ charges
10b. How many were PFK-related? _____ charges
10c. What were the PFK issues involved?

_____
_____
_____

11. PLEASE DESCRIBE BRIEFLY THE SENIORITY RIGHTS SPECIFIED IN YOUR CURRENT COL-
LECTIVE BARGAINING CONTRACT WITH REGARD TO EACH OF THE FOLLOWING.

a. Layoffs and recalls _____
_____
_____

b. Overtime _____
_____
_____

c. Job assignments _____
_____
_____

d. Eligibility for training _____
_____
_____

12. How are these rights different from what they would have been without a PFK plan?

_____
_____
_____

13. Does the collective bargaining agreement specify how employees move from one skill unit to another?

[1] yes   [2] no

14. HOW MUCH DO YOU AGREE OR DIS-
AGREE WITH EACH OF THE STATE-
MENTS BELOW?

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
a. All in all, the unions are very supportive of our PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. The unions are always threatening to file grievances about the PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. The use of a PFK plan has complicated our collective bargaining process considerably	[1]	[2]	[3]	[4]	[5]	[6]	[7]

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15. How has union influence at your facility changed as a result of the PFK plan?

    (1) greatly decreased
    (2) decreased somewhat
    (3) remained the same
    (4) increased somewhat
    (5) greatly increased

16. Relationships between unions and management can range from being very hostile to being very cooperative. Overall, how would you rate the union-management relationship in your facility?

    Very hostile   (1) (2) (3) (4) (5) (6) (7)   Very cooperative

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PART V

PFK plans rarely occur in isolation; they are usually accompanied by other organizational features that are different from those found in many organizations. This part concerns the other organizational features at your facility.

> 1. DOES YOUR FACILITY HAVE THE FOLLOWING KINDS OF FEATURES FOR ITS NON-MANAGERIAL EM-PLOYEES?

		Yes	No
a.	Team approach to management	[1]	[2]
b.	Enriched jobs	[1]	[2]
c.	Open architectural design	[1]	[2]
d.	Open door policies	[1]	[2]
e.	Formal suggestion systems	[1]	[2]
f.	An assessment center type of approach for selection	[1]	[2]
g.	Quality circles	[1]	[2]
h.	Autonomous work groups	[1]	[2]
i.	Management by objectives	[1]	[2]
j.	Lump sum salary increases	[1]	[2]
k.	Interpersonal skills training	[1]	[2]
l.	Life and career planning programs	[1]	[2]
m.	Matrix organizational design	[1]	[2]
n.	Human resources planning	[1]	[2]
o.	Alternative work schedules (flextime)	[1]	[2]
p.	All salary workforce	[1]	[2]
q.	Job sharing	[1]	[2]
r.	Two-tier wage systems	[1]	[2]
s.	Permanent part-time employment	[1]	[2]
t.	Employee stock ownership plan	[1]	[2]
u.	Employee participation in major personnel decisions (hiring, terminations, performance appraisals, etc.)	[1]	[2]
v.	Employee participation in major organizational decisions (excluding collective bargaining issues)	[1]	[2]
w.	Organization-wide bonus systems	[1]	[2]
x.	Profit sharing	[1]	[2]
y.	Cafeteria style benefit plan	[1]	[2]
z.	Other (please specify)	[1]	[2]

2. What, if any, organizational systems or features were specifically designed to be consistent with your PFK plan?

_____

_____

_____

_____

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PART VI

Some corporations have identical PFK plans in several facilities, while others have very different plans in each facility. This part of the questionnaire concerns similarities between your PFK plan and those in other facilities of your corporation.

● Are there other facilities in your corporation that use PFK plans?

[1] No ——▶ Please skip Part VI and go to Part VII, page 19.

[2] Yes ——▶ Please complete the remainder of Part VI of the questionnaire.

1. BELOW ARE SEVERAL DIMENSIONS ALONG WHICH PFK PLANS CAN VARY. HOW SIMILAR ARE THE OTHER PLANS IN YOUR CORPORATION TO THE ONE USED IN YOUR FACILITY ALONG EACH OF THE FOLLOWING DIMENSIONS?

