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APPROACHING THE SUBJECT OF ETHICS

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"Virtue is its own reward."

MARCUS TULLIUS CICERO (106–143 B.C.), *DE FINIBUS*

An Example

Consider the following fictional situation:

CASE 1.0 Truth in Writing a Resume

"Martin, can you take a look at this for me?" asked Myra Weltschmerz as she handed a copy of her resume to her boyfriend Martin Diesirae. "I want to turn this in to the engineering placement office tomorrow."

Martin sat back in his chair scanning the document while Myra stood waiting in front of him. Both were seniors at Penseroso University, he in computer science and she in environmental engineering. They had been together for two years. After a few moments, he raised his eyebrows and declared, "I don't know how you can put some of this stuff on here. You're basically lying!"

Myra cowered noticeably. "Martin, what do you mean? I'm not a liar."

"Come on! You are so! Look at this, under 'Work Experience.'" He leaned forward and held the paper about 6 inches from her face. "It says 'Accountancy Consultant to Baxter Brothers, Bakers.' That's garbage!"

"But I was—,"sputtered Myra, drawing back.

"You were nothing!" Martin broke in. "Mr. Baxter was your next door neighbor. All you did was come in once on a lark and teach his daughter how to use a spreadsheet. She was a part-time clerk! Then she entered stuff she got from the real accountant. You didn't even get paid!"

"Y-yes I did," stammered Myra timidly. "Mr. Baxter slipped me a twenty and told me and Karen to use it on a pizza."

"That's pathetic," Martin snorted. "No recruiter will take it seriously. Or what about this, under 'Extracurricular Activities'? You put 'Dixieland Jazz Band Ensemble.'" Martin jabbed his finger into the air at her. "You went to one meeting before you dropped out."

"But I paid the dues," Myra offered lamely.

"Hah! I could pad my resume like crazy just by paying dues," Martin snapped.

"But I'm a senior looking for a permanent job. A lot of other students have stuff like this on their resumes. The woman at the placement office said I should try to make my background look special."

"Your background isn't special. That's just the breaks," sniffed Martin. "I've told you for a long time to quit all your baby-sitting and do something more impressive. You must spend eight hours a week for that woman . . . Dolores or whatever. And she doesn't even pay you that much because she's always broke." Martin threw up his hands. "But you never listen."

"But Dolores needs help, and I like children. That should count for something."

"Hey, it doesn't count for much on a resume. You don't even have it on here!" He tossed the paper on the desk. "You can be so stupid, sometimes."

◆ Is Myra's representation of the consultancy acceptable? Why or why not?

◆ If not, what should she do?

◆ Is Myra's representation of the jazz band membership acceptable? Why or why not?

◆ If not, what should she do?

◆ Did you arrive at your answers immediately, or did you need to think for a while?

◆ Do you think most people would recommend what you did?

Let's consider in more detail how to approach questions like these.

The Importance of Ethics in Science and Engineering

Broadly speaking, scientists seek a systematic understanding of the physical world. Engineers seek to apply that knowledge for the practical benefit of all people. Most students in these disciplines will readily agree that mastering them requires long hours of grueling effort. Nevertheless, the effort seems worthwhile not only because success can offer a decent living,

but also because the fruits of this work influence life in every corner of the planet. This wide sphere of influence makes working in the technical disciplines very exciting, but should also give us pause. As soon as what we do in our professional lives affects other people, our ethical judgment comes into play as well as our technical judgment. There are three good reasons we should give as much attention to developing our ethical skills as our technical ones.

First, good ethical behavior usually leads to good consequences, both for ourselves and for society at large. Sometimes the good effects show up immediately, as with a reward for returning a lost wallet. Other times the effects come much later, as with trust and respect from our colleagues. Some might argue that unethical behavior sometimes pays big dividends, as with stealing secretly from a cash register. However, the long and bloody trail of human history, running from the wholesale slaughter of the Dark Ages to the recent warfare in Kosovo, suggests that injustice leads mainly to suffering in the end.

