

TECHNICAL COMMUNICATION TODAY



Richard Johnson-Sheehan



CHAPTER

4

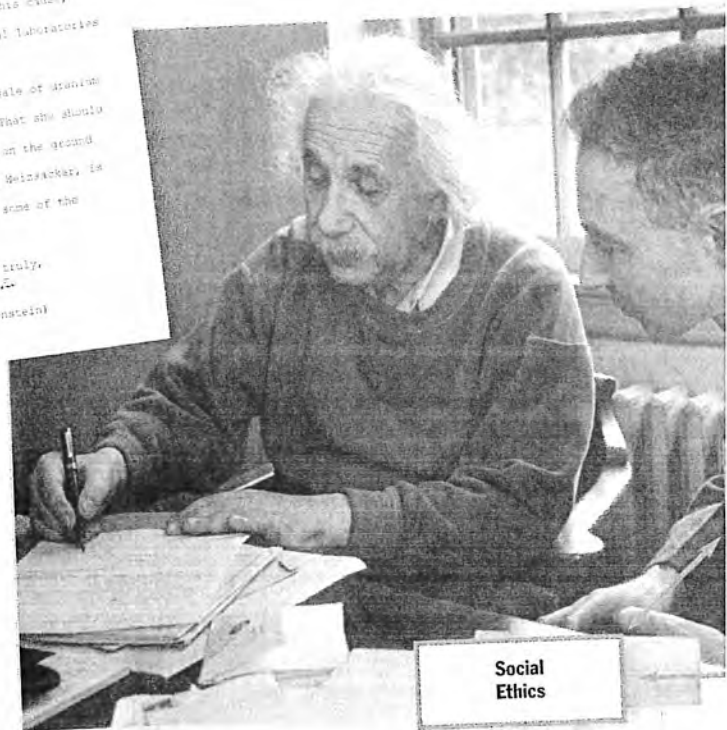
Ethics in the Technical Workplace

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Yours very truly,
Albert Einstein
 (Albert Einstein)



Social Ethics

IEEE Code of Ethics

We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:

1. to accept responsibility in making engineering decisions consistent with the safety, health and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;
2. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;
3. to be honest and realistic in stating claims or estimates based on available data;
4. to reject bribery in all its forms;
5. to improve the understanding of technology, its appropriate application, and potential consequences;
6. to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;
7. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;
8. to treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin;
9. to avoid injuring others, their property, reputations, or careers by false or malicious action;
10. to assist colleagues and co-workers in their professional development and to support them in following the code.

Personal Ethics

Ethical Dilemma

Social Ethics

Approved by the IEEE Board of Directors August 1990

CHAPTER OBJECTIVES

In this chapter, you will learn:

- A working definition and understanding of ethics.
- To identify three ethical systems: personal, social, and conservation.
- To consider social ethics as issues of rights, justice, utility, and care.
- How copyright law affects technical communication.
- Strategies for resolving ethical conflicts in technical workplaces.
- How to balance the many issues involved in an ethical dilemma.
- About the new ethical challenges that face the computer-centered workplace.

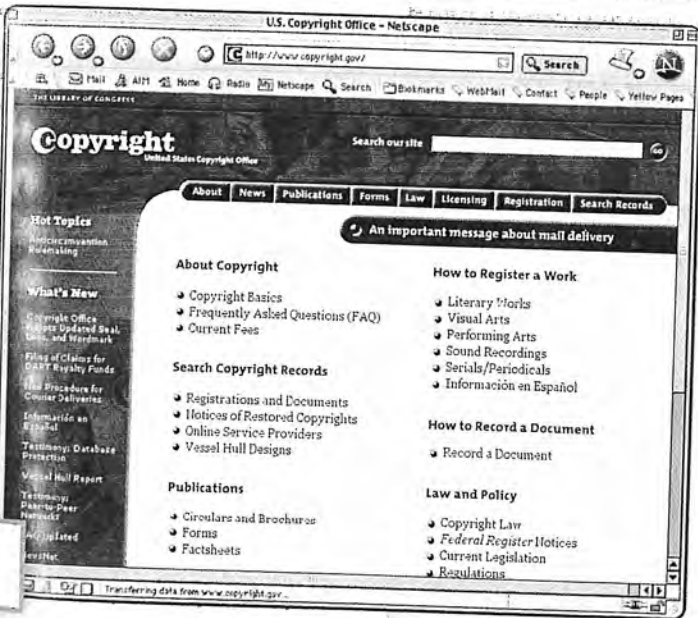
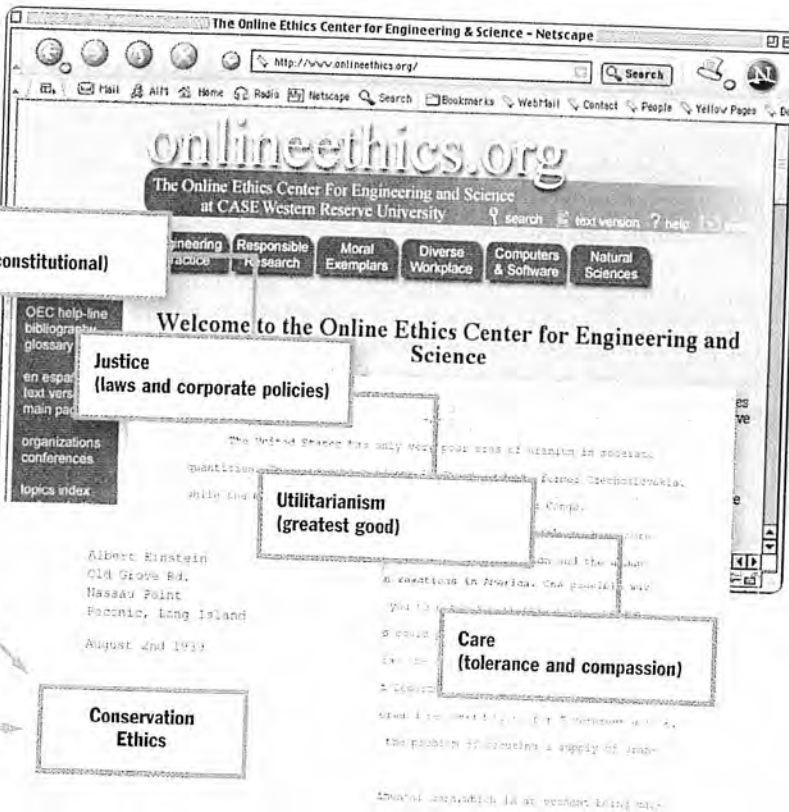
Rights
(civil and constitutional)

Justice
(laws and corporate policies)

Utilitarianism
(greatest good)

Care
(tolerance and compassion)

Conservation
Ethics



Conservation
Ethics

Ethics have taken a beating recently. Enron, Tyco, WorldCom, Global Crossing, and PCINet have added their names to a growing list of corporate scandals. Meanwhile, the collapse of the "dot com" industry was largely due to massive amounts of money being thrown at companies built on questionable, perhaps even unethical, foundations. When the dot com bubble burst in the year 2000, many people lost their jobs, their retirement savings, and their confidence in the technology sector.