	Not at all similar			Somewhat similar			Virtually identical	
a. The extent to which unionized employees are covered under the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
b. The kinds of employees covered under the PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
c. The number of skills an employee can learn under the PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
d. The extent to which pay rates are based on number of skill units learned vs. how well each skill unit is learned	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
e. Length of time an employee must stay in a skill unit before progressing to the next one	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
f. Whether employees must periodically show retention of previously learned skills	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
g. The extent to which employees are involved in the day-to-day administration of the PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
h. The extent to which corporate management stands behind the PFK plan through difficult times	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
i. The day-to-day difficulties that using a PFK plan has caused	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
j. How favorably employees have reacted to the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
k. How much local management favors the use of PFK	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
l. How much corporate management supports PFK	[1]	[2]	[3]	[4]	[5]	[6]	[7]	No union
m. How much local unions (if any) support the PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
n. The overall success of the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
o. The overall problems encountered because of the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	

2. Taking everything into consideration, how similar are *the details* of your PFK plan to those used in other facilities of your corporation.

Not at all similar   [1] [2] [3] [4] [5] [6] [7]   Extremely similar

3. Taking everything into consideration, how similar have *your experiences* in using PFK been to those of your corporation's other facilities?

Not at all similar   [1] [2] [3] [4] [5] [6] [7]   Extremely similar

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PART VII

The following questions concern your perceptions of your facility, and the effects of PFK on your facility and its employees.

1. MANY ELEMENTS CAN CONTRIBUTE TO THE SUCCESS OF A PFK PLAN. TO WHAT EXTENT DO THE ELEMENTS LISTED BELOW ACCOUNT FOR ANY SUCCESSES YOU HAVE HAD USING YOUR PFK PLAN?	Not at all	To some extent	To a large extent	To a very great extent			
a. On average higher pay rates for employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. Emphasis on employee growth and development	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Ability to move employees from one job to another as needed	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Emphasis on employee training	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. Local managerial commitment to the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. Corporate management commitment to the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Training supervisors in performance appraisals	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Training supervisors in administering the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. Employee participation in the development of the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. Employee participation in the administration of the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]	No union
k. Participation by the union	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
l. The particular demographic make-up of the work force	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. Employee commitment	[1]	[2]	[3]	[4]	[5]	[6]	[7]
n. The overall management philosophy of the organization	[1]	[2]	[3]	[4]	[5]	[6]	[7]
o. Employee selection procedures	[1]	[2]	[3]	[4]	[5]	[6]	[7]
p. The fact that the plan was installed at the facility's start-up	[1]	[2]	[3]	[4]	[5]	[6]	[7]

2. What other elements account for any successes you have had with your PFK plan?

_____

_____

3. TO WHAT EXTENT HAVE THE FOLLOWING FACTORS BEEN RESPONSIBLE FOR ANY DIFFICULTIES YOU HAVE EXPERIENCED WITH YOUR PFK PLAN?	Not at all	To some extent	To a large extent	To a very great extent			
a. Employee resistance	[1]	[2]	[3]	[4]	[5]	[6]	[7]	No union
b. Union resistance	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
c. Nature of your technology	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Lack of corporate support	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. "Kinks" in the actual working of the plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. Differences in compensation systems for different employee subgroups	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Resentment by employees not covered by PFK	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Performance appraisals	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. Insufficient training of supervisors	[1]	[2]	[3]	[4]	[5]	[6]	[7]

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	Not at all		To some extent	To a large extent		To a very great extent		No union
j. Resentment by supervisors	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
k. Changes in the external economy	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
l. Changes in the financial health of your organization	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
m. Lack of coordination among departments	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
n. Instability in the make-up of departments	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
o. Conflicts with government regulations	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
p. Not selecting the "right" employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
q. Inadequate training of employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]	
r. Legal challenges	[1]	[2]	[3]	[4]	[5]	[6]	[7]	

4. What other factors are responsible for any difficulties you have experienced with your plan?

_____

_____

_____

5. TO WHAT EXTENT HAS YOUR PFK PLAN BEEN SUCCESSFUL IN PROMOTING THE FOLLOWING OUTCOMES?

	Not at all		To some extent	To a large extent		To a very great extent
a. Improved employee satisfaction	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. Greater workforce flexibility	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Labor cost reductions	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Increased output per hour worked	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. Enhanced employee motivation	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. More employee commitment	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Lowered absenteeism	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Fewer layoffs	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. Reduced voluntary turnover	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. Better labor-management relationships	[1]	[2]	[3]	[4]	[5]	[6]	[7]
k. Better employee-management relationships	[1]	[2]	[3]	[4]	[5]	[6]	[7]

6. Taking *everything* into consideration, how successful would you say your PFK plan has been?

Not at all successful   [1]   [2]   [3]   [4]   [5]   [6]   [7]   Very successful

7. PLEASE THINK ABOUT NON-MANAGERIAL EMPLOYEES AT YOUR FACILITY. INDICATE WHETHER THE RATES OF THE FOLLOWING ARE HIGHER FOR PFK EMPLOYES OR NON-PFK EMPLOYEES.