Second, scientists and engineers make decisions crucial to society at large, and therefore shoulder an enormous burden of public trust. The complexity of modern technology forces those untrained in its way to depend on scientists and engineers for expert judgments. Unfortunately, the increased specialization of scientists and engineers sometimes leads to a narrow focus that cripples their ability to make and explain these judgments. This handicap carries over into ethics. When important and complex questions of right and wrong confront scientists and engineers in their professional work, they sometimes find themselves inadequately prepared about how to approach the issues or to communicate their advice clearly. Formal study of ethics can help to overcome these problems.

Third, happiness comes from reasoning through a complex moral puzzle, choosing a good course of action, and following through. Of course, people can sometimes do what is good on the basis of gut instinct alone. As thinking beings, however, people tend to find more satisfaction in understanding why they do what they do. Indeed, over two millennia ago Aristotle identified good ethical thought and action as the ultimate source of human happiness.

Unfortunately, education in science and engineering often provides little guidance in how to think about right and wrong. Our society at large knows this, and is sometimes uncomfortably willing to accept the movie clichés of "mad scientists" or engineers who act as unwitting pawns of larger evil forces. Granted, almost all of us receive a great deal of moral training from our parents. Primary and secondary education adds its contribution, and formal religion offers even more to its believers. However, the work place in science and engineering presents a distinct set of ethical problems. These problems often prove quite complex, and we need approaches that rely on more than gut instinct or simple rules learned in childhood. This book attempts to fill the gap in part by introducing the study of ethics applied to science and engineering.

Managing Ethical Discussion

Discussions of what is right or wrong, good or bad, often leave some people feeling ill at ease. There are several reasons.

First, how can we avoid name-calling and bruised egos in ethical discussions? It helps to distinguish between what a person says or does, and who that person is. Each of us represents some mixture of good and bad. Good people sometimes do bad things and vice versa. In other words, the goodness of a particular act or attitude does not determine the ultimate goodness of the individual. Furthermore, growth in the moral life takes time. Some people progress faster than others, at rates that depend not only on personal effort but also on all sorts of uncontrollable environmental factors. We cannot justly criticize someone for being molded in part by forces of culture and upbringing.

Second, how do we deal with the ambiguous, hard-to-define concepts that lie at the heart of ethics? Scientists and engineers, whose training normally deals with precise mathematical relations and sharply defined categories, sometimes experience frustration with reasoning qualitatively. Some may even dismiss the effort as meant for softer minds that can't handle complicated subjects like differential equations, thermodynamics, or quantum theory. This viewpoint ignores the fact that interpersonal relations, management, policy-making, and sales require far more skill in qualitative thinking than in quantitative. Unfortunately, some of the words used in moral discussion do carry many shades of meaning.[1] When unrecognized, such differences in usage often lead to irreconcilable disagreement. However, careful attention to exactly how words are used can help to avoid such problems.

Third, how do we deal with unpleasant memories of earlier wrongdoing? That all depends on what kind of people we hope to be. Errors and mistakes are part of human life. If we hope to grow into wiser people, mistakes can teach us what to avoid. Temporary guilt feelings help to burn these lessons into our minds in the way a hot iron brands a cow. However, there is no point in letting the brand burn for too long. Guilt that refuses to resolve itself becomes destructive and paralyzing, and usually points to deeper parts of the emotional life that need attention. A willingness to accept hard lessons combined with a commitment to continuing improvement can help us avoid falling into a rut.

Philosophy, Religion, and Ethics

Who should pronounce final judgment on right and wrong? Over many millennia people have appealed to judges, kings, and religious leaders for such judgments. The disappointing result has often been grand declarations claiming complete knowledge and eternal truth. History, of course,

has usually deflated these claims. Some moral questions seem unanswerable on a purely natural level—that is, a level that appeals only to what people can observe and test in the physical universe. To proceed further seems to require an appeal to the "supernatural" level—that is, a level outside the observable physical universe. Such supernatural appeals have played such an important role in moral thought that we must decide right at the outset how to handle them.

