# Chapter 7

# Human Side of Engineering

## 7.1 HUMAN CHALLENGES OF ENGINEERING

There is a fairly sharp discontinuity between schooling and working in an engineer's career. Engineering school can be a solitary affair. Long hours doing problem sets with nothing but a calculator, a pad of green engineer's paper, and a 0.5-mm mechanical pencil may be good preparation for engineering's technical challenges, but the isolation that results is not good preparation for the human side of engineering. Team and capstone design projects explore some of the human challenges of the entrepreneurial engineer's world, but the meetings, the phone calls, the client contact, and the time spent with co-workers can all add up to a level of human interaction well beyond what an engineering education prepares an engineer for.

I remember being surprised by the human relations challenges of my first full-time job, and I did what any red-blooded boy born with a library card in his hand would do: I read. I read about human relations, about sales, about marketing, about organizational behavior, and about leadership. And I made mistakes.

Not little mistakes. Mistakes that lost me friends, mistakes that lost my company sales, mistakes that ultimately sent me packing back to graduate school. And if you're wondering whether someone with such a lousy track record should be writing a chapter on human relations (or more importantly, whether you should be listening to him), so am I. But my reading and my mistakes have led to a somewhat better batting average in this ballpark, and maybe it's better to learn from the .190 hitter who has raised his average to the mid-.200s than from the batter who has always swung a .310 bat. The self-made batter knows something about improvement, while the natural has long forgotten—if he ever knew—how he came to be so good.

To start a useful dialog on human relations we must forget about your favorite person—you—and try to look at life through the eyes of others. This is the one axiom of human relations, but a number of theorems and corollaries follow directly from it. In particular, we must consider the role of praise and criticism as well as the importance of asking questions in dealing with others.

## 7.2   THROUGH THE EYES OF OTHERS

Human behavior is extraordinarily complex, and attempts to simplify the topic risk being naive, ineffective, or both. On the other hand, success as an engineer depends upon a practical ability to figure out the people around us, to work on teams in organizations, and to deal with clients and others outside our organizations. This requires a straightforward approach to understanding and working with people, an approach that does not require a Ph.D. in psychology or an advanced degree in organizational behavior. Yet, with so many different individuals, with their myriad motivations, multitude of life experiences, and variety of temperaments, it seems that any attempt to develop a straightforward approach to human relations would be doomed from the start. What, after all, is common among the individuals we meet in business?

Remarkably, there is one way in which we are all alike, and although it is the source of much conflict between individuals, ironically it is also that which permits us to predict the behavior of others:

*We are all self-interested.*

Let's face it. You are more interested in yourself than am I interested in you; I am more interested in myself than are you are interested in me. And this holds reasonably true across most pairings of individuals you can name. Of course, there is nothing strange in all this. Biologically, we are organisms programmed to survive, to look out for our own care and feeding above almost all else. As thinking beings, we also devote large proportions of our very large brains to thinking about our higher-level yearnings, wants, and needs. Such natural self-interest sounds counterproductive when it comes to building good group relations, but in a strange way it is the starting point, because if we know that we are self-interested and we know that others are self-interested, we can often predict their behavior.

Thus the starting point of good human relations is seeing things through the eyes of others. If we can understand what makes someone tick, we can start to predict what they might do under a particular set of circumstances. And once we have the ability to model effectively, as good engineers we know we have the ability to design. To build functioning circuits, we must have a model of how components react and how circuits perform. To build functioning relationships, we must have a model of how individuals behave and interact. Of course, as engineers we use both formal and informal models all the time, but the kind of modeling suggested here is somewhat more inexact and nondeterministic. Comparing our ability to anticipate human behavior to our ability to analyze a circuit, we realize that the human modeling contains more surprises, more randomness and caprice, and much less precision. On the other hand, that our modeling of human behavior is in some ways less reliable than the engineering kind does not mean it is less useful; perhaps the remarkable thing is that a single straightforward principle results in pretty good ballpark predictions of how people react.