	PFK employees much higher	PFK employees higher	About the same	Non-PFK employees higher	Non-PFK employees much higher
a. Intra-departmental transfers	[1]	[2]	[3]	[4]	[5]
b. Inter-departmental transfers	[1]	[2]	[3]	[4]	[5]
c. Promotions	[1]	[2]	[3]	[4]	[5]
d. Voluntary terminations	[1]	[2]	[3]	[4]	[5]
e. Layoffs	[1]	[2]	[3]	[4]	[5]
f. Other involuntary terminations	[1]	[2]	[3]	[4]	[5]
g. Absenteeism	[1]	[2]	[3]	[4]	[5]
h. Tardiness	[1]	[2]	[3]	[4]	[5]

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Column headers (diagonal): Considerably fewer — Fewer — About the same — More — Considerably more

	[1]	[2]	[3]	[4]	[5]
a. Production	[1]	[2]	[3]	[4]	[5]
b. First line supervisors	[1]	[2]	[3]	[4]	[5]
c. Clerical	[1]	[2]	[3]	[4]	[5]
d. Skilled trades	[1]	[2]	[3]	[4]	[5]
e. Administrative	[1]	[2]	[3]	[4]	[5]
f. Professional/Technical	[1]	[2]	[3]	[4]	[5]
g. Managerial	[1]	[2]	[3]	[4]	[5]
h. Other (please specify)	[1]	[2]	[3]	[4]	[5]

_____

```
┌─────────────────────────────────────┐
│ 9. COMPARED TO NON-PFK FACILITIES SIM- │
│    ILAR TO YOURS, HAVE YOUR EXPERI-    │
│    ENCES IN THE FOLLOWING AREAS BEEN   │
│    BETTER, WORSE, OR ABOUT THE SAME?   │
└─────────────────────────────────────┘
```

Column headers (diagonal): Ours are much worse — Ours are somewhat worse — About the same — Ours are somewhat better — Ours are much better

	[1]	[2]	[3]	[4]	[5]	
a. Absence rates	[1]	[2]	[3]	[4]	[5]	
b. Tardiness rates	[1]	[2]	[3]	[4]	[5]	
c. Layoff rates	[1]	[2]	[3]	[4]	[5]	
d. Rates or other involuntary terminations	[1]	[2]	[3]	[4]	[5]	
e. Quit rates	[1]	[2]	[3]	[4]	[5]	
f. OSHA injury rates	[1]	[2]	[3]	[4]	[5]	
g. Grievance rates	[1]	[2]	[3]	[4]	[5]	No union
h. Productivity	[1]	[2]	[3]	[4]	[5]	
i. Union-management relationships	[1]	[2]	[3]	[4]	[5]	[8]
j. Employee-management relationships	[1]	[2]	[3]	[4]	[5]	
k. Employee-union relationships	[1]	[2]	[3]	[4]	[5]	[8]
l. Supervisor-employee relationships	[1]	[2]	[3]	[4]	[5]	
m. Employee motivation	[1]	[2]	[3]	[4]	[5]	
n. Employee performance	[1]	[2]	[3]	[4]	[5]	
o. Quality of product or service	[1]	[2]	[3]	[4]	[5]	

10. Compared to what it would be if you didn't have a PFK plan, are your PFK employees . . .

[1]. . . less likely to be laid-off in an economic downturn
[2]. . . just as likely to be laid-off in an economic downturn
[3]. . . more likely to be laid-off in an economic downturn

11. Have any discrimination charges been filed against your facility in the past year?

[1] no   [2] yes

11a. How many _____
11b. How many were PFK-related? _____
11c. What were the PFK issues? _____
     _____
     _____
     _____

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12. Have any wage-and-hour violation charges been filed against your facility in the past year?

