

1984

Effects of Absenteeism on Individuals and Organizations

Paul S. Goodman
Carnegie Mellon University

Robert S. Atkin
Carnegie Mellon University, atkin@katz.pitt.edu

Follow this and additional works at: <http://repository.cmu.edu/tepper>

 Part of the [Economic Policy Commons](#), and the [Industrial Organization Commons](#)

This Book Chapter is brought to you for free and open access by Research Showcase @ CMU. It has been accepted for inclusion in Tepper School of Business by an authorized administrator of Research Showcase @ CMU. For more information, please contact research-showcase@andrew.cmu.edu.

Effects of Absenteeism on Individuals and Organizations

Paul S. Goodman

Robert S. Atkin

The purpose of this chapter is to examine the consequences of absenteeism. Instead of asking what causes absenteeism, we want to identify the causal effects of absenteeism; that is, what effect absenteeism has on the individual worker, adjacent workers, the work group, the organization, other social organizations, and society. Our goal is to provide a better theoretical understanding of these questions. The literature in this area is quite sparse. While there are probably thousands of studies examining the determinants of absenteeism, there are probably fewer than twenty studies that directly examine the effects of absenteeism on other criteria, such as productivity, safety, and so on. Therefore, our focus in this chapter is more on understanding the theoretical issues underlying this question than on making sense of a robust literature.

Note: Support for this chapter was provided by the U.S. Bureau of Mines under contracts J0100069, J0328033 and J0123040.

This chapter is distinct from others in this book. The first series of essays (Chapters One, Two, Three, and Four) attempts to delineate the concept of absenteeism from a theoretical and methodological point of view. These analyses clearly bear on our analysis of the consequences of absenteeism, but their focus is primarily on providing a new perspective for thinking about absenteeism as a concept. The chapter on absenteeism as a form of withdrawal behavior (Chapter Five) appears similar in focus to this chapter. However, there are some important differences. The literature on employee withdrawal (for example, Beehr and Gupta, 1978) argues that there are a variety of forms of withdrawal behavior (such as absenteeism, lateness, turnover) and attempts to examine the interrelationships among these forms of behavior. One assumption in that literature is that there are a variety of ways to withdraw and that different conditions may evoke different withdrawal strategies. Our focus on consequences of absenteeism is different. First, we want to trace the causal relationship of absenteeism to some other criterion variable (for example, productivity) rather than look at the association among withdrawal behaviors. Second, the class of dependent variables in our investigation is different. Our interest is in variables such as productivity, quality, grievances, lost-time accidents, and so on, as opposed to turnover or lateness. The chapter on determinants of absenteeism (Chapter Six) captures the modal orientation of most absenteeism research—absenteeism is the dependent (or predicted variable) rather than the independent variable. This chapter treats absenteeism as the independent or predictor variable. Another way to distinguish our analysis of consequences of absenteeism is to contrast it with another area in the absenteeism literature and in this collection—the area of managing or controlling absenteeism. An assumption, either implicit or explicit, in that literature is that absenteeism is dysfunctional for the organization and needs to be controlled. One major theme in that literature is to identify procedures that will reduce the amount of absenteeism (Mikalachki and Gandz, 1982). Absenteeism is typically considered from the management or organizational perspective, primarily as a negative factor. The basic position in this essay is that absenteeism has different consequences for different constituencies and that these consequences may be positive or negative.

The rationale for studying the consequences of absenteeism should be obvious. First, there are very few empirical studies tracing the effect of absenteeism on other criterion variables, yet there are beliefs often articulated by managers on the dysfunctional effects of absenteeism on productivity and costs. Does absenteeism really reduce productivity, and, if so, under what conditions? Second, the literature in organizational psychology has a tendency to look into certain single-directional relationships, such as affect→behavior (for example, job dissatisfaction→absenteeism) and not explore reciprocal effects, such as behavior→affect or behavior→behavior relationships. Third, it is probably fair to say that most studies on absenteeism imply that it is something bad that should be reduced. This analysis of the consequences of absenteeism will highlight the positive benefits and thus ensure a more balanced cost-benefit analysis of absenteeism.

To accomplish our objective, a series of theoretical issues concerning the consequences of absenteeism will be delineated first. These include the dependent variable, defining the network of interrelationships, and establishing the meaning or representation of absenteeism. Then, the core of this chapter will examine in more detail a selected set of variables that absenteeism may affect. In each case we will (1) review what we know from the literature (including some new empirical information from our Carnegie-Mellon research project on absenteeism), (2) delineate the theoretical process underlying the relationship between absenteeism and the criterion variable, and (3) identify some strategic issues in researching these relationships.

Theoretical Issues

Selecting the Dependent Variable

Our concern is to understand the effect of absenteeism on other variables. One task, then, is to enumerate the possible dependent or criterion variables. We need some systematic way to determine or organize the consequences of absenteeism. Our strategy is to borrow the constituency approach from the organizational-effectiveness literature (Goodman and Pennings, 1977) and orga-

nize the possible consequences of absenteeism by constituency. The possible constituencies include the individual who is absent, individual co-workers, the work group, the organization, the union, other social organizations, such as the family, and aggregate social units, such as the community and society. To each of these constituencies, absenteeism may generate positive or negative consequences. The importance of this exercise in categorization is that it will show that: (1) there are many consequences of absenteeism; (2) these consequences are *both* positive and negative; and (3) what may be a positive consequence to one constituency may be a negative to another. This section borrows and extends a listing of consequences developed by Mowday, Porter, and Steers (1982).

Table 7.1 lists positive and negative consequences of absenteeism by constituency. The list is meant to be representative, not comprehensive. We recognize that the different outcomes listed in this table may or may not be relevant to any given situation. The relevance of any of these outcomes would depend upon individual characteristics, the structure of the job, and the organization of work. We also acknowledge that there may be lagged effect between absence and any of these variables. For example, the effect of absence on productivity may occur on the day of the absence or several days later. We also recognize that the duration of the absence may differentially affect different outcomes. Lastly, we recognize that there is a complicated relationship among absenteeism and all the listed outcomes. We will elaborate on these points in the next section of this chapter.

The positive consequences of absenteeism, from the *individual* viewpoint, seem relatively straightforward and come from a variety of sources. There is some research that indirectly indicates that absenteeism is a form of withdrawal from job-stress situations (Staw and Oldham, 1978). If absence from work reduces stress, then it can be functional for the individual. In addition, much of our life is concerned with fulfilling such central nonwork-related roles as the parent role (when taking care of a sick child) or the marital role (when reducing marital stress). The valence and utility for performing many of these nonwork-role activities is likely to be strong (Naylor, Pritchard, and Ilgen, 1980). Completing these activities, which may require being absent from work, leads to

Table 7.1. Consequences of Absenteeism.

	<i>Positive</i>	<i>Negative</i>
Individual	Reduction of job-related stress Meeting of nonwork-role obligations Benefit from compensatory nonwork activities Compliance with norms to be absent	Loss of pay Discipline, formal and informal Increased accidents Altered job perception
Co-workers	Job variety Skill development Overtime pay	Increased work load Undesired overtime Increased accidents Conflict with absent worker
Work group	Crew knowledge of multiple jobs Greater crew flexibility in responding to absenteeism and to production problems	Increased coordination problems Decreased productivity Increased accidents
Organization-management	Greater job knowledge base in work force Greater labor-force flexibility	Decreased productivity Increased costs More grievances Increased accidents
Union-officers	Articulated and strengthened power position Increased solidarity among members	Weakened power position Increased costs in processing grievances
Family	Opportunity to deal with health or illness problems Opportunity to manage marital problems Opportunity to manage child problems Maintenance of spouse's earnings	Less earnings Decline in work reputation Aggravated marriage and child problems
Society	Reduction of job stress and mental health problems Reduction of marital-related problems Participation in community political processes	Loss of productivity

positive benefits for the individual. Not all nonwork activities can be described easily in role terms. Some nonwork activities are inherently rewarding (for example, a hobby, fishing) and will at times be elected over work activities. In most organizations, norms exist that govern absenteeism behavior. In some organizations, informal norms exist that legitimate certain days of absence although these are scheduled workdays (for example, beginning of deer season). Taking these days off may be a way to avoid social sanctions; thus, absence may lead to a beneficial consequence.

The negative consequences of absenteeism to the individual are fairly straightforward. They may include loss of pay and disciplinary action for the individual. Accidents may occur to the individual when he or she returns to a less familiar work situation. A less obvious negative consequence, which has been suggested by Johns and Nicholson (1982) and Mowday, Porter, and Steers (1982), concerns the process of altered job perceptions. When confronted with an absence, even the employee may develop a reason (attribution) or justification for explaining the absence. The reason given may or may not correspond to why the employee was absent. If, over time, the justification or reason is rehearsed over other absence events and not controverted by any other information, we would expect that justification to become a permanent part of the individual's belief system. In the case of absenteeism, we would expect people to attribute the cause more to problems in their environment, such as a bad job, bad supervisor, and so on. So, to the extent that absenteeism leads to negative beliefs about the job or job environment that are not based on the reality of the situation, we would say that absenteeism indirectly creates negative consequences for the individual.

Positive and negative consequences fall to the *co-worker*. The absence of a worker may give co-workers a new opportunity to work on a different job, which would enhance job variety and skill development. In addition, if the work area is understaffed, there may be opportunities for overtime pay. On the negative side, the co-worker may have to do additional work, which is perceived as a burden, not a benefit. Overtime may be viewed as negative when it interferes with nonwork responsibilities. Accidents can occur when the co-worker is confronted with an unfamiliar machine or set of job activities. If any of the above negative consequences occur, they

are likely to lead to conflict with the absent worker on his or her return. In addition, if the co-worker observes high absenteeism in the work group, an inferential process may be evoked to explain this absenteeism. If, as discussed earlier, the attributions are made about negative environmental conditions, the co-worker might develop negative beliefs about the work environment although he or she is not absent.