We could blame these scandals on unethical, greedy, unscrupulous people—and certainly they deserve blame—but the newness of the computerized workplace is probably also to blame. As we evolve into an electronic culture, the ethical boundaries are not as clear as they were only a few decades ago. Unfortunately, some people are willing to exploit these ethical gray areas for their own financial advantage, often hurting others.

For example, copyright law is a renewed ethical battleground in the Information Age, especially where these laws involve music. More than likely, you or your friends have MP3 players and many "free" songs downloaded off the Internet onto your computer's hard drive. Is downloading songs for free ethical? The music industry says no, and copyright law backs it up. Nevertheless, many users of MP3 players think sharing music is ethical and have decided to violate the law.

In the technical workplace, you will run into ethical dilemmas regularly. At these decision points, you need to be able to identify what is at stake and make an informed decision. Ethical behavior is more than a matter of personal virtue—it is good business. The scandals and failures of the early 21st century have quite clearly proven the importance of ethics in the technical workplace.

What Are Ethics?

People have different definitions for ethics. For some, ethics are about issues of morality. For others, ethics are a matter of law. Actually, ethics bring together many different ideas about appropriate behavior in a society.

Ethics are a system of moral, social, or cultural values that govern the conduct of an individual or community.

Ethics are a system of moral, social, or cultural values that govern the conduct of an individual or community. For many people, acting ethically simply means "doing the right thing." In fact, this phrase sums up ethics quite well. The hard part, of course, is figuring out what is the right thing to do. Ethical choices, after all, are not always straightforward.

Every decision you make has an ethical dimension, whether it is apparent or not. In most workplace situations, the ethical choice is apparent, so you do not pause to consider whether you are acting ethically. Occasionally, though, you will be presented with an *ethical dilemma* that needs more consideration. An ethical dilemma offers a choice among two or more unsatisfactory courses of action. At these decision points, it is helpful to ponder the ethics of each path, so you can make the best choice.

In technical workplaces, ethical dilemmas are not uncommon. Resources, time, and reputations are at stake, so you will feel pressure to overpromise, underdeliver, bend the rules, cook the numbers, or exaggerate results. Technical fields are also highly competitive, urging people to stretch a little further than they should. Ethical dilemmas force us into situations where all choices seem unsatisfactory.



Definitions of Ethics and Ethical Dilemma

- Ethics—systems of moral, social, or cultural values that govern the conduct of an individual or community.
- Ethical Dilemma—a choice among two or more unsatisfactory courses of action.

Why do some people behave unethically? People rarely set out to do something unethical. Rather, they usually find themselves facing a tough decision in which moving forward means taking risks or treating others unfairly. In these situations, they may be tempted to act unethically due to a fear of failure, a desire to survive, pressure from others, or just a series of bad decisions. Small lies lead to bigger lies until the whole house of cards collapses on them.

Keep in mind, though, that ethics are not always about deception or fraud. A famous example involving Albert Einstein (Figure 4.1) proves this point. Figure 4.2 shows a letter from Einstein to President Franklin Roosevelt encouraging research into the development of the atom bomb. Throughout the rest of his life, Einstein, who was an ardent pacifist, was troubled by this letter. Five months before his death, he stated:

I made one great mistake in my life . . . when I signed the letter to President Roosevelt recommending that atom bombs be made; but there was some justification—the danger that the Germans would make them. (Clark, p. 752)

In this quote, you see the ethical dilemma weighing on Einstein. He deeply regretted the atom bomb's development and use on Japan. However, he also recognized that his letter may have alerted Roosevelt to a very real danger. Historians have pointed out that Einstein's letter may have helped prevent the Nazis from creating an atom bomb themselves. Ethical dilemmas put people in these kinds of quandaries.

Einstein with Robert Oppenheimer

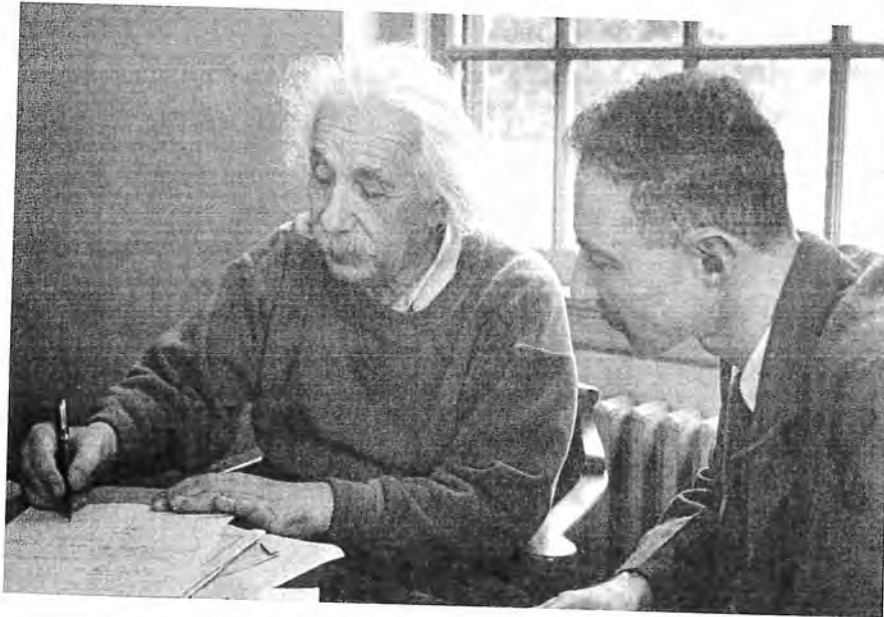


Figure 4.1: Einstein meets with Robert Oppenheimer, the leader of the United States' efforts to develop an atom bomb. Later, Einstein regretted his involvement, though minimal, with its development.