[1] no   [2] yes

12a. How many? _____
12b. How many were PFK-related? _____
12c. What were the PFK issues? _____
_____
_____

13. In ..he last year, how many *other* legal challenges have you had because of some aspect of your PFK plan?

_____ challenges

13a. What were the PFK issues? _____
_____
_____
_____

14. BELOW IS A LIST OF COMMON MEAS-
URES OF ORGANIZATIONAL FUNC-
TIONING. DO YOU THINK THESE
MEASURES ARE LOWER OR HIGHER
AT YOUR FACILITY THAN THEY
WOULD HAVE BEEN WITHOUT A PFK
PLAN?

	Much lower	Somewhat lower	Slightly lower	About the same	Slightly higher	Somewhat higher	Much higher
a. Output per hour worked	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. Unit production costs	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Labor costs per unit of production	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Non-labor costs per unit of production	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. Expenditures for training supervisors	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. Expenditures for training non-managerial employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. The percentage of defects in products or errors in services	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Quit rate	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. Layoff rate	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. Involuntary termination rate	[1]	[2]	[3]	[4]	[5]	[6]	[7]
k. Absenteeism rate	[1]	[2]	[3]	[4]	[5]	[6]	[7]
l. Total employment	[1]	[2]	[3]	[4]	[5]	[6]	[7]
1. Number of supervisory employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
2. Number of non-managerial employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. Administrative costs	[1]	[2]	[3]	[4]	[5]	[6]	[7]

15. What kind of administrative costs are lower because of PFK?
_____
_____
_____

16. What kind of administrative costs are higher because of PFK?
_____
_____
_____

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17. What are some of the unexpected benefits resulting from the PFK plan at your facility?

_____

_____

_____

_____

18. What are some of the unanticipated problems caused by the PFK plan at your facility?

_____

_____

_____

_____

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PART VIII

This part of the questionnaire contains general statements that may or may not describe your perceptions and feelings about this facility, its employees, the PFK plan, and other issues. Please answer the questions as honestly as you can.

1. THE FOLLOWING STATEMENTS MAY OR MAY NOT DESCRIBE THE EMPLOYEES AT YOUR FACILITY. HOW MUCH DO YOU AGREE OR DISAGREE WITH EACH STATEMENT?

Response scale: [1] Strongly disagree, [2] Disagree, [3] Slightly disagree, [4] Neither agree nor disagree, [5] Slightly agree, [6] Agree, [7] Strongly agree

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
a. Our employees have widely varying backgrounds	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. People here can make their own decisions without checking with anybody else	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Our employees tell each other the way they are feeling	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Our employees feel free to discuss their mistakes with management	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. PFK employees do the same things all day long	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. Our employees stick together	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Employees offering new ideas are likely to get "clobbered"	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. Activities of non-managerial non-PFK employees vary a lot from day to day	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. Our employees always help each other out when they have problems	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. The skills learned by our PFK employees are not readily transferable to other firms	[1]	[2]	[3]	[4]	[5]	[6]	[7]
k. When employees don't like the way things are being done, they tell management about it	[1]	[2]	[3]	[4]	[5]	[6]	[7]
l. PFK employees are evaluated on how well they do performance appraisals of their coworkers	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. There is a strong feeling of fellowship among our employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
n. Our employees seem to have no respect for each other	[1]	[2]	[3]	[4]	[5]	[6]	[7]
o. Our employees participated in developing the specifics of the PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
p. Overall, our employees are extremely loyal to the company	[1]	[2]	[3]	[4]	[5]	[6]	[7]
q. In general, non-managerial non-PFK employees do the same thing over and over again	[1]	[2]	[3]	[4]	[5]	[6]	[7]
r. There is constant bickering among our employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
s. At our facility, people are encouraged to make decisions for themselves	[1]	[2]	[3]	[4]	[5]	[6]	[7]
t. When employees and management disagree, they feel free to talk to each other about it	[1]	[2]	[3]	[4]	[5]	[6]	[7]
u. Employees look forward to being with one another each day	[1]	[2]	[3]	[4]	[5]	[6]	[7]
v. In general, our PFK employees have very routine jobs	[1]	[2]	[3]	[4]	[5]	[6]	[7]
w. There are lots of hard feelings among our employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
x. While employees can suggest changes in the PFK plan, they cannot decide whether these changes will be made	[1]	[2]	[3]	[4]	[5]	[6]	[7]

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2. THE STATEMENTS BELOW ARE DESCRIPTIONS OF THE WAY A PFK PLAN MAY BE FUNCTIONING, PEOPLE'S REACTIONS TO IT, AND YOUR OWN OPINIONS OF IT. HOW MUCH DO YOU AGREE OR DISAGREE WITH EACH STATEMENT WITH RESPECT TO THE PFK PLAN AT YOUR FACILITY?