Although the principle of seeing things through the eyes of others is straightforward, its application requires considerable skill. In the remainder of this chapter we consider its use in conflicts, conversations, and persuasive situations. We also consider the important roles of praise, criticism, and apology in our dealings with others.

## 7.3  ANATOMY OF A DISAGREEMENT

Nowhere is the importance of seeing things through the eyes of others more evident than in analyzing the typical disagreement. Sometimes disagreements occur because two (or more) individuals truly have an irreconcilable difference of opinion, but more often than not, one or more of the parties has not taken the time to view the situation from the opposing side.

Consider a case in point. A new engineer in a consulting company was assigned to a project by his boss. The job required that the engineer manage a group of technicians in the mapping of the piping of a chemical plant and the construction of a computer database for the project. The engineer had just completed a graduate degree and was expecting to do work that was more technically challenging than this. His negative attitude toward the assignment came across in his first on-site meeting with the client at the chemical plant when a disagreement arose over the scope of the contract. In trying to get the work to be more technically "interesting," the engineer tried to change the scope of work. This in turn disturbed the client, who complained to the engineer's boss that the work be performed as contracted. Upon returning to headquarters, the engineer got into quite a row with his boss. On the one hand, the boss could not understand how a new employee could be so cavalier with an important client and so bold as to try to change the terms of a contract without authorization. On the other hand, the engineer could not understand how he could be asked to do what he viewed as mere grunt work; this was not the kind of assignment that had been discussed when he interviewed with the company.

I wish I could report that the boss and the engineer resolved their differences and lived happily ever after, but, unfortunately, getting off on the wrong foot set the tone for the engineer's short tenure with this firm. Within 6 months he left to take another job. It didn't have to happen—if he or his boss had recognized their differences in perception, perhaps the problem could have been worked out. Without a willingness to see the conflict through the other person's eyes, however, there was little chance to reconcile these disparate views.

I should point out that this particular situation arose largely because a person fresh out of school did not consider run-of-the-mill engineering work to be "technical enough." This is a common complaint among engineers and reflects a particular pair of differing perceptions. In school, engineers are exposed to all kinds of fancy technical tools, but in practice the job that needs doing often doesn't draw on that technical tool kit. Thus the engineer is often guilty of not seeing his job through his employer's eyes, eyes that focus on the primacy of the

job and the importance of getting it done. Of course, most employers are guilty of not understanding this mismatch between their engineers' expectations and the realities that they face. The engineer's usual sink-or-swim training does little to smooth the road between school and work. This book is an attempt to smooth that road from the new engineer's point of view, but it would be useful as well if employers better understood their engineers' initial orientation and tried to get them to better understand what is required of them.

Beyond these specialized conflicts between new engineers and their employers, it is true that in many arguments, people take firm positions, viewing their side as right and the other side as wrong. There is rarely black or white in human affairs; there are more often shades of gray. Moreover, even when one side is largely right, there is generally no court of appeals to declare a winner and decide how to proceed. In the garden-variety disagreement, if the arguing parties don't work through their difficulty, the knowledge of being in the right can be little comfort in smoothing the ill consequences of the impasse. And in most cases, if there is fault, there is fault enough to go around, so much so that it is useless to try to assess blame. It is better if people try to understand each other's point of view, to separate fact from perception, and to work out a practical way to proceed.

At this point we've done little to solve such misunderstandings. In a moment we'll discuss the handiest habit for encouraging the communication that can bring about greater understanding and fewer disagreements, but before we do that, it might be useful to analyze one of your own recent conflicts from the opposing side.

### *Exploration Exercise*

Consider a recent disagreement in which you were directly involved. Write a paragraph or two analyzing the problem from the other party's point of view. Then consider ways in which the disagreement might have been avoided.

Conflict is one way in which mismatches in perception manifest themselves. In the next section, we consider how the professional salesperson or persuader can pay close attention to perceptions, thereby minimizing conflict and maximizing agreement in sales and other situations where persuasive skills must be applied.

## 7.4   WE ARE ALL SALESPEOPLE ON THIS BUS

Mention the word *salesperson* to an engineer and you may not get a pleasant reaction. Whether the stereotype we hold comes from the Arthur Miller play *Death of a Salesman* or from our own bad encounters with Willy Loman glad-handers

having the gift for gab—and deception—the stereotype does us a disservice because it prevents us from appreciating and identifying good sales technique.

