The Lorenz case is an important case in the development of the law regarding the rights of professional employees in the workplace. The crucial idea in the case was the so-called "public-policy exception" to the traditional common law doctrine of "employment at will." Common law is the tradition of case law or "judge-made- law" that originated in England and is fundamental in U.S. law. It is based on a tra- dition in which a judicial decision establishes a precedent, which is then used by suc- ceeding jurists as the basis for their decisions in similar cases. Common law is distinguished from statutory law, or laws made by legislative bodies. Traditionally, U.S. law has been governed by the common law doctrine of "em- ployment at will," which holds that in the absence of a contract, an employer may discharge an employee at any time and for virtually any reason. Recent court deci- sions, such as this one, have held that the traditional doctrine must be modified if there is an important interest at stake. Precisely how far the public policy exception extends is still being formulated by the courts, but it includes such things as a refusal to break the law (such as in the Lorenz case), performing an important public obli- gation (e.g., jury duty), exercising a clear legal right (e.g., exercising free speech or applying for unemployment compensation), and protecting the public from a clear threat to health and safety. In general, the public policy exception has not been invoked to protect an employee when there is a mere difference in judgment with the employer.2 The courts have also given more weight to the codes of administrative and judicial bodies, such as state regulatory boards, than to the codes promulgated by professional societies.3 In addition to the judicial modification of at-will employment, dissenting employees have also received some statutory protection, primarily through whistle- blower laws. The first such state law was passed in Michigan in 1981. If the employee is unfairly disciplined for reporting an alleged violation of federal, state, or local law to public authorities, the employee can be awarded back pay, reinstatement to the job, costs of litigation, and attorney's fees. The employer can also be fined up to $500.4 New Jersey's Conscientious Employee Protection Act forbids termination for conduct undertaken for the sake of compliance with "a clear mandate of public policy concerning the public health, safety, or welfare."5 Many cases in the area of what might very generally be called "employee rights" involve nonprofessional employees, but our special interest is professional employees, especially engineers. Many of the cases, like the Lorenz case, involve a conflict be- tween professional employees and managers. In fact, most of the classic cases in engi- neering ethics involve conflicts between engineers and managers. Therefore, this relationship bears close examination. It is the focus of this chapter. We begin with a very cynical and pessimistic picture of the relationship of engineers and managers— one that offers little prospect of a productive relationship between these two groups. Then we develop a more optimistic—and, we believe, more realistic—view of the relationship. ENGINEERS AND MANAGERS: THE PESSIMISTIC ACCOUNT Management theorist Joseph Raelin, reflecting the position of some students of man- agement, says, "There is a natural conflict between management and professionals because of their differences in educational background, socialization, values, voca- tional interests, work habits, and outlook."6 We can be somewhat more precise about the areas of conflict between engineers and managers. First, although engineers may not always maintain as much identity with their wider professional community as some other professionals (e.g., research scientists), engineers do often experience a conflict between loyalty to their employer and loyalty to their profession.7 Most engineers want to be loyal employees who are

concerned about the financial well–being of their firms and who carry out instructions from their superiors without protest. In the words of many engineering codes, they want to be "faithful agents" of their employers. At the same time, as engineers they are also obligated to hold paramount the health, safety, and welfare of the public. This obli– gation requires engineers to insist on high standards of quality and (especially) safety.8 Second, many managers are not engineers and do not have engineering exper– tise, so communication is often difficult. Engineers sometimes complain that they have to use oversimplified language in explaining technical matters to managers and that their managers do not really understand the engineering issues. Third, many engineers who are not managers aspire to the management role in the future, where the financial rewards and prestige are perceived to be greater. Thus, many engineers who do not yet occupy the dual roles of engineer and manager prob– ably expect to do so at some time in their careers. This conflict can be internalized within the same person because many engineers have roles as both engineers and managers. For example, Robert Lund, vice president for engineering at Morton Thi– okol at the time of the Challenger disaster, was both an engineer and a manager. Before the disaster, Lund was even directed by his superior to take the managerial rather than the engineering perspective. This account of the