Some of the positive and negative consequences for the *work group* are the same consequences as for the co-worker. In this discussion, we view the group as characterized by task interdependencies among the members. Absenteeism is likely to create job switching within the group, which leads to a broader knowledge base among the work group. This knowledge base facilitates a more effective response to future absenteeism and day-to-day production problems. If job switching leads to a more flexible and productive group (Goodman, 1979) and absenteeism facilitates job switching, absenteeism may have positive benefits for the work group. On the negative side, replacing the absent worker, from either within or outside of the group, will lead to increased coordination problems. Productivity may decline in the short run, if the replacement worker is less skilled than the absent worker. In the area of productivity, we have made conflicting claims about consequences, which can be reconciled by noting the timing of their impact. If a less skilled worker replaces the absent worker, productivity should immediately decrease. If absenteeism increases the job knowledge of group members and, hence, their flexibility, in the long run we expect this type of group to be more productive than the crew where each member can perform only his or her job. In the area of accidents, we see a parallel. If absenteeism leads to a replacement who is unfamiliar with the job, an accident is more likely in an interdependent group. As group members become more familiar with other jobs, the effect of absenteeism on accidents will be less pronounced.

The positive and negative consequences for the *organization* parallel those for the work group. Some of the differences at this level include the costs of absenteeism. Hiring, training, and paying additional workers and maintaining records for, administering, and enforcing an absenteeism program all represent costs to management of the organization. We have observed in our own research that a variety of different arrangements or implicit policies develop

with different classes of workers. The existence of absenteeism and any forms of absenteeism control policy are likely to generate grievances. Grievances, at least for the management, represent an additional cost of doing business.

Absenteeism can have consequences for the *union* and its officers. Absenteeism can be a tool for strengthening the power of the union with respect to management. Encouraging absenteeism (for example, "blue flu") can be used to increase management's costs and to extract gains for the union leadership and/or members. To the extent to which the union leadership is successful, we would expect increased solidarity among the members. In this specific example, absenteeism does not cause increased solidarity. Rather, it creates a condition that may facilitate the development of solidarity. A related scenario is one where an increase in absences is likely to create more grievances. To the extent to which the union wins the grievances, leader power is enhanced, and member solidarity may increase. Absenteeism also has negative consequences for the union. To the extent to which absences lead to grievances (Katz, Kochan, and Weber, 1982; Katz, Kochan, and Gobeille, 1982), costs in processing these grievances represent a negative consequence for the union. Also, if the union is unsuccessful in processing absence-related grievances, the power of the leadership is likely to decrease, as may the solidarity among members.

The constituencies related to absenteeism should not be solely work related. The *family* is another unit of social analysis that is affected by absenteeism. Absenteeism may be functional for the family in dealing with health, marital, or child-related problems. If incomes are rising, absenteeism may represent a way to consume positive leisure activities together. In the case of dual wage earners, absenteeism by one of the partners may be necessary to ensure the other spouse's job and earnings. On the negative side, absenteeism can lower earnings. Also, frequent absenteeism could lead to a poor work reputation, which may negatively reflect on family members. In some cases, absenteeism could aggravate marital and other family relations. If the absent worker interferes with the daily household routine, conflict may result.

The most common reference to the *societal*-level analysis is the cost of absenteeism (see Steers and Rhodes, 1978). Typically, one figures out an average cost per absence and multiplies this by

the number of days lost per year. The problem with this analysis is that it really is drawn from the organizational perspective, not the national or societal perspective. For example, if absenteeism reduces job stress and mental-health problems, then there are certain cost savings to society in the sense of needing fewer mental-health facilities. If absenteeism helps minimize marital problems, then it has certain benefits to society. While we do not have any evidence to show that increasing absenteeism will reduce the societal costs for dealing with divorces, it is important in the total cost-benefit analysis to reflect these savings and not to think about costs solely from the management perspective. Similarly, absenteeism may reduce unemployment, which would affect the societal-level calculation of the costs and benefits of absenteeism. We also point out in Table 7.1 that absenteeism, particularly for workers on shift work, may provide a means for participating in community and political processes—a less quantifiable benefit to society. We can conclude this section by noting:

- There are many possible consequences of absenteeism.
- The consequences are both positive and negative.
- Positive consequences come from many sources—avoidance of stress, fulfillment of role obligation, rewards from work and nonwork activity, greater skills and flexibility, more power, and so on.
- Negative consequences come from many sources—loss of rewards, disciplinary action, accidents, greater work stress, lower productivity, greater costs, and so on.
- Both negative and positive consequences may exist simultaneously.
- Consequences to any of the constituencies may vary over time.
- Benefits to one constituency may represent negative consequences to another constituency.
- A constituency member may be unaware of the costs and benefits of absenteeism for other constituency members.

The purpose of this discussion was to identify possible dependent variables for our analysis of the consequences of absenteeism using a constituency approach. We have selected five that have been subject to research and are most common across all the constituencies: productivity, accidents, grievances, costs, and attitudes.

Network of Interrelationships

The preceding section identified many possible consequences of absenteeism. This section explores the complex relationship among the variables. We want to make explicit the complexity of the relationships as well as to state a strategy for empirically testing these relationships. Our analysis thus far has portrayed a simple relationship between an absence event and some consequences. We use the word *consequence* to mean something that follows from absenteeism, depends upon absenteeism, and is causally related to absenteeism. It is very unlikely that there is a simple one-way flow between absenteeism and the indicators in Table 7.1; therefore, we have outlined below some characteristics of the relationships.

Reciprocal Causation. One of the major problems with the absenteeism literature is that it has been grounded on the assumption that job dissatisfaction causes absenteeism. More recently, some authors have pointed out that the opposite may be true (Staw and Oldham, 1978; Clegg, 1983). We do not want to fall into this one-way trap. Many of the factors in Table 7.1 are both consequences of and causes of absenteeism. Absenteeism can cause accidents by creating a condition where a replacement worker is less familiar with the job activities. This is an example where absenteeism is a necessary but not sufficient condition for accident. Accidents (lost time) in turn cause absences, which in turn can cause accidents. In some of our research, there are data to suggest that family and marital problems lead to increased absenteeism. Now, if the time absent from work is used to repair the marriage (through an employee assistance program), absenteeism will create a condition to reduce marital conflict, which in turn should reduce absenteeism. It would be easy to go through Table 7.1 and illustrate these reciprocal relationships.

Two-Plus Variable Relationships. In most cases, we need additional variables to explain the relationship between absenteeism and its consequences. For example, the relationship between absenteeism and disciplinary punishment at the individual level depends upon whether there is an absenteeism-control plan, whether the plan is enforced, the individual's prior absenteeism record, the role of the union, and so on. Absenteeism can affect productivity, but other variables need to be considered. Absenteeism may increase

productivity if the staffing policy normally creates excess slack in the work group or department. Absenteeism may have no effect on productivity if the job is highly motivating and variation in operator skill is not related to job performance (Moch and Fitzgibbons, 1982). Absenteeism in a central, highly skilled job may reduce productivity if comparably skilled labor is not available. While this point of identifying other main-effect variables and possible interactions appears noncontroversial, it has not generally been acknowledged in consequence studies (see Moch and Fitzgibbons, 1982, and Mowday, Porter, and Steers, 1982, for additional discussion on this point).

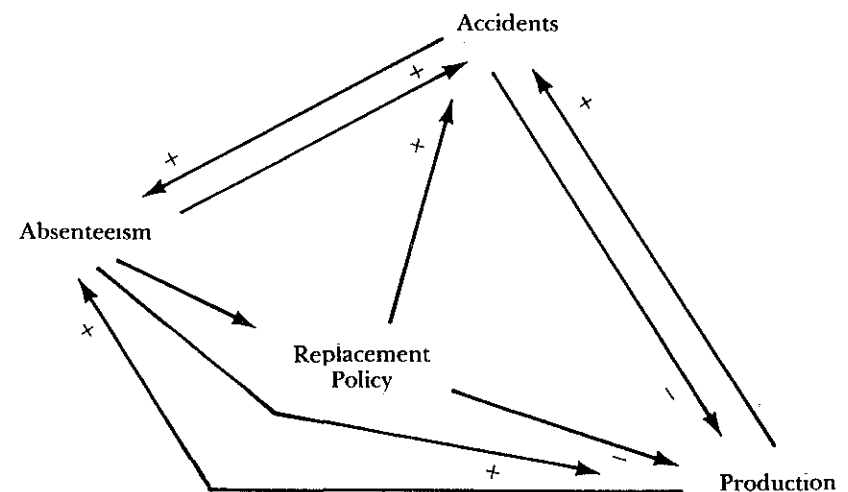
Time Factor of Absenteeism. Two time dimensions—duration of absenteeism and lagged effects of absenteeism—complicate the interrelationships between absenteeism and possible consequences. In the first case, the length of absenteeism may differentially affect the outcome variable under consideration. A short absenteeism spell may reduce stress, while a longer duration may increase stress. The effect of the lag structure of absenteeism on the possible consequence variables is another theoretical issue in understanding the models in this discussion. For example, accidents might occur in the beginning of the absence spell or later, when the replacement worker may be less vigilant.

Alternative Explanations. Our focus is on demonstrating the effect of absences on other variables. We have noted that the causal connections are complicated, and a careful model needs to be built linking absenteeism to any of the consequence variables. While there is some theoretical and empirical evidence to suggest that researching the absence-consequence link is potentially important, we should acknowledge that other variables may cause variation in the absenteeism and consequence variables and that these latter two variables may not be linked. For example, we have said that absences can cause lost-time accidents and that these accidents can cause absences. But it is possible for another variable, such as alcoholism, to cause directly both absences and accidents, and if the accidents are not lost-time accidents, there would be no connection between these two variables. In another case, it may be that poor supervision directly contributes to poorer quality and more absenteeism, without absenteeism and quality being connected.