To learn more about Einstein, go to www.ablongman.com/johnsonweb/4.2

Einstein's Letter to Roosevelt about the Atom Bomb

Albert Einstein
Old Grove Rd.
Nassau Point
Peconic, Long Island

August 2nd 1939

F.D. Roosevelt
President of the United States
White House
Washington, D.C.

Sir:

Some recent work by E. Fermi and L. Szilard, which has been communicated to me in manuscript, leads me to expect that the element uranium may be turned into a new and important source of energy in the immediate future. Certain aspects of the situation which has arisen seem to call for watchfulness and, if necessary, quick action on the part of the Administration. I believe therefore that it is my duty to bring to your attention the following facts and recommendations:

In the course of the last four months it has been made probable - through the work of Joliot in France as well as Fermi and Szilard in America - that it may become possible to set up a nuclear chain reaction in a large mass of uranium, by which vast amounts of power and large quantities of new radium-like elements would be generated. Now it appears almost certain that this could be achieved in the immediate future.

This new phenomenon would also lead to the construction of bombs, and it is conceivable - though much less certain - that extremely powerful bombs of a new type may thus be constructed. A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port together with some of the surrounding territory. However, such bombs might very well prove to be too heavy for transportation by air.

Here is Einstein's main point.

Einstein expresses the imminent problem.

He points out the possible threat of these new kinds of weapons.

Figure 4.2: In 1939, Einstein wrote this letter to President Franklin Roosevelt. The atomic bomb would have been built without Einstein's letter, but his prodding jump-started the United States nuclear program.

Source: Argonne National Laboratory, <http://www.anl.gov/OPA/frontiers96arch/aetofdr.html>.

Figure 4.2:
(continued.)

-2-

The United States has only very poor ores of uranium in moderate quantities. There is some good ore in Canada and the former Czechoslovakia. While the most important source of uranium is Belgian Congo.

In view of the situation you may think it desirable to have more permanent contact maintained between the Administration and the group of physicists working on chain reactions in America. One possible way of achieving this might be for you to entrust with this task a person who has your confidence and who could perhaps serve in an unofficial capacity. His task might comprise the following:

Einstein offers
a potential
solution.



a) to approach Government Departments, keep them informed of the further development, and put forward recommendations for Government action, giving particular attention to the problem of securing a supply of uranium ore for the United States;

b) to speed up the experimental work, which is at present being carried on within the limits of the budgets of University laboratories, by providing funds, if such funds be required, through his contacts with private persons who are willing to make contributions for this cause, and perhaps also by obtaining the co-operation of industrial laboratories which have the necessary equipment.

He points out
that the Nazis
may already be
working on
nuclear
technology,
potentially a
bomb.



I understand that Germany has actually stopped the sale of uranium from the Czechoslovakian mines which she has taken over. That she should have taken such early action might perhaps be understood on the ground that the son of the German Under-Secretary of State, von Weizsäcker, is attached to the Kaiser-Wilhelm-Institut in Berlin where some of the American work on uranium is now being repeated.

Yours very truly,

(Albert Einstein)

Where Do Ethics Come From?

How can you identify ethical issues and make appropriate choices? To begin, consider where values come from:

Personal ethics—Values derived from family, culture, and faith.

Social ethics—Values derived from constitutional, legal, utilitarian, and caring sources.

Conservation ethics—Values required to protect and preserve the ecosystem in which we live.

These ethical systems intertwine, and sometimes they even conflict with each other (Figure 4.3).

Intertwined Ethical Systems

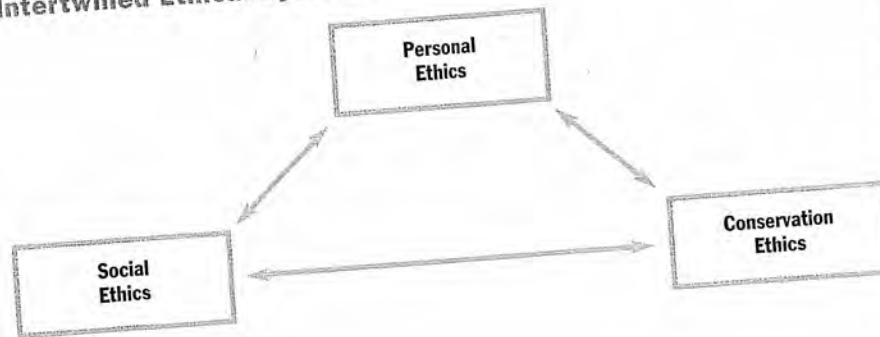


Figure 4.3: Ethics come from a variety of sources, which overlap. Your personal sense of ethics guides the majority of your daily decisions. Social and conservation ethics play significant roles in the technical workplace.

Personal Ethics

By this point in your life, you have developed a good sense of right and wrong. More than likely, your personal ethics derive from your family, your culture, and your faith. Your family, especially your parents, probably taught you some principles to live by. Meanwhile, your culture, including the people in your neighborhood or even the people you watch on television, have shaped how you make decisions. And, for many people, their faith gives them specific principles about how they should live their lives.

The basis for almost all personal ethics is the “Golden Rule,” which has been championed by numerous philosophers and religious figures, including Buddha, Confucius, Jesus, Mohammed, Moses, and Socrates.

Golden Rule: Do unto others as you would have them do unto you.

The Golden Rule states that you should do unto others as you would have them do unto you. This simple rule offers a strong foundation for personal ethics. In fact, it probably already guides the majority of your daily ethical decisions. Each day, you have opportunities to lie, steal, cheat, vandalize, or hurt people. But you don’t, because you know that hurting others ultimately hurts yourself. Further, your family, culture, and faith have taught you that respecting the needs of others means others will respect your needs.



In the technical workplace, a strong sense of personal values is essential, because these values offer a reliable touchstone for ethical behavior. A good exercise is to make a list of values that you hold dear. Perhaps some values that end up on your list might include honesty, integrity, respect, candor, loyalty, politeness, thoughtfulness, cautiousness, thriftiness, and caring. By articulating these values and following them, you will likely find yourself acting ethically in almost all situations.

Social Ethics

In technical workplaces, the most difficult ethical dilemmas are usually found in the social realm. Here is where ethical dilemmas occasionally go beyond or even against your personal values, asking you to think more globally about the consequences of your or your company's actions.

Ethics scholar Manuel Velasquez (2002) offers a helpful four-part categorization of social ethical situations:

Rights—Rights are fundamental freedoms that are innate to humans or granted by a nation to its citizens. *Human rights*, like those mentioned in the *U.S. Declaration of Independence* (life, liberty, and the pursuit of happiness), are innate to humans and cannot be taken away. *Constitutional rights* (freedom of speech, right to bear arms, protection against double jeopardy) are the rights held in common by citizens of a nation.