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
a. I think it would be a big mistake to discontinue our PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. Supervisors are evaluated on how well they do performance evaluations of PFK employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. PFK has given us greater flexibility to respond to changes in our product market	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Our first line supervisors are very supportive of the PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. We have a PFK plan because our employees wanted it	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. We use a PFK plan largely because we don't want organized labor here	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Our PFK plan has caused us a lot of legal problems	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. We wouldn't modify the PFK plan just because our employees complained about it	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. We have a hard time hiring enough people to work here	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. If we were to stop using PFK, I would seriously consider quitting	[1]	[2]	[3]	[4]	[5]	[6]	[7]
k. Using PFK has caused many tensions among our first line supervisors	[1]	[2]	[3]	[4]	[5]	[6]	[7]
l. We only make changes in our PFK plan when the employees approve of them	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. If we had things to do all over again, I would recommend against using a PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
n. Our performance appraisal system was specifically tailored for our PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
o. All in all, our employees have very little say in the way our PFK plan is administered	[1]	[2]	[3]	[4]	[5]	[6]	[7]
p. I really wish we didn't use a PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
q. We often ask for employees' opinions about how the PFK plan is working	[1]	[2]	[3]	[4]	[5]	[6]	[7]
r. If I had my way, we would use PFK plans in all our facilities	[1]	[2]	[3]	[4]	[5]	[6]	[7]
s. It would be very hard for me to go to a traditional compensation system now	[1]	[2]	[3]	[4]	[5]	[6]	[7]
t. Overall, our PFK plan has been very successful	[1]	[2]	[3]	[4]	[5]	[6]	[7]
u. If other companies knew of our experiences, they would want to begin using PFK plans immediately	[1]	[2]	[3]	[4]	[5]	[6]	[7]
v. I would try to use PFK in any other organization where I might work	[1]	[2]	[3]	[4]	[5]	[6]	[7]
w. We take employees' opinions into account when making changes in our PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]
x. Our first line supervisors don't like our PFK plan	[1]	[2]	[3]	[4]	[5]	[6]	[7]

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3 THE FOLLOWING STATEMENTS ARE DE-
SCRIPTIONS OF HOW A FACILITY MIGHT
ORGANIZE AND STRUCTURE ITSELF.
PLEASE INDICATE WHETHER YOU AGREE
OR DISAGREE WITH EACH OF THE STATE-
MENTS AS DESCRIPTIONS OF YOUR FA-
CILITY?

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
a. We have lots of ongoing interdepartmental committees at our facility	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. At this facility, it is very important to follow all the rules	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. Even small matters have to be referred to someone higher up for a final answer	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. Our facility often uses ad hoc committees (i.e., task forces) to work on special problems	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. Most people here make their own rules on the job	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. People doing the performance appraisals of PFK employees receive extensive training in conducting performance appraisals	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Little action can be taken here unless a supervisor approves of it	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. We never hold facility-wide meetings	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. Most of this facility's rules aren't really enforced	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. Several hierarchical levels are represented in our ongoing committees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
k. How things are done here is left up to the person doing the work	[1]	[2]	[3]	[4]	[5]	[6]	[7]
l. Compared to other organizations, we have a lot of rules	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. We frequently hold meetings between departments	[1]	[2]	[3]	[4]	[5]	[6]	[7]
n. We never know whether or not we'll be able to get the raw materials we need	[1]	[2]	[3]	[4]	[5]	[6]	[7]

4. BELOW ARE STATEMENTS THAT MIGHT BE
MADE ABOUT PFK PLANS IN GENERAL.
BASED ON YOUR EXPERIENCE, HOW
MUCH DO YOU AGREE OR DISAGREE WITH
EACH OF THE STATEMENTS?