The rationale for these illustrations is that the co-variation between absenteeism and accidents or absenteeism and quality may not signify that they are causally connected, and it is the responsibility of the researcher to acknowledge the existence of alternative explanations.

Interrelationships Among the Consequence Variables. The picture we have drawn about absenteeism and its consequences focuses on one consequence variable at a time. However, the consequence variables may be interrelated with each other and with absenteeism. This will further complicate our understanding of the absence-consequence relationships. Probably the best way to discuss this point is to draw a simple example between absenteeism and two consequence variables—production and accidents. Figure 7.1 illustrates some possible simple paths. The figure is drawn with the following format: starting at the bottom of an arrow, increasing that variable will have an effect on the variable at the head of the arrow, as determined by the sign. So, working from right to left, an increase in production should increase the number of accidents, which should increase absenteeism. Increases in absenteeism may have a direct effect on increasing accidents or an indirect

Figure 7.1. Possible Relationships Among Absenteeism, Accidents, and Production.



effect through the company's replacement policy; in both cases, accidents go up, which in turn should lower production. Increases in production (by increasing stress) can increase absenteeism, which can have a positive effect on production, which can increase accidents. The point of this illustration is simply that there are complicated relationships among the consequence variables and absenteeism. Note that the relationships in Figure 7.1 would be intolerably complicated if we added other consequence variables (attitudes, grievances) and specified functional relationships.

Meaning or Representation of Absenteeism

Two facts seem to emerge from the absentee literature. First, we have not done a particularly good job in empirically explaining variations in absenteeism. Second, there appears to be a trend toward better specified models; that is, researchers seem to recognize that different types of absenteeism operationalize in terms of content (for example, contract days, accidents) or frequency (and duration), which require different types of predictive models. While this move toward a more careful specification of absenteeism seems appropriate, studies adopting this point of view (for example, Moch and Fitzgibbons, 1982) have not recorded any major breakthrough.

In a new and refreshing look at the absenteeism literature, Johns and Nicholson (1982) go a step further in arguing that "absence means different things to different people in different types of different situations" (p. 134). Basically, they are arguing for a more idiographic approach to absenteeism; if we can get a better phenomenological representation of the person and environment at a given period, we can develop a better understanding or meaning of absenteeism at a given time. While there are as yet no studies that demonstrate the utility of the Johns and Nicholson theoretical argument, their position seems consistent with what we are learning from our own data set on absenteeism. We have absenteeism data on twenty-five organizations in the same industry, all operating under the same collective bargaining agreement, which includes an absenteeism control plan. Although it is the same industry and the same contract, the meaning attached to absence categories (for example, accident, excused, unexcused) differs across the twenty-

five organizations. The same variation exists within different organizations of the same company. At the organization level, we see marked variations in category codes attached to different individuals with the same frequency and duration of absenteeism. We think this occurs because the coding of absenteeism by the organization represents a series of individual negotiations between individual workers and management.

The question that has motivated this discussion is: To what extent is the meaning or representation of absenteeism important for understanding the consequences of absenteeism? That is, do we first need to carefully delineate the meaning of absenteeism before we can understand the consequences? Regarding questions about reliability of absenteeism or predictability of absenteeism, we believe that the answer is emphatically yes—the meaning or representation of absenteeism needs to be determined first. In terms of the consequences of absenteeism, this central issue of determining the meaning of absenteeism may be less important. To illustrate our contention that a precise specification of the meaning of absenteeism may not be as important in studies of consequences of absenteeism, we will consider a selected set of consequence variables from the organizational, group, and individual perspectives. There are some reasons, both theoretical and empirical, to expect absenteeism to lower productivity. The principal explanatory mechanism is that absenteeism leads to understaffing, in number or skill, which should lower productivity. To test that assertion, one simply has to know whether a person is at work or not at work—the simplest definition of absenteeism. Now, anticipating this vacancy clearly will moderate its impact on productivity, simply because we manage the staffing problem more effectively. But anticipating a vacancy is not absenteeism. Our argument is that knowledge of the individual's subjective representation of absenteeism, the identification of unique patterns of absenteeism from company records, or delineating the construct of absenteeism does not appear to be essential to understanding whether the presence or absence of a person has an impact on productivity. In the analysis of absenteeism and accidents, the same conclusions can be drawn. The basic explanatory mechanism for accidents is whether the individual is familiar with the work and machinery. Unfamiliarity can be caused by absences. Knowledge of absence types, frequencies, and subjective represen-

tations of absences does not seem relevant. Basically, we need to know whether accidents create a level of unfamiliarity in the workplace. Knowledge of whether someone is present or absent seems sufficient.

At the group level, we indicated that absence could lead to greater job knowledge and greater group flexibility as members switch around to substitute for the absent worker. Whether job knowledge and group flexibility increase seems tied to whether absence occurs and to the company's staffing policy. A detailed understanding of the meaning of absenteeism does not seem important. It is at the individual level, particularly when the consequence variables are subjective indicators, that specifying the meaning of absence may be more important. Consider that absenteeism may permit the individual to fulfill role obligations, such as taking care of a sick child. Connecting this consequence to absence is very difficult if we know only whether the person was not at work or the type, frequency, or duration of absenteeism. Identification of the meaning of absenteeism for the individual at a particular time and in a particular situational context seems necessary. Similarly, absence can permit the fulfilling of desired nonwork activities (for example, a hobby). Understanding the process by which someone decided to allocate time to nonwork rather than work activities seems a necessary condition before we can link absenteeism and benefits from nonwork activities.

We have generated a discussion on the meaning or representation of absenteeism, since it is a central theoretical issue in absenteeism research. (See Chapter Two for more details.) We want to acknowledge its importance in redirecting our thinking about some questions about absenteeism—particularly the questions about measurement and explaining reasons for absenteeism. The essence of our argument is that, in explaining the consequences of absenteeism, we may be able to sidestep the specification of the meaning or representation of absenteeism. That is, we do not need a detailed delineation of the construct or the subjective representation of absenteeism to examine its impact on a variety of possible objective consequence variables, such as productivity or accidents. We did acknowledge that delineating the subjective meaning may be important in examining the impact of absenteeism on certain subjective indicators.

Consequence Variables: Data and Theory

In this part of the chapter, we move from a general consideration of the theoretical issues about the absenteeism-consequence relationship to a more detailed consideration of variables that may be affected by changes in absenteeism. Our strategy is to focus primarily on variables that appear common to the constituencies enumerated in Table 7.1 and about which there is some empirical research. Basically, we are interested in three questions: What do we know about the relationship between absenteeism and some consequence variable? What is the underlying theoretical relationship among these variables? What is the research strategy to test each of these theoretical relationships? What motivates this section is a need to delineate fruitful research paths to examining the consequences of absenteeism. There is very little research in this area, although the problem is potentially interesting and policy relevant. By bringing together what we know and by identifying some research paths, perhaps we can help research in this area to grow.

Productivity

What effect does absenteeism have on productivity? *Productivity*, in this discussion, will be defined as output over labor input. Also, we distinguish between productivity at the firm level, the group level, and the individual or job level. *Firm-level productivity* is defined in terms of total firm output (quantity and/or quality) over labor input; *group-level productivity* refers to the output of a particular group or crew over input; and *job productivity* refers to the output-input relationship for a particular class of job. It is important to distinguish among these levels, because in different types of technologies, a particular level of productivity assessment may be more central in the production process. For example, in coal mining, crew-level productivity may be more central than job-level productivity.

Empirical Evidence. There are very few studies of the impact of absenteeism on productivity. We have identified four studies, three of which are unpublished. Katz, Kochan, and Weber (1982) and Katz, Kochan, and Gobeille (1982) have developed data sets on manufacturing plants that include a variety of industrial-relations

indicators, quality-of-working-life indicators, and organizational-effectiveness indicators over a ten-year period. Measures of quality and direct labor efficiency are available and can be considered productivity measures. The absence measure is calculated as a rate per year at the plant level. It includes days absent, excluding contract days off, over scheduled working days. Two different data sets are used in their research program, both drawn from the same company. They differ in number of plants and measures that are available. In their first data set (Katz, Kochan, and Weber, 1982; and Katz, Kochan, and Gobeille, 1982), regression analyses were run on the influence of variables such as total hours worked, grievance rate, absenteeism rate, quality-of-working-life rating, and plant dummies, on quality and efficiency. A positive significant coefficient appeared for absenteeism in respect to quality, and a nonsignificant relationship appeared for direct labor efficiency. In the second data set, absenteeism was significantly positively related to quality and negatively related to labor efficiency. The authors explain the positive relationship between absenteeism and quality by noting: (1) there was a general increase in both variables over the time of the study, and (2) cross-sectionally for any given year, the correlation between absenteeism and quality was negative but not significant.

Moch and Fitzgibbons (1982) also investigated the absenteeism, quality, and quantity relationships. Their research is directly focused on the consequences of absenteeism on production. Their basic hypothesis is that absenteeism and plant-level efficiency are negatively associated when (1) production processes are not highly automated, (2) those who are absent are central to the production process, and (3) absences cannot be anticipated. Data for this study were gathered from a manufacturing plant and cover two one-year periods. Results from this study are not completely clear. However, there is some evidence that absenteeism of more central people (for example, maintenance personnel) has negative impacts on productivity and that less automated production is more vulnerable to the negative effects of absenteeism.

A study by the Carnegie-Mellon Coal Project (1983a) also examined the impact of absenteeism on production. Data were gathered from an underground coal mine, where the crew or group

is the primary production unit. The goal of this research was to explain variation in group performance. The analytical strategy was first to estimate the basic production function. In the production function, tons of coal is the dependent variable; the independent variables are number of laborers, physical conditions, machine availability, and a set of control variables. From a series of analyses it was learned that (1) a reasonable portion of variance in crew-level production could be explained by the production function $R^2 = 0.53$; (2) there were crew and departmental differences; (3) there were some significant nonlinear effects; and (4) there were significant effects due to different technologies. Given this baseline information, different measures of crew stability that reflect who worked on what job on what day in what crew were developed. These indexes indicate whether workers were present over time in their crew, job, and department. When the stability indexes were added into the baseline production-function run, they contributed to a significant increase in the R^2 . While additional research is being conducted on the stability measure, there is some evidence that the presence of crew members (versus absence) contributes to production in interdependent work groups.