Justice—Justice involves fairness among equals. Justice takes its most obvious form in the laws that govern a society. Our laws are a formalized ethical system that is designed to ensure that people are treated equally and fairly. Similarly, *corporate policies* are the rules that ensure fairness within a company.

Utility—Utility suggests that the interests of the majority should outweigh the interests of the few. Of paramount importance to utilitarianism is *the greatest good for the greatest number of people*.

Care—Care suggests that tolerance and compassion take precedence over rigid, absolute rules. Ethics of care suggest that each situation should be judged on its own, putting heightened attention on concern for the welfare of people and preserving relationships. It also recognizes that some relationships, like those involving friends and family, will often lead to ethical choices that transcend rights, justice, and utility.

Legal issues, usually involving rights and justice, are especially important in technical communication, because the temptation to break the law to gain a competitive edge can be great. The law is a collection of rules of conduct that individuals and businesses are obligated to follow. In democracies, codes of laws are enacted by legislatures and interpreted by judges. Violating these laws can result in civil sanctions and/or criminal prosecution. Legal issues of copyright law, patent law, liability, privacy, and fraud (which are all discussed later in this chapter) are crucial concerns that affect how individuals and companies conduct themselves. You should be aware of the laws that apply to your discipline.



More information on Manuel Velasquez's ethical system is available at www.ablongman.com/johnsonweb/4.4

Where Do Ethics
Come From?

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When facing an ethical dilemma or controversy involving ethics, you should first identify which of these four ethical categories applies to your situation. Ethical issues that involve human or constitutional rights are usually given the most gravity (Figure 4.4). Issues involving care are still important, but they have the least gravity. In other words, if an ethical decision involves human or constitutional rights, it will take on much more importance than a decision that involves issues of justice, utility, or care.

Four Categories of Social Ethics

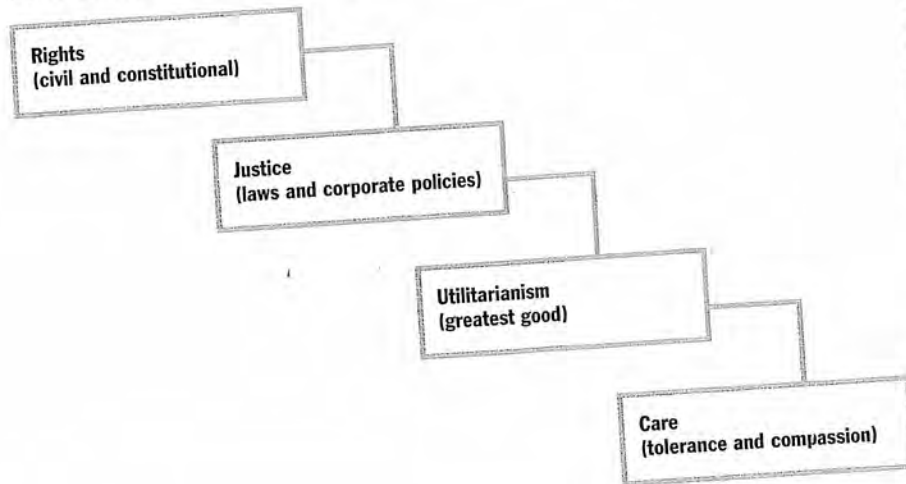


Figure 4.4: Social ethics can be ranked. Concerns about rights usually have more gravity than justice issues, and so on.

By sorting ethical dilemmas into these four categories, you can often decide which course of action is best. For example, consider the following case study:

Case Study: Your company makes a popular action figure toy with many tiny accessories. Countless children enjoy the toy, especially all those tiny boots, hats, backpacks, weapons, etc. However, a few children have choked on some of the small pieces that go with the toy. How would the four levels of ethics govern how to handle this situation?

Answer: In this case, a human right (life) has more weight than utility (thousands of children versus a few). So, the ethical choice would be to alter the toy or stop selling it.

Social ethical issues are rarely this clear cut, though. After all, rights, justice, utility, and care are open to interpretation and debate. A union organizer, for example, may see a company's resistance to unionizing as a violation of the right to free assembly provided by the U.S. Constitution. The company, on the other hand, may point to federal laws that allow it to curb union activities. This kind of debate over rights and justice happens all the time.

TAKE NOTE Keep in mind that readers from other cultures may have very different sets of values. If you are communicating with international readers, make sure you are aware of their ethical values.



Another problem is that people miscategorize their ethical issue.

Case Study: Your town's city council has decided to implement a no smoking policy that includes all public property and restaurants. Many smokers now find it impossible to have their "smoke break" around public buildings and in restaurants. They argue that their right to smoke is being violated. How might you resolve this ethical issue?

Answer: Actually, there is no such thing as a right to smoke. Smoking is a legal issue (a matter of justice) and perhaps a utility issue (the health interests of the nonsmoking majority versus the interests of a smoking minority). So, if the city chooses to ban smoking on public property or in restaurants, it can do so legally as long as it applies the law fairly to all. It is not violating anyone's human or constitutional rights.

Of course, defenders of smoking may point out that restricting smoking hurts businesses like bars and restaurants (a utility argument). Advocates of nonsmoking places might counter by pointing out that secondhand smoke may cause cancer in patrons and employees of these establishments (also a utility argument). The city council may take these arguments into consideration before passing a new law.

When making decisions about social ethical issues, it is important to first decide which ethical categories fit the ethical dilemma you are pondering. Then, decide which set of ethics has more significance, or gravity. In most cases:

- issues involving *rights* will have more gravity than issues involving *laws*.
- issues involving *laws* will have more gravity than issues involving *utility*.
- issues involving *utility* will have more gravity than issues involving *care*.



Four Categories of Social Ethics

- Rights—Civil rights and constitutional rights
- Justice—Laws and corporate policies
- Utility—Greatest good (majority rules)
- Care—Tolerance and compassion for others

There are, of course, exceptions. In some cases, utility may be used to argue against laws that are antiquated or unfair. For example, it was once legal to smoke just about anywhere, including the workplace (and the college classroom). By using utility arguments, opponents of smoking have successfully changed those laws. Today, smoking is evermore restricted in public.

Conservation Ethics

Increasingly, the ecosystem is becoming a source for ethical dilemmas. With issues of global warming, nuclear waste storage, toxic waste disposal, and overpopulation, among others, we must move beyond the idea that conservation is a "personal virtue." We are forced to realize that human health and survival are closely tied to the health and survival of the entire ecosystem in which we live. Conservation ethics involves issues of water conservation, chemical and nuclear production and waste, management of insects and weeds in agriculture, mining, energy production and use, land use, pollution, and other environmental issues.



