

## Chapter 11

# The Rights of Engineers

### Chapter Objectives

Having read this chapter, completed the included exercises, and answered the associated questions, readers should be able to

- explain the relationship between duties and rights and the nature of/basis for rights with regard to moral, civic, and employment communities;
- describe the nature and give examples of both racial and sexual discrimination, and the relation between rights and discrimination;
- list the rights of employees in general and engineers specifically, and explain problems with and solutions to the enforcement of rights.

### EXERCISE—SEXUAL HARASSMENT IN THE WORK PLACE: JOAN MENDOZA

---

Read through each of the following hypothetical scenarios. Take a few minutes to respond to the issues posed after each section. If relevant, mention any ethical principles encountered thus far to justify your answers. If none of the principles reviewed thus far appear relevant to answering the questions, then briefly justify your answers, referring to principles you think would be relevant.

Joan Mendoza recently graduated from a state university with a bachelor's degree in civil engineering. She is quite pleased with herself, since Joan successfully completed a program without female professors and very few enrolled female students. Although she is quite attractive, Joan has developed many of the more "macho" attitudes of her fellow civil engineering students, in part as a result of the environment of her school. Joan is confident a successful career as a civil engineer awaits her, in part because she had a number of promising job offers well before graduation. Since Joan wants a stable work environment, and the opportunity to give back to her community and work outdoors, she accepted a position as a project engineer with the State Highway Department (SHD).

Her interviewer painted a glowing picture of her career prospects with SHD. After her interview, Joan also spoke with another female engineer who was enthusiastic about her work. During the interview, no one mentioned to Joan that she would be only the second female engineer hired by SHD and the first

female project engineer. Joan had not thought to raise any questions concerning this subject:

1. Should the interviewer have explained to Joan her pioneering role at SHD? Why or why not?
2. Should she have raised the question of the number of female engineers working for SHD?
3. Do you think the failure of the interviewer to mention the number of female engineers working for SHD was planned? Explain your answer.

Joan thoroughly enjoys her first several months at work, which consist in introductions to various parts of SHD and more generalized training. She is suddenly sent to a rural part of the state to oversee a road repair project, after the previous manager developed a serious long-term illness. Joan packs her bags with the anticipation of facing new challenges. When she arrives at the project site, her subordinates behave in a rather hostile fashion, which Joan dismisses as a sign they are unprepared for the sudden change of leadership. However, she quickly discovers she is the only woman onsite. After several days, workers begin making comments: “Bitches belong in the house, not a construction site!” “She's not worth much as an engineer, but I'd like to get her alone...”

1. Do you think these comments are normal and to be expected at construction sites or a normal reaction to changes in leadership? Explain your answer.
2. Are these comments demeaning to Joan as an engineer or as a woman?
3. Should she confront those making the comments? If so, then should Joan order them to cease making such comments and/or report them to the headquarters of SHD? Should she request a transfer?

Despite the comments, Joan is able to focus on her job, and after a couple weeks, the comments cease. In their place, however, she notices that—when-ever she leaves her office—the men stare at her intently, almost longingly. One afternoon, just before work ends, one of the men, Bill Smith, hesitantly approaches Joan. Stuttering, Bill says he is attracted to her and would like to take her out for a drink. Joan finds his demeanor generally appealing and is tempted to take him up on the offer:

1. How should Joan react to Bill's invitation? Explain your response.
2. What limits exist within professional relationships?

Later that month, Joan notices something else: whenever she is consulting with the foreman, Tom Bryant, he seems to get very close to her. Sometimes his body touches hers. At first, Joan assumes this is an accident, but as time passes, the touching becomes more frequent. She thinks he is intentionally rubbing against her:

1. How should Joan react to Tom's behavior? Justify your answer.
2. Does Tom's behavior constitute sexual harassment? Why or why not?