Staw and Oldham (1978) suggest that the absenteeism-performance relationship may be positive *and* negative. Very low attendance rates may be technically dysfunctional and reduce job performance. Absenteeism, on the other hand, may serve as a maintenance function and help the worker cope with job stress, in turn increasing job performance. They test this dual effect of absenteeism by examining the relationship between absenteeism and performance for those people likely to be experiencing stress on the job and for those that were not. For those people who were low in growth satisfaction and probably experiencing more stress at work, the relationship between total absenteeism and rated performance was positive. No relationship between absenteeism and performance appeared for those high in growth satisfaction. While this finding appears contrary to the results of the other studies, it should be noted that the other studies used record data (versus self-report data on production) and used more detailed analytical procedures to separate out the effect of absenteeism versus other variables.

What conclusions can be drawn from the empirical studies?

First it is amazing that there are so few studies about this relationship. Second, the findings tend to support a negative relationship, but there are a lot of nonfindings (that is, hypothesis not supported). Third, the idea of a positive impact of absenteeism on production is intriguing. Unfortunately, the design of the Staw and Oldham study does not permit testing that relationship. We need to look at daily absenteeism and production, controlling for other variables. Our guess is that stress would develop over time, leading to a decline in performance. An absence event should reduce tension, and performance should be high on subsequent days, declining again over time. Unless one can test this cycle of events, it will be difficult to support the positive effect of absenteeism on production.

Theoretical Relationships. The direct relationship between absenteeism and productivity is fairly straightforward. Absenteeism means that a job in the production process will be vacant. An understaffed production process should result in some decline in production. The organizational response to a vacant job could be a replacement. The skill level of the replacement relative to that of job incumbent should explain the amount and direction of the effect on production. A less skilled replacement would lower production, and a more skilled worker might improve production. In an overstaffed situation, if a vacancy occurs, production will probably remain the same, and labor productivity will increase.

The existence of a vacancy, the staffing policy, and the replacement policy seem to be the key factors underlying the absenteeism-production relationship. Of course, other variables can help refine the intersection between these variables. Some jobs are more central to the production process than others. *Centrality* means the degree to which performance on the job or a cluster of jobs affects the activities and performance on other jobs. In mining, the absence of the mine operator will affect all other crew jobs. If a utility person is absent, that person does not necessarily have to be replaced, at least in the short run. In the Moch and Fitzgibbons study, the mechanic was a key job. Absenteeism of this worker should affect the production process more than that of an assembly worker. The degree to which a job is programmed also will bear on the vacancy-replacement relationships. In highly programmed jobs, replacement is easier, and the impact on production should be less. In high-discretion jobs, replacement will be more difficult, and

absenteeism effects should be more pronounced. The existence of a vacancy, the staffing policy, the replacement policy, the centrality of the job, and the level of discretion in the job affect the direct relationship of absenteeism to production. We noted earlier that absenteeism can affect other variables (for example, accidents) that in turn affect production. The focus here is on direct effects. The indirect effects (for example, absenteeism-accidents) appear later in this section.

Strategies for Research. How should we go about attacking the absenteeism-production relationships?

1. Begin with a common technology. Studying this question across different technologies will make the research overly complex.
2. Study the technology carefully. One needs to identify the primary production units and to have an intimate knowledge of job-skill requirements, the centrality of jobs in different settings, the extent to which jobs are programmed, the replacement strategy for that production unit, and the general staffing policy.
3. Design a data set that fits the theoretical process between absenteeism and production. Most of the studies we cited above (with the exception of the Carnegie-Mellon Coal Project) did not have a data set to address the research problem. When someone is absent, we need to know whether the person replaced has the skill experience of the replacement, which job is involved, and what the indicators of day-to-day production are. If you know only aggregate information (for example, yearly figures on absenteeism and productivity; Katz, Kochan, and Weber, 1982, and Katz, Kochan, and Gobeille, 1982) it will be difficult to shed any light on whether absenteeism causes changes in productivity and, if so, why that happens.
4. Develop a baseline model. Variation in production is a function of many critical variables. These need to be specified so that we can separate out the effect of absenteeism from other variables. In our work, we begin with the concept of the production function—in which production is a function of land, labor, and capital. In our mining research, this gets translated into physical conditions, number of laborers, and machine

availability. We think that these are the most critical and most proximate factors explaining productivity. After the production function is estimated, we then ask whether absenteeism had an additional effect on production variance.

5. Examine alternative measures of production. Different measures may require different hypotheses. Measures of quality and quantity have been used in some of the studies we cited. Absenteeism may have greater effects on quality than on quantity in programmed jobs. In these jobs, the technology may drive the number of units but not necessarily the quality. Downtime is an example of an intermediate measure of production that should be investigated. We might expect that absenteeism may have more of an impact on the duration than on the incidence of breakdown. The job knowledge of the replacement is, of course, important, for the greater the job knowledge, the shorter the duration of downtime.
6. Pay attention to linearity assumptions and lagged effects. We suspect that the effect of absenteeism on production does not have a simple linear form. For example, in coal mining, one can vary crew size within certain ranges without major impacts on production. However, changing size beyond that range will affect productivity. Similarly, the effects of absences on productivity may or may not be contemporaneous; there may be lags. For example, in coal mining, the total production cycle includes both a direct and an indirect component. If workers responsible for the indirect component were absent, production could proceed. However, after a point, the indirect work must be done. In this case, the effect of absenteeism would be lagged. The point is that the linearity assumption and possible lagged effects can be understood only if one has an intimate knowledge of the production process.

Accidents

What effect does absenteeism have on the number and severity of accidents? While many innovations have occurred in the area of machinery design and training to reduce accidents, there has been surprisingly little attention given to the relationship between absenteeism and accidents.

Empirical Evidence. We have found only a few studies dealing with the absenteeism-accident relationship. Some of these studies unfortunately do not address our interest in the effect of absenteeism on accidents. Hill and Trist (1953) studied the relationship between absenteeism and accidents, but their basic hypothesis was that accidents are a form of absenteeism. Some data were presented that indicated that accidents are positively motivated forms of absenteeism. In another study, by Allen (1981), the relationships between accidents and absenteeism are examined, but the focus is more on the effect of accidents on absenteeism than the reverse. His findings indicate that absenteeism rates are higher in plants with low wages and high occupational illness; absenteeism is a labor-supply adjustment to wage and employment hazards. While both of these studies examine the relationship between absenteeism and accidents, they do not deal with the research question in this chapter. Hill and Trist argue that accidents are one of the many forms of withdrawal (for example, turnover, tardiness). Allen provides data to demonstrate that organizations with bad safety records are likely to experience more absenteeism. Time is taken off to compensate for the higher risk of an accident; that is, plant accident rates lead to absenteeism.

The Katz and others study cited earlier (Katz, Kochan, and Weber, 1982; Katz, Kochan, and Gobeille, 1982) has some minimal data on absenteeism and accidents. Accident measures at the plant level included cost of sickness and accident benefits, number of injuries requiring more than minor first aid per 200,000 hours worked, and number of lost-time accidents divided by total hours worked. The simple correlations between absenteeism rate and these accidents showed a positive significant relationship with accident cost ($r = 0.29$, $p < 0.001$) and with lost-time accidents ($r = 0.15$, $p < 0.05$). Unfortunately, there are no multivariate runs that control for some important plant characteristics that may affect the absenteeism-accident relationship. These control variables were important in interpreting the correlation coefficients in the absenteeism-production discussion.

Some information on absenteeism and accidents appears in the Carnegie-Mellon Coal Project (1983b). Three questions are addressed: First, are people who are absent more likely to have an accident when they return to work? Second, if a worker is absent, is

his or her replacement more likely to have an accident? Third, if a person is absent, is a worker interdependent with the vacant job or a replacement worker more likely to have an accident? Before we examined the first question, probit analyses were performed on a variety of accident measures to determine the effect of job and individual demographics on accidents. The results suggest that these demographics play a small role in explaining accidents. To see whether absences precede accidents, we looked at whether people were absent prior to an accident. Absence was measured as the day before, or the amount over the preceding five workdays. The data indicate that only a small number of accidents were preceded by absences. However, a large number of accidents were preceded by nonscheduled days, such as weekends. Further investigation of the magnitude and significance of these results is in progress.

The second and third questions concern whether the replacement worker or some adjacent worker is more likely to have an accident. To examine such a question, one needs a detailed data set that identifies who works on what job on what day and that gives information on accidents. This permits operationalizing whether an absence leads to a replacement and whether an accident occurred and if so, to whom. We are currently analyzing these data from a single organization, and it is not clear that replacements are more likely to have accidents. However, only preliminary analyses have been completed, and this type of analysis needs to be completed over multiple organizations to assess the degree of stability of the relationships among absences, replacement policy, and accidents. The empirical evidence in the literature on the absenteeism-accident relationship is very inconclusive. There are simply not enough studies with the appropriate data sets to answer the questions. The evidence on the absenteeism-production relationship is more convincing.

Theoretical Relations. The direct relationship between accidents and absenteeism follows some of the theoretical rationale for the absenteeism-production relationship. Absenteeism leads to a vacancy and, in most work situations, to a condition of understaffing. In a condition of understaffing, accidents may be more likely, because workers may have more work to do, experience more stress, cut more corners, and so on. This scenario is based on the

assumption of no replacement; that is, absenteeism causes a condition of understaffing, which increases the probability of an accident.