In fact, many systems of thought and action have spoken to questions of morality over the centuries. We can loosely classify these systems as either "philosophy" or "religion." Since disagreements and misunderstandings sometimes arise over what these words actually mean, it seems prudent to offer brief (though incomplete) definitions here:

Philosophy: the rational study of principles governing knowledge, conduct, and the nature of existence.

Religion: a set of beliefs and practices concerning the supernatural, conduct, and the nature of existence. Religion appeals to one or more superhuman beings as governing forces for the physical universe.

Religion differs from philosophy by referring to supernatural beings and to things that must be taken on faith. Philosophy customarily avoids such references. Also, religion prescribes specific practices designed to promote good moral conduct, and may include paradoxes that confound reason. Philosophy, on the other hand, demands no devotional or ritual observances, and lies purely in the realm of reason.

Despite these differences, both philosophy and religion say things about moral conduct based on reason or faith. Not surprisingly, systems of thought and action that appeal to the nonphysical world cannot be checked by systematic experiments. Thus, many philosophies and religions coexist, with no agreement on how to pick the "correct" one, assuming a "correct" one exists. Herein lies an unsolvable problem for ethics. Each system depends upon different ideas about human existence, which in turn lead to significant differences in moral rules.

This book cannot settle such differences. Its description of human existence remains at a purely natural level, staying away from supernatural concepts like "revelation" and "god." Unfortunately, as we have said this perspective proves inadequate for tackling certain ethical problems; we need additional principles. These principles resemble the axioms used in mathematics. For example, classical geometry relies upon certain axioms about how line segments and angles add together, how parallel lines relate to each other, and so on. Given these axioms, we can derive all kinds of consequent theorems (to the agony of many high school students!) that

compose the main body of classical geometry. Other axioms lead to other kinds of geometries.

Similarly, this book invokes a small number of axiomatic ethical principles as they are needed. These principles originated with the philosophers of ancient Greece and are shared by most Western religions and philosophies today. For the Greek thinkers, science formed merely one aspect of a much larger philosophy that also dealt with morality. Aristotle, who lived over 2300 years ago, drew distinctions between science and other branches of philosophy. His thought still maintained a close connection between them, however, as with his development of formal logic. The deep split that developed between experimental science and speculative philosophy originated much later with the Enlightenment of the eighteenth century. That split still exists today. Nevertheless, modern science and the ethical principles asserted here share a commonality that traces back to the cradle of Western civilization. Thus, these principles will not seem surprising, particularly to most scientists and engineers.

In short, this book uses a self-consistent world view that is compatible with both modern scientific thought and most Western philosophy and religion. However, the fundamental principles asserted in this book stand only upon their intuitive reasonableness and their long tradition of use. Further justification requires an appeal to something beyond the observable world. This book makes no such appeals, but points out explicitly where they would prove helpful.

The Existence of Right and Wrong

Interestingly, we must begin our study of ethics by adopting an axiom regarding the most fundamental question one can ask about right and wrong: do they exist in any objective way? Some people argue that all truth is little more than personal opinion—that culture and upbringing completely bias any ultimate judgment. This book avoids such extreme relativism. We will instead adopt a view that meshes better with science and engineering. A scientist or engineer takes for granted that certain laws of physics, such as $E = mc^2$ and $F = ma$, operate under all circumstances. We will assert a related ethical principle. Since we make such assertions so rarely in this book, we will highlight them as they appear.

Principle: *Certain aspects of right and wrong exist objectively, independent of culture or personal opinion.*

This principle does not declare exactly which things in ethics exist objectively, but despite its imprecision the statement still finds its strongest defense through philosophy or religion. This principle has the important

practical consequence of moving ethics closer to discerning an objective reality rather than defining a subjective standard.