differences between the perspectives of engineers and man– agers suggests the possibility of frequent conflicts. This prediction is confirmed by a well–known study by sociologist Robert Jackall. Although his study focuses only infrequently on the relationship between managers and professionals, his occasional references to the relationship of managers to engineers and other professionals make it clear that he believes his general description of the manager–employee relationship applies to the relationship of managers to professionals, including engineers. In his study of managers in several large U.S. corporations, Jackall found that large organ– izations place a premium on "functional rationality," which is a "pragmatic habit of mind that seeks specific goals." Jackall found that the managers and firms he studied had several characteristics that were not conducive to respecting the moral commit– ments of conscientious professionals.9 First, the organizational ethos does not allow genuine moral commitments to play a part in the decisions of corporate managers, especially highly placed ones. A person may have whatever private moral beliefs she chooses, as long as these beliefs do not influence behavior in the workplace. She must learn to separate individual conscience from corporate action. Managers, according to Jackall, prefer to think in terms of trade–offs between moral principles, on the one hand, and expediency, on the other hand. What we might think of as genuine moral considerations play little part in managerial decisions, according to Jackall. Faulty products are bad because they will ultimately harm the company's public image, and environmental damage is bad for business or will ultimately affect managers in their private role as consumers. This attitude is in contrast to that of White, an employee who, according to Jackall, was concerned with a problem of excessive sound in his plant. White defined the issue of possible harm to employees as a moral concern instead of approaching it pragmat– ically. In another example, Jackall recounted the story of Brady, an accountant who found financial irregularities that were traced to the CEO. Whereas Brady saw the issue as a moral one, managers did not. In discussing the case, they held that Brady should have kept his mouth shut and dropped the matter. After all, the violations were small relative to the size of the corporation.10 Second, loyalty to one's peers and superiors is the primary

virtue for managers. The successful manager is the team player, the person who can accept a challenge and get the job done in a way that reflects favorably upon himself and others.11 Third, lines of responsibility are deliberately blurred to protect oneself, one's peers, and one's superiors. Details are pushed down and credit is pushed up. Actions are separated from consequences insofar as this is possible so that responsibility can be avoided. In making difficult and controversial decisions, a successful manager will always get as many people involved as possible so he can point his finger at others if things go wrong. He should also avoid putting things in writing to avoid being held responsible. Protecting and covering for one's boss, one's peers, and oneself super- sedes all other considerations. According to this account of managerial decision making, the moral scruples of professionals have no place. In such an atmosphere, a principled professional would often appear to have no alternative to organizational disobedience. Such was the case with Joe Wilson, an engineer who found a problem with a crane that he believed involved public health and safety. Wilson wrote a memo to his boss, who replied that he did not need such a memo from Wilson and that the memo was not con- structive. After Wilson was fired and went public, a New York Times investigation cited a corporate official's comment that Wilson was someone who "was not a team player."12 If engineers typically work in an organizational environment like the one Jackall described, their professional and ethical concerns will have little chance of being accorded respect. There is, however, a more constructive aspect of Jackall's study. He does suggest some characteristics of managerial decision making that are useful in analyzing the manager–engineer relationship: 1. Jackall's study implies that managers have a strong and probably overriding concern for the well-being of the organization. Well-being is measured primarily in financial terms, but it also includes a good public image and relatively conflict- free operation. 2. Managers have few, if any, loyalties that transcend their perceived obligations to the organization. They do not, for example, have professional obligations that they might consider to override or even counterbalance their obligations to the 3. The managerial decision-making process involves making trade-offs among the relevant considerations. Ethical considerations are only one type of consideration. Furthermore, if we are to believe Jackall, managers tend not to take ethical consid- erations seriously, unless they can be translated into factors affecting the well- being (e.g., the public image) of the firm. Jackall presents a very pessimistic picture of the place of a morally committed professional in an organization. In the next section, we suggest ways in which engi- neers can have a much more positive and productive .relationship between them and their organizations. ,organization