For more information on conservation ethics, go to www.ablongman.com/johnsonweb/4.6

Where Do Ethics Come From?

One of America's prominent naturalists, Aldo Leopold, suggested that humans need to develop a *land ethic*. He argued:

All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. . . . The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land. (p. 239)

In other words, your considerations of ethics should go beyond the impact on humans and their communities. The health and welfare of the ecosystem around you should also be carefully considered.

Technical fields need to be especially aware of conservation ethics, because we handle so many tools and products that can damage the ecosystem. Without careful concern for use and disposal of materials and wastes, we can do great harm to the environment.

Ultimately, conservation ethics are about *sustainability*. Can humans interact with their ecology in ways that are sustainable in the long term? Conservation ethics recognize that resources must be used. They simply ask that people use resources in sustainable ways. They ask us to pay attention to the impact our decisions have on the air, water, soil, plants, and animals on this planet.

Conservation ethics are becoming increasingly important. The 21st century has been characterized as the "Green Century," because humans have reached a point where we can no longer ignore the ecological damage caused by our decisions. For example, within this century, estimates suggest that human-caused climate change will raise global temperatures from 2 to 10 degrees. Such a rise would radically alter our ecosystem.

HELP Copyright Law in Technical Communication

An interesting flashpoint today is copyright law. A copyright gives someone an exclusive legal right to reproduce, publish, or sell his or her literary, musical, or artistic works. Copyright law in the United States was established by Article 1 of the United States Constitution. The U.S. law that governs copyright protection is called "Title 17" of the United States Code.

Essentially, a copyright means creative work is someone's property. If others would like to duplicate that work, they need to ask permission and possibly pay the owner. Authors, musicians, and artists often sign over their copyrights to publishers, who pay them royalties for the right to duplicate their work.

New electronic media, however, have complicated copyright law. For example,

- When you purchase something, like a music CD, you have the right to duplicate it for your own personal use. What happens if you decide to copy a song off a CD and put it on your website for downloading? You might claim that you put the song on your website for your personal use, but now anyone else can download the song for free. Are you violating copyright law?
- According to Title 17, section 107, you can reproduce the work of others "for purposes such as criticism, comment, news reporting, teaching (including mul-



tiple copies for classroom use), scholarship, or research.” This is referred to as “fair use.” So, is it illegal to scan whole chapters of books for “teaching purposes” and put them on a CD for fellow students or coworkers?

- New technology like webcasting (using digital cameras to broadcast over the Internet) allows people to produce creative works. If you decided to webcast your and your roommates’ dorm room antics each evening, would you be protected by copyright law?
- Blogs, or web logs, are becoming a popular way to broadcast news and opinions. Are these materials copyrighted? Is it illegal to share words and images on blogs?

The answer to these questions is “yes,” but the laws are still being worked out. It is illegal to allow others to download songs off your website. It would be illegal to scan large parts of a book, even if you claimed they were being used for educational purposes. Meanwhile, you can protect webcasting and blogs through the copyright laws.

The problem is the ease of duplication. Before computers, copyrights were easier to protect because expensive equipment like printing presses, sound studios, and heavy cameras were required to copy someone else’s work. Today, anyone can easily duplicate the works of others with a scanner, CD/DVD recorder, or digital video recorder.

Ultimately, violating copyright is like stealing someone else’s property. The fact that it is easier to steal today does not make it all right. Nevertheless, a few scholars have argued that copyright law is antiquated and that this kind of electronic sharing is how people will use text and music in the future.

Asking Permission

To avoid legal problems, it is best to follow copyright law as it is currently written. You need to ask permission if you would like to duplicate or take something from someone else’s work. You can ask permission by writing a letter or e-mail to the publisher of the materials. Publishers can almost always be found on the Internet. On their websites, they will often include a procedure for obtaining permissions. Tell them exactly what you want to use and how it will be used.

In some cases, especially when you are a student, your use may fall under the “fair use clause” of the Copyright Act. Fair use allows people to copy works for purposes of “criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research” (17 U.S. Code sec. 107). If your use of the materials falls under these guidelines, you may have a *limited* right to use the materials without asking permission.

For example, fair use would likely allow you to use a song legally downloaded from the Internet as background music in a presentation for your class. However, it does not allow you to distribute that song freely to your friends, even if you claim you are doing so for educational purposes.

Copyrighting Your Work

What if you write a novel, take a picture, produce a movie, or create a song? How do you copyright it? The good news is that you already have. In the United States, a work is copyrighted as soon as it exists in written form. If you want, you can add the

copyright symbol “©” to your work to signal that it is copyrighted. The copyright symbol, however, is no longer necessary to protect a work.

If you want to formally protect your work from copyright infringement (i.e., so you can sue someone who uses your work without your permission), you should register your copyright with the U.S. Copyright Office (Figure A). This step is not necessary to protect your work, but it makes settling who owns the material much easier.

The U.S. Copyright Office Website



Figure A: You can visit the U.S. Copyright Office website to learn more about copyright law or to protect your own work.

Source: United States Copyright Office, <http://www.loc.gov/copyright>.

Plagiarism

One type of copyright infringement is plagiarism. In Chapter 5 of this book, plagiarism is discussed in depth, but the subject is worth briefly mentioning here.

Plagiarism is the use of someone else's text or ideas as your own without giving credit. Plagiarism is a violation of copyright law, but it is also a form of academic dishonesty that can have consequences for your education and career.

For example, cutting and pasting words and images off the Internet and "patch-writing" them into your documents is a form of plagiarism, unless those materials are properly cited. To avoid questions of plagiarism, make sure you cite your sources properly and, when needed, ask permission to use someone else's work.

Resolving Ethical Dilemmas

No doubt, you will be faced with numerous ethical dilemmas during your career. There is no formula or mechanism you can use to come out with the "right" answer. Rather, ethical dilemmas usually force us to choose among uncomfortable alternatives.

Doing the right thing can mean putting your reputation and your career on the line. It might mean putting the interests of people above profits. It also might mean putting the long-term interests of the environment above short-term solutions to waste disposal and use of resources.

Confronting an Ethical Dilemma

When faced with an ethical dilemma, start considering it from all three ethical perspectives: personal, social, and conservation (Figure 4.5).

Personal ethics—How does my upbringing in a family, culture, and faith guide my decision? How can I do unto others as I would have them do unto me?