The Subject of Moral Analysis

Having proposed that objective morality exists, we might ask which matters lie within the moral domain and which do not. *In classical moral thought, morality concerns the goodness of voluntary human conduct that affects the self or other living beings.* Let's look more closely at what this definition really means.

First, the word "voluntary" holds great importance, implying that we have adequate control over what we're doing. *Assuming we have not deliberately allowed ourselves to remain ignorant, powerless, or indifferent, we have complete moral responsibility for what we do only with adequate knowledge, freedom, and approval.* It seems both unfair and imprudent to hold people responsible for meeting a standard of behavior they cannot reach because of normal human limitations.

Second, the definition restricts the object of moral behavior to living things. That is, you cannot behave morally toward a rock, except when that behavior indirectly affects some other living thing (like throwing the rock at your next-door neighbor).

Third, the definition uses the word "moral" rather than "ethical." What is the difference? In fact, the two overlap heavily. "Moral" generally refers to any aspect of human action. "Ethical," on the other hand, commonly refers only to professional behavior. Since this book concerns itself principally with situations encountered in professional life, "moral" and "ethical" will often appear interchangeably.

The Role of Codes of Ethics

Many professional and scholarly societies maintain formal codes of ethics. Such codes seem to find more use in engineering than in science, probably because engineers tend more often to view themselves as members of a profession like medicine or law. Such codes remind society members of the high ethical standards expected in the work place. Also, codes lay out those standards to new workers who have little experience. Finally, as public documents, codes can help professional societies take formal or legal disciplinary action against flagrant violators.

However, codes suffer from severe limitations in the rough-and-tumble of the real world. Codes lay out general ideals of ethical behavior, and often establish specific rules for commonly encountered situations. However, no list of ideals and rules can possibly give adequate guidance in all the complex situations that can arise. Shades of gray abound, and

the best way to apply ideals and norms may not be obvious. Moreover, focusing only on the specific rules in codes sometimes leads to ethical minimalism, which is the idea: "If it's not specifically forbidden, it must be allowed." In addition, some situations call for quick decisions, with no time to consult a "rule book" of any sort. Worse yet, often no "traffic cop" is around to blow the whistle on code violations. Finally, certain formal ethical standards can change with time, sometimes in response to legal decisions.

All these shortcomings point to a need to develop ethics that spring habitually from the inside, and do not depend on some external list of rules. Strong ethical character makes it easier to rapidly and consistently handle messy situations not listed in a code.

A REAL-LIFE CASE: Destruction of the Spaceship *Challenger*

Shortly before noon on January 28, 1986, the U.S. space shuttle *Challenger* lifted off from its launching pad at Cape Canaveral, carrying several astronauts and a schoolteacher. Seventy-two seconds later the spaceship disintegrated in a fireball. A subsequent investigation showed that cold temperatures on the morning of the launch reduced the resiliency of the O-rings that sealed joints in the solid rocket boosters. Both the primary and secondary O-rings failed to make sealing contacts, permitting hot exhaust gases to escape and penetrate the adjoining fuel tank filled with liquid hydrogen and oxygen.

The problem proved to be no surprise to the booster manufacturer, Morton Thiokol. Indeed, engineer Roger Boisjoly had completed bench tests nearly a year earlier showing that O-ring sealing properties were lost for several minutes below 50 degrees Fahrenheit. However, under pressure from Congress to keep costs down and an aggressive launch schedule intact, neither Thiokol management nor NASA officials showed any interest in redesigning the joint. Because of the 18-degree temperature on the night preceding the launch, Boisjoly and other Thiokol engineers recommended strongly that the launch of January 28 be aborted. However, this recommendation was overruled by Thiokol management and NASA.

Clearly this case illustrates some serious lapses in judgment. The seals have since been redesigned. Nevertheless, current estimates of the chance that a given shuttle launch will fail catastrophically from some cause lie at 1 in 248. Given the large number of shuttle launches anticipated for scientific purposes and for construction of the new space station *Freedom*, the cumulative probability of disaster becomes significant. Furthermore, observers point out that some engineers at NASA have become so obsessed with avoiding blame for future trouble that they demand endless reports and studies that actually wind up increasing risk.