Several months later, Joan's supervisor, Bob Hamm, arrives at the site to inspect the project. After the review, during a private consultation in her office, Bob tells Joan the project seems to be falling behind schedule, and he will have to write a negative performance review of her work. As a married man, Bob says he understands that women sometimes have difficulties adjusting to new environments and that—were they to spend the night together—he could help her adjust. Bob tells Joan that if she agrees, then he will revise his report on her work. As this is her first performance review, Joan knows it will be very important to her long-term career prospects with SHD:

1. Should Joan sleep with Bob? Why or why not?
2. There were no witnesses to this conversation. How important is this fact? Why?
3. Should Joan lodge a complaint with SHD's headquarters? Explain your answer.
4. If she does and SHD does nothing, then should Joan lodge a complaint with the federal Equal Employment Opportunity Commission? Why or why not?

## 11.1 NOT ONLY DUTIES, BUT ALSO RIGHTS

Up to this point, the focus has been largely on the responsibilities and duties of engineers, companies, employers, and employees. However, the flip side of such duties is rights. Western ethical and political thought has stressed rights to a greater extent than responsibilities; this is less true in Asian societies. Given this emphasis, especially in the United States, many have argued that too much stress has been laid on rights.<sup>126</sup>

Perhaps this emphasis can be explained with reference to the US Constitution, where the first 10 amendments are collectively known as the “Bill of Rights.” These amendments have been understood as limiting the powers of the Federal government over individuals. For example, the well-publicized second amendment is generally understood as restricting the powers of the Federal government to limit weapon ownership. Again, especially in the United States, many citizens focus mainly on their rights and very little on their responsibilities and duties.

Given this state of affairs, the fact that relatively little emphasis has been given to the rights of engineers is interesting.<sup>127</sup> Perhaps this results from the fact that rights and obligations are correlative: if engineers have obligations in relation to one party, then rights are implied in relation to another. For example, as was discussed in [Chapter 9](#), if engineers have important obligations to foster and preserve public safety, then they also have rights to violate employment

126. For examples of philosophers who have argued for a shift away from rights to more capabilities-based approaches characteristic of virtue ethics, see [Nussbaum \(2003\)](#) and [MacIntyre \(2013\)](#).

127. For notable exceptions, see [Whitelaw \(1975\)](#) and [Flores \(1980\)](#).

confidentiality to do so. Thus, it could appear as though discussions of rights are unnecessary, since they are already implied in discussions of duties. Since rights violations can be common, however, focus on them is necessary.

## 11.2 THE NATURE OF RIGHTS

A “right” can be understood as an entitlement of an individual. “Positive” rights are when one is entitled to others acting in a certain way, doing something. For example, a right to education would be a positive right, entailing that schools are built, teachers are hired, and so on. “Negative” rights are when one is entitled to others not acting in a certain way and not doing something. For example, a right to free speech would be a negative right, entailing that no one prevents one from speaking, writing, and so on. Obviously, positive and negative rights can be connected, for example, a positive right to medical treatment and a negative right to choose a physician to consult. Again, it is important to keep in mind that rights are correlated with duties and obligations: in the case of positive rights, the duty of one individual or group is to do something for another; in the case of negative rights, the duty of one individual or group is not to do something to another.

Rights are central to the exercise of autonomy, since they guarantee the minimal conditions necessary to pursue interests. However, rights are not absolute. To protect the rights of others—or achieve an important social goal—rights can be restricted. These potential conflicts between the rights of individuals and society necessitate discussion regarding the ethical implications and consequences of rights.

Rights exist at various levels, the most fundamental of which are generally referred to as “human” rights. Since many have argued that rights at this level should be conceived as encompassing more than just human beings, calling them “moral” rights might be more appropriate.<sup>128</sup> In India, for example, dolphins have been declared “nonhuman persons,” which prevents them from being kept in captivity for entertainment. Moral rights are based simply on belonging to a moral community. Membership in this community could be determined by possessing sentience, emotions, reason, and so on. It might also be determined by physical similarities to other beings.