Social ethics—What rights or laws are involved in my decision? What is best for the majority? How can I demonstrate caring by being tolerant and compassionate?

Conservation ethics—How will my decision affect the ecosystem? Will my choice be ecologically sustainable in the long term?

Balancing the Different Issues in an Ethical Dilemma

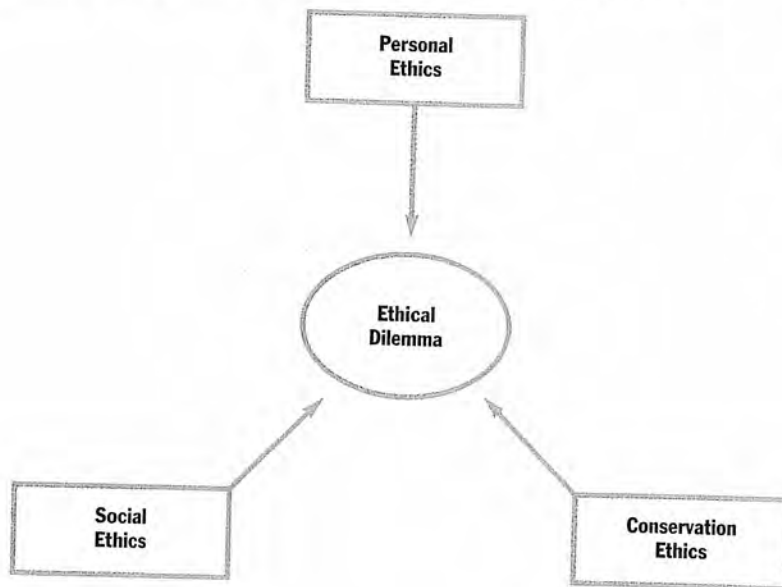


Figure 4.5: Resolving an ethical dilemma requires you to consider it from various ethical perspectives.



Do you want to try solving some more ethical dilemmas? Go to www.ablongman.com/johnsonweb/4.8

With most ethical dilemmas, you will find that ethical stances conflict. To resolve the dilemma, it helps to first locate the “ethical tension”—the point where two or more ethical stances are not compatible. For example:

- As a doctor who treats gunshot victims all the time, you may be opposed to gun ownership, but social ethics in the form of constitutional law make gun ownership a right. *Here, rights are coming into conflict with utility.*
- Someone offers you a draft of your competitor’s proposal for an important project. With that information your company would almost certainly win the bid. However, your industry’s code of ethics regarding proprietary information forbids you to look at it. *Here, justice is coming into conflict with utility.*
- Your company owns the rights to the timber in a forest, but an endangered species of owl lives there and its habitat, by law, should be protected. *Here, justice, rights, and conservation are in conflict.*
- A legal loophole allows your company to pump tons of pollution into the air, even though this pollution is obviously harming the health of the residents in a small town a few miles downwind. *Here, personal ethics and utilitarianism are in conflict with justice.*

Product liability is a place where these kinds of conflicts become especially important. If your company produces a product that harms people unintentionally, the company may still be found liable for damages. It is not enough to simply splash warnings all over your documentation. Even if warnings are provided, your company might be found negligent by the courts and ordered to pay damages.

LINK For more information on liability in technical documents, see Chapter 19, page 546.

Resolving an Ethical Dilemma

When faced with an ethical dilemma, you can use the following five questions to help you resolve it. These questions are a variation of the ones developed by Professor Sam Dragga in an article on ethics in technical communication (1996).

Do any laws or rules govern my decision?—In many cases, laws at the federal, state, and local levels will specify the appropriate action in an ethical case. You can look to your company’s legal counsel for guidance in these matters. Otherwise, companies often have written rules or procedures that address ethical situations.

Do any corporate or professional codes of ethics offer guidance?—Most companies and professional organizations have published codes of ethics. They are usually rather abstract, but they can help frame ethical situations, so you can make clearer decisions. Figure 4.6 shows the code of ethics for the Institute of Electrical and Electronics Engineers (IEEE).

Are there any historical records to learn from?—Look for similar situations in the past. Your company may keep records of past decisions, or you can often find ethical cases discussed on the Internet. By noting successes or failures in the past, you can make a more informed decision.



IEEE Code of Ethics

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1. to accept responsibility in making engineering decisions consistent with the safety, health and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;
2. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;
3. to be honest and realistic in stating claims or estimates based on available data;
4. to reject bribery in all its forms;
5. to improve the understanding of technology, its appropriate application, and potential consequences;
6. to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;
7. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;
8. to treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin;
9. to avoid injuring others, their property, reputation, or employment by false or malicious action;
10. to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.

Approved by the IEEE Board of Directors
August 1990

Source: Institute of Electrical and Electronics Engineers, 1990.

Figure 4.6:
The IEEE Code of Ethics. Just about every established field has a code of ethics you can turn to for guidance.



Want to see other codes of ethics? Go to
www.ablongman.com/johnsonweb/4.10

Resolving Ethical
Dilemmas

Resolving Ethical Dilemmas

- Do any laws or rules govern my decision?
- Do any corporate or professional codes of ethics offer guidance?
- Are there any historical records to learn from?
- What do my colleagues think?
- What would moral leaders do?

What do my colleagues think?—Your co-workers, especially people who have been around for awhile, may have some insight into handling difficult ethical situations. First, they can help you assess the seriousness of the situation. Second, they may be able to help you sort out the impact on others. At a minimum, though, talking through the ethical dilemma may help you sort out the facts.

What would moral leaders do?—You can look for guidance from moral leaders that you re-

spect. These might include spiritual leaders, civil rights advocates, business pioneers, or even your friends and relatives. In your situation, what would they do? Sometimes their convictions will help guide your own. Their stories may give you the confidence to do what is right.

Facing an ethical dilemma, you will probably need to make a judgment call. In the end, you want to make an informed decision. If you fully consider the personal, social, and conservation perspectives, you will likely make a good decision.

When You Disagree with the Company

Ethical conflicts between you and your company need to be handled carefully. If you suspect your company or your supervisors are acting unethically, there are a few paths you can take:

Persuasion through costs and benefits—After you have collected the facts, take some time to discuss the issue with your supervisors in terms of costs and benefits. Usually unethical practices are costly in the long term. Show them that the ethical choice will be beneficial over time.

LINK For more on persuasion strategies, see Chapter 7, page 180.