- ◆ How safe should the shuttle be before it is allowed to fly?
- ◆ What kind of management system might avoid both carelessness and paralysis?

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"It is proof of a base and low mind for one to wish to think with the masses or majority, simply because the majority is the majority. Truth does not change because it is, or is not, believed by a majority of the people."

GIORDANO BRUNO (1548–BURNED AT STAKE 1600)

Note

1. Take the word "good," for example. Suppose you heard someone say, "John deserves a real pat on the back—he stood his ground in the face of bitter opposition and did some good!" What image springs to your mind in response to this compliment? Maybe John is a saint-in-waiting fighting for the downtrodden. On the other hand, maybe John has merely argued for an attractive color of paint on the office walls. Who can argue that aesthetics is not a "good" of sorts? So "good" may refer to nonmoral as well as moral considerations.

Problems

1. Write a page or two describing an ethical dilemma you have encountered in a job you've had. (If you've been lucky enough never to have been confronted with a problem like this, describe one that a friend or relative of yours has had.) Recommend what action you think you (or your friend/relative) should have taken, and give reasons for and against that recommendation. Note: you don't have to say what was actually done in real life (unless you want to)!

2. Each case below has a question after it.
   a. Begin to put together your answer by writing down a brief list of options available to the main character who has to make a decision.
   b. Under each option, write a bulleted list of reasons for and against that course of action. The reasons should be short—no more than a phrase or sentence per point.
   c. Recommend what you think the character should do.

CASE 1.1 Endorsements and Commercialism

Myra Weltschmerz and her boyfriend Martin Diesirae walked slowly hand in hand outside the Engineering Library at Penseroso University. They had been studying hard together, so the warm twilight of early autumn offered an inviting break. Penseroso stood near the center of Exodus, a midwestern city of about three hundred thousand. Even so, the air carried the sweet rural scent of the grain harvest. Venus and Jupiter shone brightly as evening stars against the pastel sky. Myra squeezed Martin's hand. She had lived a hard life, but for an instant all seemed well with the world.

"You know," she whispered, "I had a good interview today."

"Good!" he responded. "Did you get your resume fixed up like I told you?"

"Not exactly. But I guess you did have some good points. I took out that bit about consulting, but I left in the Dixieland Jazz Ensemble as an extracurricular activity. I also put in my baby-sitting for Dolores' kids as 'child care.'"

Martin nodded. "It's a step in the right direction. I still think the jazz band is a stretch, but the 'child care' has a good ring." He paused, then continued wistfully, "Yeah, it's all about sales. You just have to sell yourself right." Then he grew earnest. "Did I tell you? Paragon Academic Supply called me today. You know that place a couple of blocks from here? Somehow they got wind that I won the Computer Science Department's Byte Award this year for scholarship and activities. They're starting some new promotion in the next month, and want to feature local students using their products."

Myra stopped in her tracks. "Really?!"

"Yeah. Awesome, huh? Anyway, they want to take my picture for a poster and newspaper ads, and get some quotes about how great I think their store is. In return, they're offering me a certificate for five hundred bucks of their merchandise. Retail value, of course." Myra stared for a moment, not knowing what to say. "That's a lot of stuff," Martin continued. "I could put it toward a new printer for my computer, or just get a fancy new calculator. I guess I don't have to decide now. Anyway, they asked me to sign the contract tomorrow."

"So they're going to give you this just because you won that award?" Myra asked.

"Yeah. Is something wrong with that?"

"I'm not sure. Pro sports figures sell their names all the time. And so do other famous people. But I've never heard of a student doing it. I mean, being a good student means learning a lot, right? It's not like you're doing something for someone else. Learning is supposed to help you all by itself. Do you really need to get paid extra if someone thinks you do it well?"