With regard to dolphins, the Indian Ministry of Environment and Forest has stated that “various scientists who have researched dolphin behavior have suggested that the unusually high intelligence as compared with other animals means that dolphins should be seen as ‘nonhuman persons’ and as such should have their own specific rights, and it is morally unacceptable to keep them captive for entertainment purposes” (“[India Bans](#),” 2013). This does not mean, of course, that dolphins are entitled to the same rights and

---

128. Concerning claims that rights traditionally given to humans should extend further, see [Regan \(2004\)](#).

protections as human beings. Rather, because of a specific characteristic dolphins possess, intelligence, they are different from other animals and, therefore, entitled to rights—the right not to be kept for purposes of entertainment. Since one need only belong to the moral community to have moral rights, these have been understood as foundational, outweighing other forms of rights.<sup>129</sup>

Other forms of rights are contractual in nature, based on membership in particular groups: civic rights are based on membership in a particular nation or community. Employee rights are based on membership in a particular company, and the rights of engineers are based on membership in a particular profession and role responsibilities related to engineering. Insofar as these rights are contractual in nature, they are limited to particular relations among people. Civic rights, for example, do not transfer from one society to another, although moral rights do. For this reason, determining what counts as a moral right is especially important:

- Based on their level of intelligence, the Indian government has classified dolphins as “nonhuman persons,” granting them certain rights. Should intelligence take precedence over other characteristics on the basis of which individuals and groups would be accorded rights? Why or why not?

The rights of engineers can be considered in terms of three levels: engineers as moral beings, as employees, and as engineers. As mentioned above, moral rights are the most fundamental, since they apply to all moral beings, in all situations. Again, moral rights override other types of rights. For example, employers do not have the right to violate the moral rights of employees to achieve business objectives, even if employees have signed contracts giving employers authority over them. These rights are crucially important, since they provide means of morally justifying actions and making demands. Moral rights can, therefore, be understood as trumps, to be invoked when fundamental aspects of people's humanity are threatened. Previously, it was explained that engineers have a duty to “ensure that fundamental rights will not be negatively impacted as a result of their work with technology.”

Since persons have moral rights merely because they belong to the moral community, these rights reflect how persons deserve to be treated as members of that community. Therefore, in establishing moral rights, one must ask how moral beings deserve to be treated. This is clearly not a factual enterprise, since the treatment of persons varies socially and culturally. As a normative question, disagreement exists regarding which rights are truly moral. In part, this results from continuous attempts by stakeholders to equate civic with moral rights and to give the latter greater justification. Candidates for moral

---

129. Regarding the nature of human rights in general, see [Ropp and Sikkink \(1999\)](#) and [Nickel \(1987\)](#).

rights include—but are not limited to—a right to life, food, shelter, privacy, justice, nondiscrimination, free speech, fair treatment, and equal opportunities.<sup>130</sup> These are all based on the supposition that, in some sense, persons share a fundamental equality and should be able to act on their potentials as persons.

Of course, listing sets of rights is not the same as determining their meanings in concrete situations. For example, although a “right to life” refers to protection from the moment of conception for some, it refers to protection from the moment of birth for others. Additionally, although a “right to justice” could mean a trial before a jury composed of peers in some social contexts, it could mean the exercise of power for communal well-being by authority in other social contexts.<sup>131</sup> Hence, the meaning and status of different rights are much debated, and considerations and justifications of all these rights would go well beyond the scope of this text. Here it is important that engineers simply be aware of the nature of and debates concerning moral rights, for the sake of better understanding their specific professional duties and rights.<sup>132</sup>

### 11.3 EMPLOYEE RIGHTS AND THE LIMITS OF EMPLOYERS

As mentioned before, the rights of employees are based on either explicitly signed or implicitly understood contracts, agreed upon between employees and employers. These rights are, thus, specific to particular employment situations. For example, if an employee signs a contract to be paid a specific amount for the completion of a piece of work, then she has the right to be paid that amount once the piece of work has been completed. If an employee signs a contract to be paid at a rate of one and a half for overtime, then he has the right to be paid at a rate of one and a half for working overtime. Employee rights, thereby, limit the powers of employers to act arbitrarily in setting or changing conditions of employment.

Of course, the rights of employees established in contracts are limited by considerations of moral permissibility. Employers cannot give employees the right to violate the rights of others, for example, allowing employees to assign workers to life-threatening working conditions without their consent. Thus, in addition to employee rights explicitly agreed upon and established through contracts, employees have other rights. Many of these are related to the moral and civic rights that belong to individuals because of membership in particular societies. For this reason, to apply in working environments, these rights need not be explicitly articulated in employment contracts.