But who cares? In a book aimed at discussing life skills for engineers, why should we care about good sales technique? Sure, a few among us will earn their pay by pounding the streets of technical sales, but those people receive separate training. Why take time out of our busy agenda to stop and talk about powers of persuasion? The answer to all of these questions is a single word: ideas. As engineers, our primary stock in trade is ideas, oftentimes innovative ideas, ideas that have not been tried, ideas that may encounter stiff resistance from co-workers, bosses, clients, or consumers. These people and others must be persuaded—they must be sold—before they are willing to give a new idea a try. Nothing can be quite as frustrating to an engineer as to have a good idea but to be unable to get anyone to take a look at it. This situation is further exacerbated by engineers who often find the logic of their own arguments compelling, so compelling they feel that the world should beat a path to their door. Once again we are confronted by a perceptual problem. The world—our co-workers, bosses, clients, or consumers—often does not see things the way we do—may not think the way we do. If we are to be successful in gaining the acceptance of our ideas—if we are to be successful engineers—we must try to narrow the perceptual divide between us and those we seek to persuade.

Having established that, in a sense, we engineers must all be salespeople at one time or another, we can now ask, what makes a good one? When I worked in the engineering-software business, I hit the streets looking for business, and over the years I had the opportunity to get to know a number of professional salespeople. I found it interesting how far out of line the Willy Loman stereotype was with the behavior of these sales pros. Indeed, the best ones were confident and fairly fearless, but those characteristics were not necessarily the ones that started them on the road to sales success. Usually what separated the stars from the meteorites was their ability to listen. Perhaps this flies in the face of conventional wisdom, but a salesperson cannot force you to buy something you don't want. The only real option he or she has is to show you how some product fulfills some physical or psychological need you have. And the only way to find out what that need is is to probe and to listen.

We will consider ways to enhance our listening capability in a moment, but here it is interesting to consider that the stereotypical salesperson—the one who does all the talking—is the antithesis of the effective listener-persuader. The reason we remember the gift-of-gab guys and gals is that they annoyed us so. (Inevitably we walked out before buying anything, or if we did buy, we almost immediately regretted it.) On the other hand, it is easy to forget the good salespeople. They're so smooth we often think that they just wrote up our order, but careful analysis of many such situations reveals an effective listener, matching need with product to facilitate an easier decision.

Let's see if you can extract a human relations lesson in persuasion from your own recent encounters with salespeople in the next exploration exercise.

*Exploration Exercise*

Consider two recent experiences with salespeople, one good and one bad. In each case, consider how much they talked versus how much they listened. Compare and contrast how much each salesperson thought in terms of his or her needs versus yours.

Thus far we have considered situations of conflict and situations of persuasion. In both cases, individuals are seeking a change in the status quo, and in both cases a perceptual gap exists. Conflicts arise from a lack of attention to other's perceptions, and sales occur with devoted attention to others' views. The vital question is how does one become more adept at seeing things from another person's perspective? In the next section, we consider the crucial role questions play in this regard.

## 7.5    THE ROLE OF QUESTIONS

The key to human relations is seeing things through the eyes of others, and the key to seeing things through the eyes of others is *asking questions*. Once this is said it is easy enough to understand, but it is surprising that so many people believe that the way to resolve a conflict, make a sale, initiate a friendship, be a good conversationalist, or conduct just about any activity involving others is to tell their side of the story. This approach discounts the interests of the other person, who is as egotistical and self-centered as we are and who will be appeased, persuaded, friendly, conversational, or in other ways more positive toward us if given the chance to express his or her views.

The most effective way to draw people out is to ask questions. In this section, we consider the asking of questions in differing circumstances, including conversational, conflict-resolving, and persuasive situations. We will see that different kinds of questions are appropriate in different situations and will identify some of the more important types.