Martin stiffened. "Obviously you're not too excited about this!" he exclaimed. He pulled his hand away. "I thought you'd be happy."

"Martin, that's not what I meant! It's just that everything is so commercial these days already. Does studying have to get commercialized too?"

"I don't see the problem," Martin huffed. "I do a good job, get some recognition, and use it in a perfectly legal way." He eyed her suspiciously for a moment. "You're not jealous, are you?"

Myra felt her stomach tense. "No, Martin, I'm happy. I know it's very important to you." She paused, and her face hardened slightly. "But . . . are you going to look for an agent every time you get an A on a test?"

Martin threw up his hands. "I don't understand you! You say you're happy, but you don't show it. Do you want me not to sign?"

Myra's face grew pale. "I don't know what I want."

"You can say that again! That's always been your problem."

"Martin!" she whined.

◆ Should Martin accept the endorsement contract?

Case 1.2 Reporting Apparent Bribery

Mind adrift, Celia Peccavi shuffled slowly from the restroom of Pandarus Pizza to the kitchen. She had worked at Pandarus for six months, and despised slow days like this one. The minutes turned to centuries. She would quit in an instant, but as a sophomore in biology at Nosce te Ipsum University, Celia desperately needed the money to pay her tuition.

As she drifted past the manager's office, her ears perked up at the sound of animated conversation inside. She did not recognize the voice. Celia never missed a chance to eavesdrop, so she lingered just outside the closed door, where with effort she could make out the words.

"Mr. Mauvais, I really need this job," came the unfamiliar voice. "I can paint your windows better than the person you have now. I've helped several restaurants with their promotions. You should see my work!"

Celia heard the squeak of an office chair, then the voice of her manager Thorne Mauvais. "I don't know. I'm happy with the artist we have. His work is good and his rates are fair. He's very reliable. I'm not a public works agency, you know."

"But my work is better. What is he charging you?"

A pause ensued, and Celia heard some papers shuffle. Apparently Thorne was showing some figures to the visitor, who moaned, "I can't beat that price! That's not much over break-even! Are you sure that's right?"

"I told you his rates were fair," retorted Thorne.

Another pause followed. "Look," the visitor broke in suddenly. "I can't take the job this cheap. But how about this? I'll charge 10 percent over what Pandarus is paying now, but I'll throw in something extra for you personally. You said earlier you like football, right? Well, I have a friend who has season tickets for the Penseroso Peacocks. Fifty-yard line, close to the field. He lets me use them all the time as a favor. I'll get you tickets for two for any game you want this season."

"Any game?" Thorne repeated.

"Any game!"

"Well," Thorne murmured vaguely. "I don't know. The Peacocks aren't too good this year." He stopped, then continued, "Toss in a second game and you've got a deal."

"Two games? Two tickets each?"

"Yup."

The visitor sighed unhappily. "OK, I'll do it."

"I'll call you tomorrow with the details of when you should start with the window painting, and with the games I want."

Celia heard the two rise out of their chairs. She started instantly toward the kitchen, but the office door opened before she got more than a few steps. "I look forward to hearing from you, Mr. Mauvais."

"Sure," Thorne responded patronizingly.

Celia turned around involuntarily to see them. Her glance met Thorne's, and his face darkened. "Celia, come into my office, please," he called, beckoning.

She complied. When they got inside, Thorne took a seat and motioned for Celia to shut the door. "Why aren't you in the kitchen?" he inquired suspiciously.

She shrugged. "I had to go to the bathroom."

Thorne's voice grew accusing. "The bathroom is right next door, but I haven't heard anyone in there for a while. You weren't just hanging around, were you?"

Celia tossed her long brown hair. "Hey, I had to fix my hair. It needs a lot of work sometimes. I had to brush it out. Do you mind?"

"This isn't a beauty salon. I don't want you primping during working hours." He pointed at her hair. "Anyway, it doesn't look any better than it did earlier," he said derisively.