---

130. Again, for a fuller discussion of human rights in general, see [Ropp and Sikkink \(1999\)](#) and [Nickel \(1987\)](#).

131. For a cross-cultural analysis of justice, see [Leung and Morris \(2002\)](#).

132. For more on the nature of rights in general and their relations to engineering specifically, see [Martin and Schinzinger \(2010\)](#), Chapter 3.

Topics at the intersection of moral rights and employment might include fair compensation and hiring practices, equal opportunities for promotion, humane working conditions, protection against sexual harassment, degrees of privacy in working environments, and the nature of safe and healthy working environments, depending on the nature of the job. Topics at the intersection of civic rights and employment might include expression of religious preferences, protection against arbitrary dismissal, and participation in managerial processes. As with moral rights in general, considerable debate exists concerning how such rights should be applied to employment contexts. A great deal of discussion surrounds rights to privacy and nondiscrimination, for instance.

## 11.4 THE RIGHT TO PRIVACY

With the development of technologies allowing for employee monitoring, the right to privacy has become an especially contentious issue. When employees sign employment contracts, they clearly consent to limitations on their actions—just as membership in society limits free actions. A concern surrounds the extent to which employers are entitled to determine whether employees are adhering to these limits. For example, employees have duties to perform their jobs at acceptable levels, but the following questions can be asked regarding the limits of employer involvement: are employers entitled to monitor all employee actions? Can they monitor the behaviors of employees outside of work environments, for example, by testing for off-duty drug use? Should employers be allowed to limit the amount of time employees spend visiting the restroom, during working hours? Can they administer polygraph exams, lie-detector tests? Should employers be allowed to search the personal possessions of employees?

Although answers to many of these questions have been established regarding the nonworking parts of people's lives—through constitutional protections coupled with court rulings—they are not yet fully settled in employment contexts and call for ethical reflection. Writing protections for workers into employment contracts would be one way to resolve such issues. Even in dealing with employee collectives such as unions, however, employers have been disinclined to volunteer such protections. In addition to privacy, discrimination in the workplace is another hotly contested topic, lying at the intersection of employment, rights, and ethics:

- Do you think employers should be allowed to monitor the actions of their employee, regardless of job performance? Why or why not?

## 11.5 SPECIFIC CONSIDERATIONS OF DISCRIMINATION: RACIAL AND SEXUAL

The United States, for example, has long debated its history of racial discrimination—although such reflections are by no means either unique or confined to the United States, occurring in other parts of the world with regard to not only racial

but also ethnic groups. Generally, it has been accepted that such discrimination in employment contexts is morally wrong. Practices of discrimination reject the fundamental equality of all human beings, instead making a characteristic irrelevant to work-related duties, race, a central factor in decisions regarding employment. This has led to charges of “reverse discrimination,” discrimination against the majority population.

To correct for past injustices and raise minority populations to levels where they can compete equally, practices of “affirmative action” have been instituted. In these schemes, for example, if two workers are equally qualified for a position, then the one who is a minority would be hired. Insofar as the nonminority candidate might actually be more qualified—although both must be qualified—but denied the position in favor of the minority candidate, this has been considered reverse discrimination: in the attempt to right a past wrong, another wrong is committed, so the argument goes. More recently, a growing awareness exists that discrimination based on sex, religion, and national origins falls into the same category as discrimination based on race.

Again, if workers are to be treated equally, then this should be true with regard to characteristics irrelevant from the perspective of work-related duties. As touched on in the exercise at the beginning of this chapter, discussions regarding sexual harassment point toward this recognition. In sexual harassment a particular group is singled out for adverse treatment, resulting in negative effects on the abilities of members of that group to perform their jobs. Sexual harassment takes two main forms: first, actions are directed against a particular individual or group, for example, sexual advances; second, a sexually harassing culture/environment is established, for example, discussions or jokes of a sexual nature. Confusion regarding sexual harassment can arise from the nature of harassment.