Another explanation in the absenteeism-accident relationship concerns the concept of *familiarity*. *Familiarity* refers to the knowledge one has of intra- and interjob activities and the work environment. In the context of coal mining, for example, one can refer to the knowledge one has about one's job, equipment, co-workers, supervisor, and physical conditions. In the dynamic context of the work environment, changes in physical conditions may call for different job activities, use of equipment, or coordination activities. Familiarity with these events on a day-to-day basis should minimize chances for accidents. Unfamiliarity may increase the chances for accidents. Familiarity can be used to characterize the knowledge of the absent person or the replacement. In the former case, the person who was absent returns to work. The issue is the degree of familiarity that person has with the job activities or work environment. If the person has experienced a long absence and is therefore less familiar with the work, chances for an accident may increase for the focal individual and for an adjacent worker. In the latter case, we need to know the familiarity of the replacement with the job and work environment. Note that the unfamiliarity of the replacement worker has implications for that individual as well as for an interdependent worker. The unfamiliar replacement worker may cause an accident for the adjacent worker because different coordination mechanisms are being used. Unfamiliarity for the replacement worker then has implications for the accident rate of both that individual and of the adjacent worker.

Another factor that may underlie the absenteeism-accident relationship is the concept of *vigilance*. *Vigilance* refers to the degree to which an individual consciously attends to all aspects of his or her work activity. Sometimes when driving a car, the work activity (driving) is done almost automatically, with low attention to each of the sequential activities. At other times, one pays careful attention to all the driving activities. In jobs with very low variety and standard routines, work may be done in a low-vigilance manner, while the opposite may be true in high-variety, unstructured jobs. Absenteeism may be functional for low-vigilance activities by "breaking set." After an absence, the worker may return to the job with re-

newed attention to the work activity, which lowers the probabilities for an accident. In high-variety, stimulating jobs, absence may be dysfunctional. In this case, after an absence interruption, it may take time to reach the optimal level of vigilance for the job, so that the possibility of an accident is increased. Duration of absence also may be related to vigilance and accidents. Long duration of absenteeism may initially increase vigilance of work. Long duration may make the contrast between nonwork and work roles more salient, so that the initial vigilance levels should be higher. Also, if the long duration was due to an accident, we would expect the worker to be more cautious, an aspect of increased vigilance.

The concepts of vacancy, familiarity, and vigilance should be fairly robust in explaining the absenteeism-accident relationship. However, as we mentioned in the discussion of production, there are other variables to include in the model. For example, the centrality of the job is important in explaining the absenteeism-vacancy-accident chain. When a vacancy occurs in a central job, failure to find a replacement will increase the number of production problems during that period, which may contribute to accidents. If a replacement is found, the degree of familiarity of the replacement should be associated with the frequency of accidents either for the replacement or for an adjacent worker. In a less central or peripheral job, a vacancy will have less effect on the production process, and a replacement is less necessary. So centrality affects the probability of a replacement and the number of problems and risks created by a vacancy. The degree to which the job is structured bears on the absenteeism-vigilance-accident chain. Absence in highly routine jobs may increase vigilance and lower accident rates, while the opposite may be true for nonroutine jobs. We also need to recognize that the relationship among these variables may not be linear and that there may be lagged effects among these variables. For example, long absence duration may contribute to initial vigilance, but the degree of vigilance may decline sharply after the first few days back at work.

Strategies for Research. The following are some key points in researching the absenteeism-accident relationship:

1. Choose the appropriate data set. The theoretical discussion of the absenteeism-accident link requires that we be able to trace through the effects of absenteeism on vacancies and on replacements in specific jobs and at specific times in a particular organizational context. Simply collecting summary data at the firm level on absenteeism and accidents is inadequate.
2. Reformulate the meaning of accidents. Most companies record accidents and indexes of lost-time accidents and no-lost-time accidents. Severity rates and accident costs are also generated from accident reports. The problem with these data is parallel to the problem with data on absenteeism. Companies use different types of reporting schemes. Within companies, different units adopt different conventions in labeling accidents. There is a natural bias to underreport accidents, since they are socially undesirable. At a more microscopic level, accidents may have different meanings to different people at different times in different situations. A worker with accidents that always occur on Fridays has a different accident profile from the worker who has the same kind of accidents that are randomly distributed over scheduled workdays. The different meaning ascribed in these two cases is important. If we want to model the absence-accident relationship, then the meaning we attach to accidents must be congruent with our model. One of our explanations is that absences cause unfamiliarity, which increases the chance of an accident. If our measures of accidents do not reflect our underlying concept of accidents, then prediction will be impossible. For example, unfamiliarity should contribute to an accident. But if our measure of accidents reflects withdrawal behavior (Hill and Trist, 1953), we will not be able to predict accidents.
3. Develop a baseline model. The ideas in the discussion on the absenteeism-production relationship fit here as well. Before one attacks the absenteeism-accident relationship, some baseline model of accidents should be constructed. In the production analysis, the production function formed the baseline model. The analogy for accidents is less clear. We have approached the baseline in accidents by building an individual- and job-

demographic model for different types of absenteeism. Basically, we want to identify variables that would affect accidents even under perfect attendance. That is, given a common technology, there may be individual (for example, age) and organizational (for example, job shift) factors that affect accidents. Once that model has been estimated, one can pursue the analysis of the absenteeism-accident relations. That is, we want to determine the relative impact of absenteeism on accidents relative to the baseline model.

4. Examine alternative analytical techniques. Both absenteeism and accidents are low-frequency events, and this poses analytical problems in examining this relationship. In some of our data sets, we find that most employees have no accidents, those with accidents typically have one, and a very few employees have more than one accident. For example, on average, in all of our twenty-five data sets, absenteeism may run around 15 percent for all reasons. The majority of the workers (60 percent) have no accidents, and those with only one accident constitute much of the remaining work force (20-30 percent). If we take seriously the idea of refining the meaning of accidents (for example, in terms of withdrawal, uncontrollable accidents, and so on), then there will be fewer observations to study, at least within any common meaning of accidents. The problem is not only the low frequency of these events; their distributional qualities are also quite complex. Clearly, there are traditional statistical techniques for dealing with these data. We would begin our work by estimating a baseline model for accidents and then try to assess the impact of absenteeism. However, we may need to adopt new methods of study for accidents. In our own work, we are moving toward building rich case studies of absenteeism and accident behavior for a given work group. This type of qualitative representation captures the total experience of the work group in a given unit of time. The researcher can see all the complexities of these relationships unfolding within a particular social context. This more clinical approach may be used in addition to more traditional statistical approaches.

Grievances

Empirical Evidence. The study by Katz and others (Katz, Kochan, and Gobeille, 1982; Katz, Kochan, and Weber, 1982) on industrial relations and economic indicators provides some evidence about the relationship between absenteeism and grievances. Using plant-level data, they reported a correlation $r = 0.26$ ($p < 0.01$) between absenteeism and grievances. Unfortunately, this type of statistic does not speak to the causality of the relationship or what other variables may affect these two variables. In other related analysis, in a regression format, they report that grievances may have a negative effect on direct labor efficiency, a productivity measure. Unfortunately, we have found few other studies that bear directly on this relationship. There are peripheral studies that examine effects of the union on absenteeism (Allen, 1981), of the collective bargaining provisions on absenteeism (Dalton and Perry, 1981), and of the role of the union in representing employee interests on absenteeism (Hammer, Landau, and Stern, 1981), but none of these shed any light on the manner in which absenteeism may affect grievances.

Theoretical Relationships. The effect of absences on the number of grievances must be understood in an institutional framework. Many collective bargaining agreements have provisions that state the conditions under which an employee can be dismissed for absenteeism. The agreement also creates the distinction between legitimate absences (for example, holidays) and other kinds of absences. Typically, a worker can have a certain number of unexcused days before being put on probation. Subsequent absenteeism is usually the cause for discipline or discharge. Since these absenteeism-control plans are often formally part of the contract and one function of the grievance process is to deal with the administration of the contract, one would expect absenteeism-related grievances to increase with the presence of a formal plan and with greater enforcement of the plan. The problem is to assess whether the number is significantly larger than some base period (that is, than with no plan) and how large the increase is. The structure of the relationship between absence and grievance is as follows: Absences occur

for a variety of reasons. The company counts and classifies the absences. If an absenteeism policy exists and the counts exceed a certain number, disciplinary action occurs, which creates conflict between labor and management. Grievances come into play because there are often ambiguities in the system of classifying absences, and there are likely to be conflicting precedents regarding how absences have been administered in the past.

A different theoretical view that may bear on the absenteeism-grievance relation comes from Hirschman's (1970) *Exit, Voice, and Loyalty*. His basic argument is that employees dissatisfied with some aspect of work can exit (temporarily or permanently) from the organization or can use their voice (via the union) to express their dissatisfaction in order to change the state of affairs. Employees are more likely to exit if they have little loyalty or commitment to the organization. If loyalty exists and there is a possibility for change, "voice" will be used. This framework provides some interesting hypotheses about absenteeism. If loyalty and a mechanism for change exists, there will be a positive relationship between job satisfaction and attendance. That is, dissatisfaction will not increase absenteeism, because a mechanism to address problems exists. A belief in the effectiveness of union representation also will decrease voluntary absenteeism (Hammer, Landau, and Stern, 1981).

While this framework and these hypotheses do not directly explain whether absenteeism causes grievances, they may bear on some of the underlying theoretical processes. The belief that the union is an effective mechanism for change may decrease certain types of absenteeism (Hammer, Landau, and Stern, 1981) that might lower the probability of absence-related grievances. This fact would not remove the relationship between these two variables, but the nature of the relationship may be attenuated. On the other hand, if the workers' belief that the union is an effective mechanism is connected to a belief that the union will be successful in processing grievances, then the fear of disciplinary action from absenteeism will decline, and absenteeism and grievances will increase. Hammer, Landau, and Stern (1981) do not discuss this possibility. Our dilemma, then, with this theoretical position is that there are alternative positions about what will happen to absenteeism and grievances. The contribution of this position is that it focuses on

whether the union is powerful in effecting change and raises some alternative hypotheses about satisfaction and absenteeism relationships. Also, the "exit-voice" position is not inconsistent with the institutional position discussed earlier. That position states that, as absenteeism increases, for whatever reasons, where there is some institutional policy about controlling absenteeism, grievances will increase in the course of administering the policy. A powerful union can both reduce the causes of absenteeism, which should decrease grievances, and encourage workers to take marginal absences.