Celia stiffened, then counterattacked. "So what did that guy want?"

"None of your business! Get back to work!" Thorne shot back.

With minced steps, Celia opened the door and sauntered out, tossing her hair with a flourish. "Maybe we should ask the owner about company policy toward visitors," she remarked sarcastically.

"Never mind the owner. I run this place!" Thorne yelled after her.

◆ Should Celia tell the owner about what she heard?

CASE 1.3 Obeying a Law "for the Sake of It"

Terence Nonliquet stretched slowly in the passenger seat of the cramped car. It was Friday night, and his head ached from a long week of studies and duties as a teaching assistant. He regretted agreeing to accompany his girlfriend Leah Nonlibet to visit her ailing grandmother. The old woman's life was slowly ebbing away, and Leah became very depressed after each visit. This time she asked Terence to come along as a support, and to help with the four hours of lonely driving. Terence knitted his brow as he dreamed about all the other ways he could be spending the evening. "How much further?" he asked with a sigh.

"About 80 miles," Leah responded. "It's an easy drive now. It's a straight shot from here on this two-lane road."

"Good. It's dark and there's nothing to see."

Leah tried to change the subject. "How was being a teaching assistant this week?"

Terence furrowed his brow. "Pretty hard, but I guess I expected that for my first semester teaching. You know, I'm still only a junior. When the Computer Science Department has to use upperclassmen as teaching assistants, they usually go for seniors. But early this week I overheard one of the professors say my record was good, and they were really shorthanded for some reason."

During the conversation, Leah had braked to a stop for a red light at a lonely intersection. The light had been red for about a minute. "I don't understand why this light is so long," Leah muttered. "Every time I take this road, I get caught here for a couple of minutes. There are hardly ever any cars."

"I don't see any cars now," Terence rejoined, "and the place is flat, so you can see for miles. Why don't you just go?"

"Through a red light? I could get a ticket!"

"Do you see any cops?" asked Terence, looking around. "I don't. You're not going to get a ticket. Not this time."

"But how can you be sure? Maybe there's a cop car hiding where we can't see!"

Terence's voice sharpened. "Leah, just go. If you get caught, I'll pay the ticket. I'm wiped out from all this driving. Let's just move and get to your grandmother's."

"But I don't want a ticket on my record," Leah persisted defensively, "and maybe my insurance rates will go up. Anyway, it's just wrong to go against a red light. I won't do it."

"Why not?" Terence argued. "Stoplights are there to control traffic so accidents don't happen. You know there won't be an accident here."

"It's against the law!"

"The law is there just to prevent accidents. If you know there won't be an accident, the law isn't a big deal!"

"Yeah, right . . . what cop is going to buy that?" contended Leah testily. "The law doesn't say, 'stop at reds only when there's a chance of an accident.' It says, 'stop at reds,' period. I think it's always wrong to disobey traffic laws. You notice, I don't speed either."

"My aching butt is reminding me of that right now," Terence groaned. "You're more likely to have an accident from getting angry at me than from speeding or red lights!"

"I'm not angry."

Terence rolled his eyes and settled deep into his seat. Silence followed.

◆ What should Leah do?

CASE 1.4 Public Trust: The Duties of Club Officers

Todd Cuibono and Emily Laborvincet sat working on their homework together in his dorm room at Penseroso University. Their romantic involvement had begun a year ago when they met in a shared general chemistry class. Now that the fall semester had begun, both were sophomores: she in chemistry and he in chemical engineering.

The evening grew long, and Emily looked up wearily from her books, hoping for a break and a little companionship. "Hey Todd, I saw another one of those posters announcing a meeting of the student chapter of the National Chemical Society. I never heard of that— it's not the same as the regular professional group, the American Chemical Society, is it?"

Todd's face remained buried in his book. "No, it's different."

"So what is NCS?" Emily persisted.

Todd started to scribble in his lab book. "It runs sort of in parallel to the student chapter of ACS. In a lot of ways it does the same thing."