Actions that demean others by turning them into objects—rather than treating them as beings deserving of respect—are obviously immoral. However, if sexual advances are welcomed or appreciated, then harassment has not occurred. Therefore, sexual harassment depends on subjective intentions and interpretations: the same action considered harassment in one set of circumstances might not be considered harassment in another. Women and men could have different interpretations of sexual actions in the workplace. Attempts have been made to establish objective rules that would limit behaviors. Given the subjective dimensions of behaviors, however, these rules will likely be inadequate. For this reason, issues surrounding harassment should be considered from not only a legal but also an ethical perspective:

- Aside from race, would policies like affirmative action be appropriate for other categories of personal and social identification? Explain your answer, listing and describing any other such categories.
- How should one react to seeing a coworker sexually harassed in the workplace? If you think your workplace is an environment of sexual harassment, what is the best course of action to take?



## 11.6 EMPLOYEE RIGHTS, IN GENERAL

In listing the rights of engineers, previously established duties can be used as a guide; [Chapter 6](#) established the duties of companies in relation to stakeholders. Since duties entail rights and vice versa, when applied to employees as stakeholders, employee rights follow from the duties of companies.

Employees have the right to

1. be protected from unnecessary harm in their employment;
2. fair and just treatment by employers;
3. not be subjected to discrimination or harassment in their employment;
4. be treated by their employers based on merit;
5. have their contracts honored.

These rights are directly derived from corporate duties and, therefore, do not require further justification.

In addition to corporate duties, [Chapter 6](#) listed employee duties. Turning back to this list reveals an additional employee right to

6. disobey illegitimate employment directives.

The other duties of employees establish the rights of employers rather than employees. Duties associated with these rights would, thus, receive further clarification in a text on stockholder—rather than employee—ethics.

## 11.7 THE RIGHTS OF ENGINEERS, SPECIFICALLY

Previous chapters have emphasized that, given their professional status, engineers are more than simply employees: they belong to a special category of employee with duties specific to their roles as engineers. Engineers have role responsibilities they should carry out in an autonomous fashion. To fulfill these special duties, engineers should also have specific rights, over and above those of other employees. Even if these rights are not explicitly formulated in employment contracts, in hiring engineers, employers implicitly agree to them. Just as general employee rights can be derived from corporate duties, so too can specific rights of engineers be derived from their duties to ensure trust from the public.

First, based on previous discussions of safety and whistle-blowing, as a special category of employees, engineers have the right to

7. blow the whistle (externally or internally) if, in their professional judgments, the physical safety of the public will be endangered as a result of their failures to act.

It should be remembered that, in accordance with previous discussions of whistle-blowing, the right to whistle-blow does not necessarily entail an ethical responsibility to do so.

Second, based on the duty of engineers to perform their work in an adequate fashion—so as not to endanger the safety of themselves or others—engineers have the right to

8. obtain the resources necessary to perform their assigned tasks competently.

Third, based on the relationship of engineers with the public, engineers have the right to

9. inform the public of engineering decisions that have the potential to seriously harm the physical welfare of the public.

In contemplating if, when, and how to exercise this right, it is important to keep in mind the complexity involved in balancing duties related to loyalty and confidentiality with those related to public safety.

## 11.8 ANOTHER RIGHT: INTELLECTUAL PROPERTY

One right not included in the above list—since neither does it directly affect the abilities of engineers to engineer more ethically nor does it directly follow from the duties of engineers—but that should be mentioned, is the right of engineers to property. Worldwide, schemes of intellectual property are becoming evermore complex. For this reason, on a global basis, the property rights of engineers should be outlined explicitly.

To encourage the development of new technologies, engineers should have the right to obtain just rewards from their achievements, including long-term gains resulting from their contributions to intellectual property. As “property” becomes an increasingly fluid notion—especially in international contexts—it is important that ownership rights be articulated. A final right of engineers would be to

10. fair compensation for their work, including the right to share equitably in gains resulting from their contributions to intellectual property.

Here the right to gains associated with intellectual property is based on the nature of technological development more generally, rather than engineering specifically. Articulating this right might be one of the more controversial claims of this text.