Another possible explanation is that grievances precede absenteeism, and not the opposite. The idea is that grievances are a surrogate for industrial conflict, industrial conflict increases the unpleasantness of work, and absence is a way to avoid that unpleasantness. Earlier we noted that there was some empirical evidence that in low-wage/high-accident plants, workers would take more absences (Allen, 1981), and absence may be a labor market adjustment to low-paying and unsafe jobs. While there may be some appeal to the grievance-absenteeism relationship, there are a number of reasons why it may not be a highly probable or dominant relationship. First, grievances may not be as good an indicator of industrial conflict as strikes. Second, the incidences of grievances are not highly visible. Grievances affect the worker filing the action, the grievance committee, and certain levels of management. Unless a grievance precipitates a strike, it is unlikely that the work force in general would know the incidence rate, content, and disposition of grievances. Since grievance measures may be less visible to the work force than information about low wages or lost-time accidents, we would expect that they would have less impact on aggregate absenteeism.

Another possibility, which we acknowledged earlier in this chapter, is that a third variable may affect grievances and absenteeism. For example, the behavior of a supervisor may cause both absences (as a way to reduce interpersonal conflict) and grievances (by violating certain aspects of the contract). While this alternative explanation is viable, our focus for the rest of this section is on examining whether absenteeism causes grievances, the major theme of this analysis. While we have examined the merits of a variety of specifications of the grievance-absenteeism relationship,

the most viable one, given the context of this chapter, is that absenteeism precedes and/or leads to grievances. The critical factors seem to be the existence and enforcement of an absenteeism control plan and the role of the union. The stronger the plan and enforcement procedures, the more likely it is that grievances will occur. If the union reduces sources of absenteeism, the relationship between absenteeism and grievances may be alternated. If the union is powerful and in conflict with management, the association between these two variables may be strengthened.

Strategies for Research. Our position is that absences create grievances when there is an institutional policy that specifies limits on absence types and related penalties. To examine the relationship between absenteeism and grievances, we need to develop a system for recording grievances. In our current research program on absenteeism and in other research, we have not found good systems for recording first- and second-level grievances. In most plants, later stages of the grievance process are usually recorded, because there are specific parties (arbitrators) and costs associated with grievance processing. We have found few examples of good systems that capture all the steps in the grievance systems. We also need to assign meaning to a grievance. This represents the same problem discussed in respect to absenteeism and safety. Grievances are the result of a complicated political and negotiation process. Our theoretical position is that absenteeism leads to particular types of grievances (absenteeism related), not grievances in general. The problem is that, when we try to identify grievances related to absenteeism policy, some may be self-evident, but the description of others may be masked by some political agenda of labor or management.

In addition, we need to determine the existence of an absenteeism policy. The problem faced by the researcher is to determine whether such a plan actually exists. We have found in our research that public testimonials about the plan from either management or labor tell us little about whether a plan is actually operational. We see the process of recording an absence type or administering the plan as a continual process of negotiation between individual workers and management. Separate deals are often made because of special circumstances. If this characterization is true, one would look for evidence not of a general policy but rather of different poli-

cies with different classes of workers. The task, then, is to infer the policy from the patterns of absences and the implementation of disciplinary action. A good approach would be to look for people who have similar patterns of absence where one has been disciplined and the other not. By looking at these contrasting cases, we may infer the rules governing the policies. If we can determine the existence of an absenteeism control policy, it would be useful to determine the extent to which there is a single rule or multiple rules for different workers. The greater the number of rules governing the absenteeism-control policy, the greater the number of grievances. If there is one set of rules used by all, there will be lower ambiguity in the policy and fewer grievances. In addition to determining the existence of a rule and the number of rules, some measure of the severity of the policy should be noted. Severity can be measured in terms of the number of people fired because of absenteeism over the total work force or people on the plan. The time elapsed between being subject to an absenteeism-control plan and being fired could be another measure of severity.

Finally, we should examine the institutional structure of the union and management. The institutional structure of the union and the character of labor-management relationships should moderate the absenteeism-grievance relationship and thus should be described. The degree of commitment with which the union grievance committee accepts and processes grievances will affect propensity to file grievances. Past success in winning grievances, position in the union power structure, and the need to reassert power or visibility, particularly in the time of an election, may contribute to the propensity to file grievances. The general character of labor-management relations should also be important. If union and management operate primarily in an adversary role, absenteeism and grievances should be highly related; if they operate in a more cooperative mode, the relationship should be alternated.

Absenteeism Costs

What effect does absenteeism have on company operating costs? It has been estimated that more than 400 million workdays are lost because of absenteeism each year. Cost estimates of absenteeism range from \$8.5 to \$26 billion (Steers and Rhodes, 1978).

Empirical Studies. There are only a few published empirical studies that include costs for absenteeism. Macy and Mirvis (1976) estimated the costs of absenteeism in a factory as between \$55.36 and \$62.49 per incident over a four-year period. Total estimated absenteeism costs for that firm varied from \$289,360 to \$570,453 per year during that period. Mirvis and Lawler (1977) estimated the costs of absenteeism for tellers in a Midwestern bank. The cost per incident was \$66.45. While both studies are carefully done, they tell us more about the process of estimating than the actual costs. We would not expect their reported costs to be generalizable across industries or occupations.

Theoretical Issues. There is no well-developed theory on the relationship between absenteeism and costs. Work in human-resource accounting provides one tradition in understanding costs of human resources (Flamholtz, 1974). The recent interest in evaluating the effectiveness of quality-of-working-life projects provides another intellectual tradition in assessing the costs of human resources. In both traditions, the problem is to find a realistic approach to portraying the costs of absenteeism to the firm.

There are several ways to classify the costs associated with absenteeism. The aggregate approach estimates the number of additional workers hired to offset the effects of absenteeism. For example, a firm may need 100 production workers to produce efficiently. However, if a certain percentage of these individuals are expected to be absent, the firm may hire an additional pool of workers (replacements) to offset absenteeism. The cost of recruiting, selecting, training, and paying these additional workers represents one way to estimate the costs of absenteeism. This aggregate approach to estimating absenteeism may overstate absenteeism costs. It is unlikely, at any period, that the pool of additional workers will always be replacing absent workers. Absenteeism rates are not constant over time, so there would be days when replacements may not be needed. In addition, absenteeism does not always lead to replacements. Therefore, the pool of the additional workers will be spending part of their time in other productivity activities, and this needs to be subtracted from costs of absenteeism.

Another approach, more individual in perspective, estimates the incremental costs (or benefits) per day associated with a specific

absent worker. If a worker is absent and not replaced, the firm still incurs fringe-benefit costs. In addition, there may be costs incurred from lower productivity or greater chances of accidents for other workers who work in an understaffed situation. If a worker is absent and a replacement occurs, the task is to compare the marginal costs (benefits) that would have been incurred if the worker who was absent had come to work with the costs of the replacement worker. This enumeration includes both direct costs (salary, overtime, fringe benefits, supervisory costs and cost of recruiting and training replacements) and indirect costs (productivity loss, accidents, grievance costs, and physical overhead). In this approach, it is also important to recognize that absenteeism does not always lead to a replacement, so that direct labor costs may not be incurred.

There are a number of interesting theoretical issues underlying the absenteeism-cost relation. One is that there is a natural bias to assume that absenteeism increases costs. Consider the following case: A company hires additional workers to meet staffing needs in the face of absenteeism. That represents a cost. On the other hand, we have pointed to possible benefits to the company, as a function of absenteeism, in terms of short-run improvements in productivity and work group flexibility. This represents a benefit. The net effect may be a benefit. The issue is to recognize that the net effect of absenteeism is not always a cost.

A second issue concerns assigning costs to different meanings of absenteeism. Take the simplest case. Most collective bargaining agreements specify holidays and contract days that one may take and for which one will be paid. The costs associated with these days are costs of doing business. In one sense, they are no different from other labor or material costs. Many collective bargaining agreements give workers time off for bereavement or National Guard duty. Granting these days off reflects the firm's acknowledgment of obligations in the nonwork environment and, again, is an accepted cost of doing business. These types of costs that are agreed upon in the labor contract should perhaps be distinguished from absenteeism costs that are not sanctioned by the labor contract.

Another issue concerns who should be included in the enumeration of costs of absenteeism. Most absenteeism record systems concern nonexempt employees. Almost all studies on absenteeism

focus on blue- or white collar workers. Record data are generally not kept on managers. One consideration in considering consequences of absenteeism, particularly the cost issue, is determining the appropriate population for investigation.

The last issue concerns the enumeration of categories for assessing costs. Most researchers (for example, Macy and Mirvis, 1976) include the items we have listed in the direct and indirect costs. A major difference among writers in this area concerns how to deal with costs such as supervisor time, recruiting, selection, and physical overhead. Mirvis and Lawler (1977) include these categories in the assessment of absenteeism costs; Goodman, Atkin, and Seabright (1982) do not. Whether to include these costs depends on how the organization deals with opportunity costs. That is, if a supervisor spends some time each day looking for replacements for absentees, should this time be allocated to the cost of absenteeism? Some argue that while this supervisory activity is being performed, other productivity activities cannot be, so that there is a cost to managing absenteeism. The opposing argument is that there is slack in supervisory jobs. If the supervisor spends time dealing with obtaining a replacement, there is still enough slack within the job to complete other activities without hurting productivity. This issue of allocating fixed costs appears in other areas, such as overhead charges, costs of training replacement workers, and so on.