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
a. Labor unions strongly support PFK plans	[1]	[2]	[3]	[4]	[5]	[6]	[7]
b. PFK plans should be used with all non-managerial employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
c. PFK plans make it more difficult for unions to organize a workforce	[1]	[2]	[3]	[4]	[5]	[6]	[7]
d. PFK plans only work with certain kinds of employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
e. PFK plans make boundaries between collective bargaining units fuzzy	[1]	[2]	[3]	[4]	[5]	[6]	[7]
f. PFK plans make contract negotiations with unions very difficult	[1]	[2]	[3]	[4]	[5]	[6]	[7]
g. Organized labor is generally opposed to PFK plans	[1]	[2]	[3]	[4]	[5]	[6]	[7]
h. All in all, the costs of PFK plans far outweigh their benefits	[1]	[2]	[3]	[4]	[5]	[6]	[7]
i. PFK plans make work group membership too unstable	[1]	[2]	[3]	[4]	[5]	[6]	[7]
j. PFK plans reduce the chance of employees forming a union	[1]	[2]	[3]	[4]	[5]	[6]	[7]

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	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
k. PFK plans could work well with managerial employees	[1]	[2]	[3]	[4]	[5]	[6]	[7]
l. Labor unions distrust PFK plans	[1]	[2]	[3]	[4]	[5]	[6]	[7]
m. PFK plans don't come anywhere near their touted benefits	[1]	[2]	[3]	[4]	[5]	[6]	[7]
n. PFK plans blur distinctions between labor and management	[1]	[2]	[3]	[4]	[5]	[6]	[7]

5. In your experience, what organizational features and/or environmental conditions are necessary for PFK systems to work well?

_____
_____
_____
_____

6. Based on your experience, what kinds of employees are most suited to work successfully under a PFK plan?

_____
_____
_____
_____

7. We would like to obtain information about PFK plans from as many organizations as possible. Your help in providing names and locations of other organizations you know about that also use PFK plans would be very useful to us.

Name of Organization	City	State
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

8. The quality of our data would be greatly enhanced if you could provide us a copy of your PFK plan. All details will, of course, be held in the strictest confidence.

[1] PFK plan enclosed

Thank you very much for your help. We sincerely appreciate the time you have taken to complete this lengthy questionnaire. We will send you a summary of our findings in a few months. Please use the space below to write any comments you have.

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THE IMPORTANCE OF MANAGEMENT PHILOSOPHY
TO THE SUCCESS OF PAY-FOR-KNOWLEDGE SYSTEMS:
AN EMPIRICAL TEST

Abstract of dissertation submitted in partial fulfillment
of the requirements for the degree of
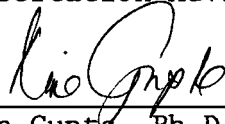Doctor of Philosophy

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ABSTRACT

In recent years, pay-for-knowledge compensation systems have
received serious attention from practitioners and organizational
researchers. Some have hypothesized that the specific mechanics of
pay-for-knowledge systems are critical to success while others have
suggested that contextual factors determine whether or not these
systems will be successful. Empirical research has not been very
supportive of these hypotheses, however.

Another hypothesis is that management philosophy is important to
the success of pay-for-knowledge systems. The purpose of this study
is to test this hypothesis by addressing three questions: 1) Are the
components that make up management philosophy related to the successes
experienced by companies using pay-for-knowledge systems?, 2) When the
components are used together, do they predict success reasonably
well?, and 3) Can the components of the management philosophy be used
together with what we already know about the specific mechanics and
contextual factors to <u>improve</u> predictions of success?

The pay-for-knowledge literature focusing on determinants of
success is reviewed, and related findings are summarized. The
management philosophy literature is discussed, and the management
philosophy construct is explicated.

Using a sample of 35 Personnel Directors of companies with
pay-for-knowledge systems, components of the management philosophy
construct are operationalized by focusing on its manifestations.
Respondents' perceptions of productivity, quality of output, employee

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attitudes and employee withdrawal behaviors are used as measures of success.

The results show that manifestations of the management philosophy are often positively related to the success outcomes and that, when used together, some manifestations are reasonable predictors of the success outcomes. The results also show that models using specific mechanics and contextual factors to predict success can be improved significantly by the addition of selected management philosophy manifestation measures.

Overall, the findings in this study suggest that the management philosophy communicated in day-to-day operations may be far more important than the philosophy communicated during the design and development of the pay-for-knowledge system. Implications of these findings for managers and directions for future research are discussed.