## 11.9 THE ENFORCEMENT OF RIGHTS

Before concluding this discussion of rights, it is necessary to briefly consider their enforcement. Unlike the duties of engineers, the preservation of rights requires an enforcement mechanism—since individuals and institutions are expected to respect rights. In life, rights are often violated. As discussed above, establishing legal mechanisms is one way to ensure the recognition and enforcement of rights. Drafting and enforcing laws can establish all types of rights—human, moral, civic, contractual, and so on.

Unfortunately, however, all too often those in positions of authority are the ones who violate rights. Therefore, additional actions are necessary. These often include boycotts, publicizing rights violations in news media, resigning positions, and so on. In addition to legal actions, these may or may not be effective. Just an awareness of and the ability to articulate the above rights, however, could further the ability of engineers to have their rights respected:

- Since moral and human rights are only recognized and enforced in some parts of the world, what determines the importance of rights worldwide? Do individuals and groups that recognize and enforce such rights have responsibilities to help other individuals and groups to attain this recognition and enforcement? Why or why not?

## 11.10 SUMMARY

As professionals, employees, and members of moral and civic communities, in addition to duties, engineers have rights. The nature of these rights in general, and specific rights, can be understood in terms of duties. Rights are the flip side of duties, and they can be conceived in terms of levels: the lower the level, the more basic and universal the associated rights, becoming more specific at higher levels. Insofar as engineers have obligations associated with the roles they occupy, engineers also have rights that should be ensured, allowing them to fulfill these obligations. In the sphere of employment, chief among such rights are those protecting individuals from discrimination—where characteristics of individuals and groups unrelated to job performance are used to make decisions regarding employment. Although a right to intellectual property is not directly related to public safety, given the present state of technological developments and social roles of engineering, engineers should enjoy the gains resulting from their intellectual property. Finally, although the enforcement of rights cannot be guaranteed, an awareness of rights by engineers could help to ensure they are.

## REVIEW QUESTIONS

---

1. Explain the difference between positive and negative rights and the relationship of rights to duties/obligations?
2. In which way are rights related to autonomy? Under what conditions would it be ethical to restrict certain rights?
3. What are moral rights? Why do they “trump” other types of rights? Does one have to be human to possess moral rights?
4. In terms of what three levels can the rights of engineers be considered? Explain the relationship between these levels and the duties engineers have to public safety.
5. Why should the intellectual property rights of engineers be explicitly outlined?

6. List and explain the six employee rights discussed above and the ways they are derived from corporate duties.
7. Explain one way of insuring the recognition and encouragement of rights?
8. Define sexual harassment. Explain the two main forms of sexual harassment discussed above.

## REFERENCES

- Flores, A. (1980). Engineer's professional rights. *Issues in Engineering Journal of Professional Activities*, 106(4), 389–396.
- India Bans Captive Dolphin Shows as 'Morally Unacceptable.' (2013), Environment News Service. May 20. <http://ens-newswire.com/2013/05/20/india-bans-captive-dolphin-shows-as-morally-unacceptable/>.
- Leung, K., & Morris, M. W. (2002). Justice through the lens of culture and ethnicity. *Handbook of justice research in law* (pp. 343–378). New York: Springer.
- MacIntyre, A. (2013). *After virtue*. London: A & C Black.
- Martin, M., & Schinzinger, R. (2010). *Introduction to engineering ethics* (2nd ed.). New York: McGraw Hill.
- Nickel, J. (1987). *Making sense of human rights: Philosophical reflections on the universal declaration of human rights*. Berkeley: University of California Press.
- Nussbaum, M. (2003). Capabilities as fundamental entitlements: Sen and social justice. *Feminist Economics*, 9(2-3), 33–59.
- Regan, T. (2004). *The case for animal rights*. Berkeley: University of California Press.
- Ropp, S., & Sikkink, K. (1999). *The power of human rights: International norms and domestic change*. Cambridge: Cambridge University Press. Vol. 66.
- Whitelaw, R. (1975). The professional ethics of the American engineer: A bill of rights. *Professional Engineer*, 37–41. August.