Research Strategy. In developing a research strategy, the following steps should be taken into account.

1. Develop new information systems. Traditional company accounting records are not designed to deal with the general issue of determining costs of absenteeism. On one level, the data may be there, but not in the desired form. For example, if worker A is absent and replaced by B, this state of affairs needs to be recorded, and then differential wages need to be calculated. In other cases, the data will not typically be collected. For example, in determining costs of absenteeism, we need to know the supervisory time related to absenteeism and the number of additional workers hired to deal with absenteeism. In both of these examples, new data systems would have to be created. That is an expensive task and one that companies may not cooperate with.

2. Estimate direct and indirect costs. To get the correct picture on costs of absenteeism, one must estimate both direct and indirect cost. Despite some of the problems we have mentioned in estimating direct costs of absenteeism, estimating indirect costs will be even more difficult. One must first estimate whether absenteeism changes productivity or accidents and then estimate the costs for that amount of change. Both estimation problems, particularly the former, make obtaining reliable estimates of indirect costs very difficult. Some strategies for estimating these indirect costs appear in this chapter and in Goodman (1979) and Goodman, Atkin, and Seabright (1982).
3. Relate costs to meaning of absenteeism. In the theoretical discussion, we argued that it was probably better to separate costs of absenteeism by the types of meaning of absenteeism. Perhaps the simplest way of thinking about delineating meaning is to examine it from the point of view of the company and to distinguish between absenteeism that is paid for and legitimized by the company and all other kinds of absenteeism. We advocate making this distinction because the meaning of these permitted absence days is clear and represents an a priori agreement about the number and schedule of workdays. An employee may be legitimately absent from work. Other types of absences, such as accident days, excused days, and unexcused days, are not formally legitimated, subject to multiple meanings from different constituencies, and should be costed separately. This discussion of costs is presented from the point of view of the firm. Different cost estimates would occur if we used different constituencies.

Affective Reactions

Does absenteeism affect the worker's affective state? Much of the absenteeism literature assumes the opposite—that negative affective states (for example, job dissatisfaction) can cause absenteeism. In this section, we want to examine whether absenteeism leads to changes in affective states. The specific hypothesis is that absenteeism can reduce stress and lead to both positive and negative attitude change.

Empirical Evidence. There are, unfortunately, very few empirical studies dealing with the absentee→affective reaction relationship. One study, by Staw and Oldham (1978), is interesting because it links absenteeism, attitudes, and performance. They argue that if a person is in an incompatible job (high stress), he or she may require some level of absenteeism to reduce stress. If a person is in a compatible job (low stress), then absenteeism will not serve the same function. They predict a positive relationship between absenteeism and performance in the incompatible jobs. Some empirical data are presented to support this differential hypothesis. While this study is important because it articulates theoretically the need to examine the absenteeism-attitude relationship and the positive consequences of absenteeism, it never directly tests the link between absenteeism and attitudes. That relationship is inferred from the sign of the association between absenteeism and performance for people in compatible and incompatible jobs.

A recent study by Clegg (1983) addresses the relationship between absenteeism and organizational commitment and job satisfaction. A basic thesis in this research is that researchers have focused too much on the attitude→absenteeism relationship rather than giving attention to the opposite causal path or some alternative explanation. Using a longitudinal design, some evidence was presented indicating that absenteeism was negatively related to job satisfaction and that job satisfaction was negatively related to absenteeism.

Theoretical Relationships. Absenteeism may have two effects on the individual worker. First, it may decrease or increase stress. Second, it may contribute to positive or negative attitude change. These two effects (stress and attitude change) may be experienced by the absent worker, a co-worker, or a replacement worker. There are many sources of stress at work. One mechanism for dealing with stress is some form of withdrawal, which would include absenteeism. While only a temporary way to manage stress, absenteeism may temporarily reduce experienced stress. This rationale is consistent with the Staw and Oldham (1978) paper. While an absence may reduce stress that is work initiated, prolonged absence may increase experienced stress at home. This stress may be caused by increased role pressures from family members or from the realiza-

tion that one is not fulfilling the work role. Duration of absence may have consequences for the employee returning to work. The longer the duration, the greater the experienced stress when returning to work. The increased stress may occur because absence should lead to some "piling up of work," and activity levels of work and home probably differ, so that one would have to readjust to activity levels at work. This discussion of stress has focused on the absent worker, not the co-worker. Absence of an employee may increase role overload or stress for the remaining employees. If replacement workers are used, they are likely to experience some levels of role ambiguity given their unfamiliarity with the jobs at hand.

In this chapter, we have distinguished between work and nonwork outcomes. To the extent to which absenteeism permits the realization of valued nonwork outcomes, we would expect to see positive attitudes in these nonwork areas. Opportunities to be with one's family or to enjoy a hobby should lead to positive attitudes. The absent worker also may develop negative attitudes. To the extent to which workers are disciplined by their supervisor or co-workers for absence, interpersonal conflicts may develop, which may lead to negative attitudes toward one's supervisor or fellow workers. Absenteeism may also affect the attitudes of workers who do come to work. If absenteeism creates opportunities for other workers to work on different jobs and those jobs offer rewards such as greater variety, challenge, and skill development, we would expect a shift toward more positive attitudes about work in general. That is, absenteeism creates a rewarding opportunity that can affect attitudes. The critical issue, of course, is whether the new job activities are rewarding and how often the opportunity occurs.

Workers who remain at work may develop negative attitudes toward the absent worker or the company for a number of reasons. First, if the absent worker causes the work load of the present workers to go up, we would expect feelings of inequity and the development of negative attitudes toward the absent worker. Second, absence may be viewed by the employees regularly attending work as a form of inequity. That is, the "contract" is to come to work every day, but some workers come irregularly and still retain their jobs.

The above theoretical explanations focus on direct effects of absence on attitudes. We discussed earlier that the process of

explaining absences by the absent individual may lead to attitude change. In this case, the person may attribute (correctly or incorrectly) the reason for absences to poor job or environmental conditions. The more often these attributions get rehearsed (as a function of absences), the more likely it is that they will facilitate the creation of attitudes.

Strategies for Research. Delineating the meaning of absenteeism is particularly important for understanding the absenteeism-attitude relation for the absent worker. If absenteeism represents a withdrawal from a stressful situation, we may expect to see a reduction in stress. If, on the other hand, absenteeism represents a planned consumption of nonwork activities (for example, fishing), we may not expect to see changes in stress, while we may expect to see changes in nonwork attitudes. The meaning of absence is less important in the analysis of the present workers' attitudes. In that case, the opportunity for working on another job and the character of that work are the key, not the reasons for the opportunity.

Analyzing this relationship requires a very detailed data set. If we want to examine the relationship among job stress, absenteeism, reduction of stress, and changes in attitude, we need frequent measures of these variables over time. If we want to see whether working on a new job as a result of absenteeism affects worker attitudes, we need measures on job characteristics, need dispositions, and job attitude before and after each job opportunity. While it is possible to develop such a data set, it differs from data sets typically found in the organizational literature.

Both work and nonwork attitudes should be measured. Absenteeism occurs because of work- and nonwork-related factors. To the extent that absenteeism creates the opportunity to perform valued nonwork activities, we would expect changes in attitudes about nonwork activities. Rousseau (1978) has shown that nonwork attitudes can affect absenteeism. Our interest is in demonstrating that absenteeism can affect both work and nonwork attitudes.

Critical Issues

One of the issues in researching the consequences of absenteeism is identifying the set of consequences. We adopted a constituency perspective from the organizational-effectiveness literature

and generated a list of positive and negative consequences for constituencies. While our analysis focused primarily on five consequences, many of the other variables mentioned in Table 7.1 are either included under the five consequence variables or are not central research problems. For example, benefits from compensatory nonwork activities, altered job perceptions, job variety, or skill development for co-workers could all be summed under changes in affective states. Greater crew flexibility or increased coordination problems would fit in the analysis of productivity. There are other consequences listed in Table 7.1 that are not really major research issues. Whether absenteeism leads to loss of pay for the absent worker or overtime for the co-worker is important, but it is hardly a challenging research question.

There are, however, important consequences we have not examined in detail. These consequences are found in social organizations outside the organization, such as the family or union. The omission of these variables is not surprising, since much of our research has a managerial or at least an organization-level bias. Table 7.1 acknowledges that there are other social organizations that are affected by absenteeism. A comprehensive analysis should develop theoretical models and data sets to assess the effects of absenteeism (positive and negative) on these social units. The research task appears to be manageable. Basically, it requires that we learn more about other social arenas, such as the family, and begin to develop data sets to trace through the effects of absenteeism.

The focus of our discussion has been on absenteeism as an independent variable. We have intentionally contrasted this perspective from the modal literature, which treats absenteeism as the dependent variable. However, we do not want to fall into the trap that characterizes most of the literature on absenteeism—that is, a one-way causal path. Absenteeism is both a cause of and a consequence of certain forces. In Clegg's research (1983), evidence for absenteeism as an independent and dependent variable is presented. In addition, in our theoretical discussions, it was pointed out that there are alternative variables that cause both absenteeism and other variables that appear to vary with absenteeism as well as variables that moderate the absenteeism-consequence relationship. The point is rather simple. The absenteeism-consequence relationship is more complicated than we have specified. However, given

the amount of theory and research in this area, our strategy would be to focus on this one-way relationship and carefully study some selected relationships before examining forms of reciprocal causation.