Seek legal advice—Your company likely has an attorney who can offer legal counsel on some issues. You may visit legal counsel to sort out the laws involved in the situation. If your company does not have legal counsel or you don't feel comfortable using it, you may need to look outside the company for legal help.

Mediation—Companies often offer access to mediators who can facilitate meetings between you and others. Mediators will not offer judgments on your ethical case, but they can help you and others identify the issues at stake and work toward solutions.

Memos to file—In some cases, you will be overruled by your supervisors. If you believe a mistake is being made, you may decide to write a *memo to file* in which you express your concerns. In the memo, write down all the facts and your concerns. Then, present the memo to your supervisors and keep a



copy for yourself. These memos are usually filed for future reference to show your doubts.

LINK For more information on writing memos, see Chapter 16, page 446.

Whistleblowing—In serious cases, especially where people's lives are at stake, you may even choose to be a whistleblower. Whistleblowing usually involves going to legal authorities, regulatory agencies, or the news media. Being a whistleblower is a serious decision. It will affect your career and your company. Federal laws exist that protect whistleblowers, but there is always a personal price to be paid.

Ethical situations should be carefully considered, but they should not be ignored. When faced with an ethical dilemma, it is tempting to walk away from it or pretend it isn't there. In any ethical situation, you should take some kind of action. Inaction on your part is both ethically wrong and might leave you or your company vulnerable to liability lawsuits. At a minimum, taking action will allow you to live with your conscience.

Websites exist that can help you make your decision by considering ethical case studies. For example, the Online Ethics Center for Engineering and Science at Case Western University offers many case studies that are discussed by ethics experts (Figure 4.7). Perhaps one of these cases is similar to the one you face, and you can use the wisdom of these experts to make the ethical decision.

On-Line Ethics

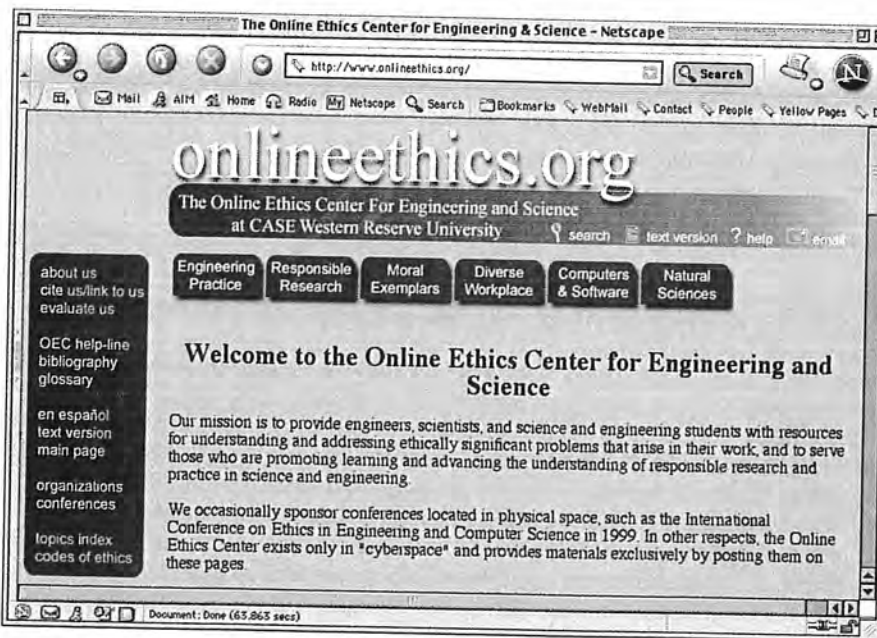


Figure 4.7: The Online Ethics Center for Engineering and Science at Case Western University is a great place to learn about ethics in scientific and technical disciplines.

Source: The Online Ethics Center for Engineering and Science, <http://www.onlineethics.org>.



Does whistleblowing really work? Go to www.ablongman.com/johnsonweb/4.12
To access the Online Ethics Center and similar sites, go to www.ablongman.com/johnsonweb/4.13

Resolving Ethical Dilemmas

Caroline Whitbeck, Ph.D.

DIRECTOR OF THE ONLINE ETHICS CENTER FOR ENGINEERING & SCIENCE,
CASE WESTERN UNIVERSITY

The Center for Engineering & Science in Cleveland, Ohio, is an academic division that researches issues involving technology.

Why should technical professionals learn about ethics?

The practice of a profession, such as the profession of engineering, is characterized by two elements: (1) the practice directly influences one or more major aspects of human well-being and (2) it requires mastery of a complex body of knowledge and specialized skills. To become a professional in a field requires both formal education and practical experience.

The responsibility to achieve certain ends characterizes the core of professional ethics. For example, engineers have a responsibility for the public safety, and research investigators have a responsibility for the integrity of research. Achieving ends requires judgment in the application of professional knowledge.

Following moral rules, such as "Do not offer or accept bribes," important as they are, does not demand the exercise of judgment that is required to fulfill responsibilities. Because the judgment needed to fulfill responsibilities requires professional knowledge, those without professional knowledge cannot judge whether a professional is making responsible judgments, that is, behaving both competently and with due concern. This is the reason why professions establish standards of responsible practice for their practitioners.

Of course, individual practitioners and sometimes the professions themselves may prove untrustworthy, but when they do, everyone loses. When professionals prove irresponsible, they may be monitored more closely. Monitoring may work to see if the rules are being followed, but it does not readily check on the trustworthiness of professional judgments.

If society loses trust in a profession, people avoid relying on the service of members of that profession.

Ethics in the Technical Workplace

Some legal and ethics scholars have speculated that the Information Age requires a new sense of ethics, or at least an updating of commonly held ethics. These scholars may be right. After all, our ethical systems, especially those involving forms of communication, are based on the printing press as the prominent technology. Laws and guidelines about copyright, plagiarism, privacy, information sharing, and proprietary information are all based on the idea that information is "owned" and shared on paper.

The fluid, shareable, changeable nature of electronic files and text brings many of these laws and guidelines into discussion. For example, consider the following case study:



Case Study: You and your coworkers are pulling together a training package by collecting information off the Internet. You find numerous sources of information on the websites of consultants and college professors. Most of it is well written, so you cut and paste some of the text directly into your materials. You also find some great pictures and drawings on the Internet to add to your presentation. At what point does your cutting and pasting of text become a violation of copyright law? How can you avoid any copyright problems?

In the past, these kinds of questions were easier to resolve, because text was almost exclusively paper based. Printed text is rather static, so determining who “owns” something is a bit easier. Today, the flexibility and speed of electronic media make these questions much more complicated.