Emily remained puzzled. "Why have two groups do the same thing? It's stupid!"

"It's not stupid," Todd snapped. "In fact, I could become NCS vice-president next week if I accept the offer."

Emily's jaw slackened. "You never told me about this!"

"You never asked," retorted Todd. "The NCS president, Waldo Drake, asked me a couple of days ago."

"What do you mean 'asked'? Doesn't there need to be an election?"

"Not in NCS. It's still a new organization. It doesn't have a regular succession of officers yet. Waldo formed it last year after resigning as vice president of ACS. He had a big policy fight with the ACS president, Regina Livia—I forget why. Now his current NCS vice-president has graduated, and he needs a replacement."

Emily couldn't believe her ears. "Policy fight? I thought Regina was Waldo's girlfriend! So they broke up in a big way, huh?"

"Well, that too," replied Todd. "But their disagreement was mostly professional."

"I doubt that," laughed Emily. "I've noticed NCS events almost always conflict in time with ACS events. The two groups seem like rivals. Anyway, how does NCS get any money for its events? Despite the name, I bet they don't have a national organization to back them."

"Waldo has unbelievable connections," Todd responded. "And he knows how to use them. For example, his older brother graduated a year or two ago from Penseroso with straight A's, also in chemistry. He gave Waldo all his course notes, exams, and homework. They're awesome. But Waldo makes them available only to NCS members, and the member dues are really high. Still, a lot of students have coughed up the cash just to get at those files."

"Unbelievable!" Emily gasped.

"There's more. Waldo's younger sister is on the cheerleading squad for Penseroso. She's an absolute babe, and has several similarly gifted friends. Waldo has persuaded her and her friends to help out with car-washing fund raisers. They've done two or three so far. They use an off-campus lot owned by some other friend of his. The girls dress up in bikinis and sometimes heels, and the cars almost crash into each other trying to line up. The view also gets most of the NCS guys to help out."

Emily's eyes widened. "And you were there? You never told me!"

Todd shrugged. "Sure I was there. Why not? I mean, it was a public street corner after all . . . in full view of everyone. I didn't bother to invite you because you were busy every Saturday they had one.

"I think those car washes are disgusting!" Emily shot back. "I can't believe Waldo could persuade those girls to do that, even if one of them *is* his sister."

"Well, I guess he gives them a pretty big chunk of the proceeds. On the side of course," replied Todd.

"I can't believe that's legal!" cried Emily. "Don't the campus codes for organizations forbid that?"

"Actually, Waldo is following the codes to the letter," responded Todd. "The codes require that all money a registered organization takes in from on-campus activities be deposited in a special university account. All sorts of rules govern how that money can be spent. But regular dues and money from off-campus activities are exempt. The officers can use those funds basically at their own discretion. Anyway, NCS also gets money from the student organization fund. That's the money that pays for printing notices and the food at meetings on campus."

"But Waldo still has this slush fund on the side?" asked Emily. "And why would you want to be vice-president?"

"Waldo mainly uses the profits to get good food at meetings and pay for member parties," responded Todd. "I'm thinking of taking the job because it would look good on my resume. Also, Waldo will graduate at the end of the year. He'll take all his connections with him, so the organization will probably die. Then he'll have to do something with the war chest he's built. My guess is that he'll probably just divide it among the officers."

"That's larceny! You'll get in trouble!"

"I don't think so. The university doesn't know about the money, and even if it did, Waldo has followed the letter of the codes. If the NCS dies, the money has to go somewhere, and that's at officer discretion. Anyway, no one will complain, since the rank and file has no idea what's in the kitty."

"You shouldn't take that money!"

"OK, OK! I don't know for sure if there'll be any dividing of spoils anyway. But if it makes you feel better, I can reject my portion if I want. I'm still thinking of taking the vice-presidency, though, for my resume."

◆ Should Todd accept the vice-presidency?

◆ Should Todd accept any money?