Another issue is the population to be studied. Our discussion really focused on occupations where work unfolds in some specific time schedule; we talked about occupations where there are some formal expectations about coming to work at a certain time. Indeed, without these expectations, it is not clear what absence means. What about self-employed people whose occupations do not have specific expectations about time, such as artists? A version of this same issue is that some occupations are somewhat diffuse as to where work is performed. A manager might decide to work at home for a given day. Would that be considered absence? The point of this issue is that absenteeism gets defined primarily in occupations where people work in a specific place at a specific time. If they are not there, then we observe an absence. The bias in the absenteeism literature and, to some extent, in this chapter is that we have focused primarily on the production worker, tangentially on the manager, and not at all on occupations where expectations about where and when to work are diffuse. In acknowledging this limitation, we also are suggesting some research opportunities. What effect does managerial absenteeism have on the manager's productivity or affective state? What is the relationship among absenteeism, nonwork satisfaction, and productivity for a research scientist or artist?

If we limit our theorizing to occupations where data on absenteeism are collected, one can still raise the question of generalizability. That is, do we expect absenteeism, for example, to have an impact on productivity and accidents across all work settings? The answer to that question should be evident from the theoretical analyses presented in this chapter. The argument was never derived from a particular work setting (for example, coal-mining crews). Rather, our theoretical focus was on variables or parameters that make a difference. For example, in the productivity analysis, the centrality of the job and the amount of discretion in the job are important in assessing the impact of absenteeism on productivity. In different work settings, we might expect to find different distributions of centrality or distributions within jobs and, therefore, different relationships between absenteeism and productivity.

If we can successfully understand the relationships between absenteeism and its consequences, we can focus our attention on other criterion variables. For example, much of the organizational-theory literature is concerned with determinants of performance. Yet we know little about the effect of performance on other variables. How do increases in performance affect absenteeism, accidents, affective states, and so on? What are the critical moderators? What is the nature of the functional relationship? All these questions are important, yet there is little systematic research addressing these questions. The point is that the strategy underlying the absenteeism-consequence relationship could be generalized to other variables, such as performance, turnover, or accidents. We are not advocating examining the interrelationships among a set of criterion variables, for that has been tried in the effectiveness literature with little success (Goodman, Atkin, and Schoorman, 1983). Rather, we are advocating a fine-grained analysis of variables that are traditionally dependent variables in most organizational research. We want to trace out their effects on the individual, work group, organization, and other social units.

Implications for Practice

An important theme underlying this chapter is that absenteeism has positive and negative consequences at the individual, group, organizational, and societal levels. Unfortunately, many managerial approaches to absenteeism assume that absenteeism has primarily negative consequences. If one works on this assumption of negative consequences, the primary action implication is that absenteeism should be reduced. Our analysis of positive and negative consequences by constituencies indicates that this assumption and the implied course of action may not be correct.

A careful analysis of the benefits and costs of absenteeism may be a useful managerial activity. A careful analysis of both positive and negative effects might uncover an array of latent consequences not previously recognized by managers. We think that this type of analysis will set the stage for different action alternatives. For example, if one-day absences facilitate job switching and enhancement of multiple job skills per employee, the organization may not want to eliminate this form of absence. On the other hand,

if one-day absences do not enhance the acquisition of multiple skills and serve primarily to assist in family activities (for example, child care), then action alternatives such as child-care facilities may be appropriate. Identifying the cause and consequence of absenteeism might help in selecting more appropriate action alternatives. If absenteeism does reduce productivity, then understanding the cause of this relationship will have obvious consequences for practice. One factor underlying this negative relationship is the role of the vacancy and/or the unfamiliarity of the replacement in causing lower productivity. One remedy for this situation is training replacements for specific jobs and thus reducing the amount of unfamiliarity when a replacement is necessary. If absenteeism causes accidents, then understanding the cause of this relationship will have obvious consequences for practice. If a worker is absent for a period and returns to a work situation unfamiliar with various aspects of work, the chances for accidents may be increased. One remedy, particularly for workers experiencing long spells of absenteeism, would be to provide some form of safety training prior to returning to work. Or, if absenteeism leads to the replacement of a worker by someone unfamiliar with various aspects of work, then some form of training for the replacement may minimize accidents.

In our analysis of grievances, we pointed out that the existence of an absenteeism-control plan probably will increase the frequency of grievances. The implication is not that one should throw out absenteeism-control plans. Rather, our analysis of absenteeism and grievances indicates that (1) the existence of an absenteeism-control plan may increase grievances, a potential cost to the organization and union; (2) it is difficult to administer an absenteeism-control program so that all employees are treated equitably; and (3) absenteeism-control plans are not quick solutions to reducing absenteeism. If an absenteeism-control plan is implemented, a major investment in training should be undertaken, and a feedback system should be installed to ensure that the program is working equitably over time.

In this chapter, we have shown that absenteeism can have a variety of positive and negative consequences for the individual, co-workers, and organization. We also believe that some levels of absenteeism will exist in any organization, and, therefore, some

consequences that we discussed will follow. It may be possible in some cases, however, to alter some of the negative consequences through alternative organizational designs. For example, if absenteeism contributed to accidents and lower productivity in a work group, it may be that redesigning the group into an autonomous work group characterized by multiskilled members who are highly cooperative and cohesive would attenuate the absence-accident relationship. That is, these organizational interventions will not eliminate the consequences of absenteeism but surely will moderate their negative impact. This example is suggested to illustrate how alternative forms of work organization may be important in understanding the absenteeism-consequence relationship.

References

- Allen, S. G. "Compensation, Safety, and Absenteeism: Evidence from the Paper Industry." *Industrial and Labor Relations Review*, 1981, 34 (2), 207-218.
- Beehr, T. A., and Gupta, N. "A Note on the Structure of Employee Withdrawal." *Organizational Behavior and Human Performance*, 1978, 21, 73-79.
- Carnegie-Mellon Coal Project. "Determinants of Group Productivity." Unpublished technical report to the U.S. Bureau of Mines, Carnegie-Mellon University, 1983a.
- Carnegie-Mellon Coal Project. "Effects of Absences on Accidents." Unpublished technical report to the U.S. Bureau of Mines, Carnegie-Mellon University, 1983b.
- Clegg, C. W. "Psychology of Employee Lateness, Absence, and Turnover: A Methodological Critique and an Empirical Study." *Journal of Applied Psychology*, 1983, 68 (1), 88-101.
- Dalton, D. R., and Perry, J. L. "Absenteeism and the Collective Bargaining Agreement: An Empirical Test." *Academy of Management Journal*, 1981, 24 (2), 425-431.
- Flamholtz, E. *Human Resource Accounting*. Encino, Calif.: Dickenson, 1974.
- Goodman, P. S. *Assessing Organizational Change: The Rushton Quality of Work Experiment*. New York: Wiley-Interscience, 1979.
- Goodman, P. S., Atkin, R. S., and Schoorman, F. D. "On the

- Demise of Organizational Effectiveness Studies." In K. S. Cameron and D. Whetton (Eds.), *Organizational Effectiveness: A Comparison of Multiple Models*. New York: Academic Press, 1983.
- Goodman, P. S., Atkin, R. S., and Seabright, M. "Issues and Strategies in Evaluating Employee Assistance Programs." (Contract J0100069, U.S. Bureau of Mines.) Carnegie-Mellon University, Oct. 1982.
- Goodman, P. S., and Pennings, J. M. (Eds.). *New Perspectives on Organizational Effectiveness*. San Francisco: Jossey-Bass, 1977.
- Hammer, T. H., Landau, J. C., and Stern, R. N. "Absenteeism When Workers Have a Voice: The Case of Employee Ownership." *Journal of Applied Psychology*, 1981, 66 (5), 561-573.
- Hill, J. M., and Trist, E. L. "A Consideration of Industrial Accidents as a Means of Withdrawal from the Work Situation." *Human Relations*, 1953, 6 (4), 357-380.
- Hirschman, A. O. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, Mass.: Harvard University Press, 1970.
- Johns, G., and Nicholson, N. "The Meanings of Absence: New Strategies for Theory and Research." In B. M. Staw and L. L. Cummings (Eds.), *Research in Organizational Behavior*. Vol. 4. Greenwich, Conn.: JAI Press, 1982.
- Katz, H. C., Kochan, T. A., and Gobeille, K. R. "Industrial Relations Performance, Economic Performance and Quality of Working Life Efforts: An Inter-Plant Analysis." Unpublished paper, Massachusetts Institute of Technology, 1982.
- Katz, H. C., Kochan, T. A., and Weber, M. R. "Assessing the Effects of Industrial Relations and Quality of Working Life Efforts on Organizational Effectiveness." Unpublished paper, Massachusetts Institute of Technology, 1982.
- Macy, B. A., and Mirvis, P. H. "Measuring Quality of Work and Organizational Effectiveness in Behavioral-Economic Terms." *Administrative Science Quarterly*, 1976, 21, 212-226.
- Mikalachki, A., and Gandz, J. *Managing Absenteeism*. London, Ontario: School of Business Administration, University of Western Ontario, 1982.
- Mirvis, P. H., and Lawler, E. E. III. "Measuring the Financial

- Impact of Employee Attitudes." *Journal of Applied Psychology*, 1977, 62 (1), i-8.
- Moch, M. K., and Fitzgibbons, D. E. "Automation, Employee Centrality in the Production Process, the Extent to Which Absences Can Be Anticipated, and the Relationship Between Absenteeism and Operating Efficiency: An Empirical Assessment." Unpublished paper, University of Texas at Dallas, 1982.
- Mowday, R. T., Porter, L. W., and Steers, R. M. *Employee-Organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover*. New York: Academic Press, 1982.
- Naylor, J. C., Pritchard, R. D., and Ilgen, D. R. *A Theory of Behavior in Organizations*. New York: Academic Press, 1980.
- Rousseau, D. M. "Short Noted Relationship of Work to Nonwork." *Journal of Applied Psychology*, 1978, 63 (4), 513-517.
- Staw, B. M., and Oldham, G. R. "Reconsidering Our Dependent Variables: A Critique and Empirical Study." *Academy of Management Journal*, 1978, 21 (4), 539-559.
- Steers, R. M., and Rhodes, S. R. "Major Influences on Employee Attendance: A Process Model." *Journal of Applied Psychology*, 1978, 63 (4), 391-407.