At this time, many of our laws governing the use of information and text are evolving to suit new situations.

Copyright law—Today, copyright law is being strained by the electronic sharing of information, images, and music. In legal and illegal forms, copies of books, songs, and software are all available on the Internet. According to the law, these materials are owned by the people who wrote or produced them; however, how can these materials be protected when they can be shared with a few clicks of a mouse?

Trademarks—People or companies can claim a symbol, word, or phrase as their property by trademarking it. Usually, a trademark is signaled with a TM symbol. For example, the Internet search engine, GoogleTM, is a trademarked name. The trademark signals that the company is claiming this word for its use in the area of Internet search engines.

To gain further protection, a company might *register* its trademark with the U.S. Patent and Trademark Office, allowing it to use the symbol [®] after the logo, word, or phrase. Once the item is registered, the trademark owner has exclusive rights to use that symbol, word, or phrase. For example, IBM’s familiar blue symbol is its registered trademark, and it has the exclusive right to use it.

There are exceptions, though. The First Amendment of the U.S. Constitution, which protects free speech, has allowed trademarked items to be parodied or critiqued without permission of the trademark’s owner.

Patents—Inventors of machines, processes, products, and other items can protect their inventions by patenting them. Obtaining a patent is very difficult because the mechanism being patented must be demonstrably unique. But once something is patented, the inventor is protected against others’ use of his or her ideas to create other products.

Privacy—Whether you realize it or not, your movements online are regularly monitored through electronic networks. Websites will send or ask for *cookies* that identify your computer. These cookies can be used to build a profile of you. Meanwhile, at a workplace, your e-mail and phone conversations can be monitored by your supervisors. Privacy laws are only now being established to cover these issues.



For more information on trademark and patent laws, go to www.ablongman.com/johnsonweb/4.15

Ethics in the
Technical Workplace

Information sharing—Through electronic networks, companies can build databases with information about their customers and employees that can be shared with other companies. Information sharing, especially involving medical information, is an important issue that will probably be resolved in the courts.

Proprietary information—As an employee of a company, you have access to proprietary information that you are expected not to share with others outside the company. In government-related work, you may even have a *security clearance* that determines what kinds of information you have access to. When you leave that company, you cannot take copies of documents, databases, or software with you. In some cases, you may even be asked to sign papers that prevent you from sharing your previous employer's secrets with your new employer.

Libel and slander—You or your company can be sued for printing falsehoods (libel) or speaking untruths (slander) that damage the reputation or livelihood of another person or company. With the broadcasting capabilities of the Internet, libel and slander have much greater reach. A website, for example, that libels another person or company, may be a target for legal retaliation. If you use e-mail to libel others, these messages could be used against you.

Fraud—The Internet is also opening whole new avenues for fraud. Con artists are finding new victims with classic fraud schemes. Websites, especially, can sometimes give the appearance of legitimacy to a fraudulent operation. Meanwhile, con artists use e-mail to find victims (had any e-mails from the widows of wealthy Nigerian dictators recently?).

Only the future can tell whether a new understanding of ethics will arise. Most of the changes will be subtle. Many will be worked out in the courts.

CHAPTER REVIEW

- Ethics are a system of moral, social, or cultural values that govern the conduct of an individual or community.
- Ethical dilemmas force us to choose among uncomfortable alternatives.
- When you are faced with an ethical dilemma, consider it from all three ethical perspectives: personal, social, and conservation.
- You can turn to sources like laws, professional codes of ethics, historical records, your colleagues, or moral leaders to help you make ethical choices.
- When you disagree with the company, use persuasion first to discuss costs and benefits. You may turn to legal avenues if persuasion won't work.
- Ethical guidelines are evolving to suit the new abilities of computers.
- Copyright law and plagiarism are two rapidly evolving areas of ethics in this computer-centered world.
- Privacy and information sharing are also becoming hot topics, because computer networks facilitate the collection of so much information.





Individual or Team Projects

1. At www.ablongman.com/johnsonweb/4.10, you will find codes of ethics that apply to a number of career paths. If you are an engineer, you might consider looking to the IEEE Code of Ethics. If you are going into medicine, you might look to the American Medical Association (AMA). Write a memo to your instructor in which you summarize the codes of ethics, and highlight their important features. Discuss which specific ethical issues seem to pertain to your field.
2. Describe a real or fictional situation that involves a communications-related ethical dilemma. As you describe the situation, try to bring personal, social, and conservation ethics into conflict. At the end of the situation, leave the readers with a difficult question to answer.

In a memo to your instructor, identify the ethical issues at stake in the situation you described and offer a solution to the ethical dilemma. Then, give your description to someone else in your class. He or she should write a memo to you and your instructor discussing the ethical issue at stake and offering a solution to the problem. Compare your original solution to your classmate's solution.
3. Visit the U.S. Copyright Office at <http://www.loc.gov/copyright> and write a brief synopsis of copyright law. What are some copyright issues that seem to be changing? What are some issues that will likely stay the same? Do you believe that the current copyright law will stand the test of time? Do you think an alternative to copyright law is available, specifically, an alternative that allows authors, musicians, and artists to be paid for their creative work?
4. Find examples of advertising that seem to stretch ethics by making unreasonable claims. Choose one of these examples and write a short report to your instructor in which you discuss why you find the advertisement unethical. Use the terminology from this chapter to show how the advertisement challenges your sense of personal ethics, your social ethics, or your conservation ethics.
5. After researching conservation ethics on the Internet (see www.ablongman.com/johnsonweb/4.6), develop a Conservation Code of Ethics for your campus. In your code, you might discuss issues of recycling, water usage, chemical usage, testing on animals, or release of pollution. If you were an administrator at your university, how might you go about putting your code of ethics into action?

Collaborative Project

The case study at the end of this chapter discusses a difficult case in which an engineer feels forced to do something unethical. Read and discuss this case with a group of others. Sort out the ethical issues involved by paying attention to the personal, social, and conservation factors that shape the ethical dilemma.

If you were this engineer, how would you react to this ethical dilemma? How would you turn your reaction into action with writing? Would you write a memo to Frank's supervisor? Would you write a letter to the state Environmental Protection

Agency (EPA)? Would you try to write a new policy regarding violations of pollution releases? Would a memo to file be enough? Would you blow the whistle?

Whichever path you choose, write a letter or memo to a specific reader (e.g., Frank, his supervisor, the state EPA, a newspaper journalist) that takes action. Summarize the situation for the readers of your document, and then suggest an appropriate course of action. Support your decision by highlighting the ethical issues involved and discussing the ramifications of inaction.