### 7.5.1    Questions in Conversation

"I'm not a very good conversationalist. I never know what to say." How many times have you heard someone say something similar to that? No doubt those same people have had good conversations, but it is difficult to stand back from our own human interactions and understand what has transpired. What characterizes good conversation? Usually in good conversation, at least one of the parties asks a question and then listens carefully to the response, following up with more questions that move the conversation along. Thus the prime mover of a conversation is not the talker—that is the easy role. The motive force behind every conversation is the questioner-listener. Of course, the best conversations are those where the questioning and talking roles are exchanged repeatedly.

What types of questions can move a conversation along? It is difficult to generalize, but open-ended questions about something that interests a conversation partner aren't a bad place to start. After all, we know that other people are most interested in themselves.

### 7.5.2  Questions in Conflict Resolution and Negotiation

Conflict resolution also requires the use of questions but from a more elaborate approach. Whether dealing with an interpersonal problem or an organization-wide conflict, it is important to use various questioning techniques to narrow the perceptual gap that exists between the parties involved. Such a conflict resolution episode typically begins with the recognition by one or more parties that a problem exists. Once this occurs, one of the parties must observe, "We've got a problem. How do you see it?" or something similar. This fairly open-ended approach invites the other party to share his or her frustrations. When that person finishes, the questioner can briefly summarize what he or she has heard and ask whether the summarized view is valid. If it's not, a more directed question or two can iron out differences, and, within a few iterations, the process should achieve perceptual convergence. At this point, the original questioner might ask whether it would be all right to share his or her view of the problem. The original talker is now the listener, and after the other view is shared, the listener is asked to summarize what he or she has heard.

After perceptual convergence on this second party's view, a series of questions can then be asked to identify the differences between the two individuals. This series can be followed by a series of more specific questions to see whether there is any room for maneuver or compromise. The progression from open-ended, to confirmatory, to increasingly directed questions moves the parties from conflict toward points of agreement and possible compromise, and closer to the resolution of the conflict. If the conflict cannot be resolved, at least the parties will know that it was not for lack of understanding but rather because of truly irreconcilable differences.

*Exploration Exercise*

Consider a recent disagreement in which you were directly involved. Make a list of 10 questions you might have asked the other party to probe his or her position and perception. Make a list of 10 questions he or she might have asked you.

### 7.5.3  Questions in Sales and Persuasion

Persuasive situations call for all the questioning skill a persuader can muster. We will consider a formal sales cycle as our model situation. In a professional sales situation, questioning usually begins along conversational lines in an attempt to probe the customer's interests, motivations, and needs in a general sense.

After identifying needs connected with the product or service, the salesperson may begin a perception-confirming sequence of questions and summaries, and confirmatory-type questions may begin, though there is usually no need for the persuader to share his or her perceptions with the customer.

After establishing a few perceptual outposts, the persuader can narrow the questioning to more specific lines, that is, to what a professional salesperson calls *closing* questions. The bottom line in all persuasion situations is that the business must be asked for and gotten. Books on sales are a better place to read about this well-developed art form, but some of the more salient types of "closes" can be discussed here.

The conditional close is a good initial trial balloon, and it goes something like this: "If I can show you that X, Y, and Z occur as a result of using this product, will you buy?" If the person says yes, it is then a matter of persuading him or her that X, Y, and Z will occur. If the person says no, there is then an opportunity to ask what conditions still obstruct the sale. Along the way, this kind of questioning can lead to the discovery of one or more such objections; the uncovering of objections is a call to return to a more open-ended form of questioning to obtain perceptual convergence on the customer's buying blocks, thereby paving the way for their removal.

After removing objections, further closing attempts can be made from the direct close, "Would you like to buy this today?" to the somewhat sneaky assumptive close, "Would you like it in red or in blue?" In this way, the persuader can work from open-ended, information-gathering questions, to more specific needs-defining questions, to the closing questions that clinch the deal.

Skill in the art of the question can help make us surprisingly effective in our dealings with people. In our increasingly electronic, anonymous society, the art of conversation and one-on-one communication is being lost. It can be regained if we only take time to ask.

## 7.6   PRAISE

Beyond the desire to be understood and listened to, each of us loves to be praised. Children adore the praise of their parents. Spouses crave the praise of each other. Workers crave the praise of bosses and co-workers. Despite our ravenous appetite for praise, we are remarkably stingy in handing it out; of course, this represents a remarkable breakdown in our seeing things through the eyes of others (Carnegie, 1981).

Why are we so tight with our praise? Do we see it as a kind of currency to be hoarded? Do we view this praising business as some sort of zero-sum game with only so much to go around, so that the praising of others may lead to their success at the expense of our own? Such fears are rarely warranted. Far from being inherently scarce, praise is a fully renewable resource, with many people around us doing praiseworthy things and only ourselves to blame if we don't make the time or effort to notice them.

And it's unfortunate that we don't take more time to notice because praise works a powerful magic on the people it touches. I recall remarking to a frowning,

somewhat grumpy woman behind a rental-car counter at Washington National Airport what nice handwriting she had. A large smile came over her face and we had a nice chat about business and the weather. After this nice chat, and without my asking, she took special care to give me a brand-new car with only 23 miles on it. Understand, I told her that she had good handwriting not because I wanted a new car or anything else from her. I praised her handwriting because she indeed had lovely handwriting, and what looked as though it might become a stereotypically bad service experience turned into a pleasant human encounter.

Of course, there may be times when you do praise with the hope of improvement or change. A young engineer joined a major consulting firm and noticed that the janitorial service in her office was spotty at best. She noticed that the same janitor worked in the department each day, and so one day when the janitor had done a better-than-usual job, she stopped him in the hall and said that she appreciated the extra effort put into the cleaning that day and that she really appreciated it when he took special care in sweeping and dusting her room. The janitor seemed stunned that someone had noticed the extra effort and said something about thinking that no one cared about cleanliness these days. The engineer assured him that she certainly did and that she was glad to have someone working in her part of the building with an old-fashioned attitude toward neatness. Shortly after this conversation the janitor instituted a spot-waxing program in the building, enlisting the help of the other building janitors, and until that janitor was transferred to another building, the engineer never noticed another lapse in cleanliness.

While we should recognize that praise is something we all crave and that it can have a remarkable effect on people, we should guard against that imposter, *flattery*. Flattery resembles praise in that it compliments a person for something, but it lacks sincerity. Individuals who have inflated opinions of themselves can be flattered (i.e., all of us can be flattered at least some of the time), but in better moments most of us can recognize flattery as the imposter it is. When recognized, flattery can have a worse effect than never having said anything at all.

To distinguish heartfelt praise from flattery, it is helpful to be truthful and specific when praising. When you say something nice, say exactly what it is you like. For example, in my encounter at the airport, I did not say something vague about the woman's appearance or demeanor; I said I thought she had nice handwriting, and she did. If you say something specific, there will be less chance that your comment will be misinterpreted as mere flattery.

### Exploration Exercise

Consider a person with whom you have regular contact. Make a list of several things you truly like about that person. On your next meeting, at an appropriate time, offer praise regarding one of the things you most like. Write a brief paragraph reporting what you praised, why, and the individual's reaction.

## 7.7   CRITICISM

If it is important to recognize those around us for the things they do that we like, it is equally important to be cautious in criticizing them when they do things we don't like; when criticism is necessary, it is important to express it in a way that targets the behavior and not the person.

That criticism should be used cautiously is not surprising advice if only we see things through the eyes of others. When was the last time you enjoyed being criticized? I realize, in retrospect, that there were times when I needed to be criticized, but I can't recall a single instance when I was happy or particularly grateful for it at the time. I remember many times when I felt that criticism was overly harsh or disproportionate to the crime, and I can think of a number of people I am less than fond of, largely as a result of their critical nature. We all have similar feelings, and the projection of our feelings onto others should be fairly immediate: If we don't like receiving criticism, why should anyone else?

The other thing wrong with criticism is that it can easily be ineffective. Many people have self-defense mechanisms with an enormous capacity to deflect criticism. If armed robbers, rapists, child molesters, and even cold-blooded killers can rationalize their savage, immoral behavior, the average Joe or Jane can certainly deflect accusations of petty wrongdoing. If we are interested in being effective—if we are interested in changing behavior—we must maintain the confidence and trust of the people who have done wrong and help them see why it is to their benefit to change their ways.

There are many ways to accomplish this. One is to offer criticism in a spirit of helpfulness. This is a fairly direct approach, and its directness occasionally can lead to resentment; however, words such as "I know you are giving your best effort, and do you think it would be possible if you tried XYZ?" can sometimes temper the blow enough to make a breakthrough. Notice that phrasing the constructive criticism in the form of a question has the effect of tempering the blow even further. Also notice how the use of "and" rather than "but" helps prevent the erection of additional psychological barriers before the sentence is finished.

Another way to temper criticism is to point to your own failings. Sometimes telling a little story about a personal mistake before you ask a person to change his or her behavior is an effective means of offering criticism. It can also be helpful to play down the mistake the person has made. If you make the mistake sound like a big deal, requiring a big effort to rectify, the artificially high hurdle you've erected will make the person resist changing all the more. If you make the error seem easy to correct, you should encounter less resistance to your suggestions.

In addition, it is important not to spend time assessing blame. Some time ago, I had a boss who spent a good portion of his day tracking down mistakes and those who made them. That attitude paralyzed the whole organization, to the point that no one did very much for fear of making a mistake. The proper approach to mistakes is that, once they are uncovered, they be corrected quickly and the individuals try harder to avoid them. Looking to assess blame only makes people more secretive and less cooperative in fixing problems.

It is useful to turn this reasoning on its head at times and use error count as a productivity indicator. The reasoning goes something like this. Given that we try hard to improve on our mistakes, our rate of error tends to remain constant or diminish over time. Therefore the number of errors we make is at least proportional to the amount of work we are doing. We would always rather that errors not occur; but given that they do, and always will, occur, seeing something positive in their occurrence can help us adopt an attitude that contributes to their correction and reduction.

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### *Exploration Exercise*

Analyze a recent situation in which you were criticized or in which you criticized someone. In two paragraphs describe the situation as it occurred and then describe how it might have been handled otherwise.

## 7.8  ENGINEERING IS SOMETIMES HAVING TO SAY YOU'RE SORRY

On the subject of mistakes, it seems only fair to consider our own. At the same time we are lightning quick to point out the errors of others, we can be glacially slow to admit our own.

To recognize the rarity of apologies, we need only ask and answer two questions:

**1.** When was the last time someone apologized to you?
**2.** When was the last time you apologized to someone?

I don't know your answers to these questions, but for many readers it has probably been a long time since they have made or received an apology. What is it that makes us so unable to admit our mistakes, apologize, and move on? Perhaps it is a matter of excessive pride combined with a fear of appearing weak. There is little to do about excessive pride but try to overcome it. On the other hand, apologizing when you have made a mistake, far from projecting weakness, will often be seen as a sign of strength of character and confidence.

One of the reasons we may not want to apologize is that we may feel we are only partially at fault; we think that if we apologize the other person will blame us entirely without examining his or her role at all. In situations such as this, a good approach is the conditional, or explained, apology. In an explained apology you begin by calmly and briefly explaining what irritated you about the other person's behavior, but you go on to say that, regardless of anyone else's behavior, you have no excuse for behaving as badly as you did and you apologize. Forced to face having had a role in the problem, many will admit their contribution, and the relationship can proceed with little damage. Others will not see their role, or will refuse to admit it. In these cases, the person making the

explained apology can determine whether there is value in using questions to try to get the other person to recognize his or her role in the conflict. In either case, the explained apology can often clear the air sufficiently to allow the business at hand to proceed.

### *Exploration Exercise*

Consider one recent incident where you felt a person should have apologized to you; then consider one recent incident where you feel you should have apologized to someone else. In each case, consider whether your relationship with each of the individuals has become worse, better, or remained the same. Write a paragraph describing each incident and the change in relationship that occurred thereafter.

## 7.9   WEAR A LITTLE PASSION

In many situations, it is possible to "view the glass as being half empty or half full." As engineers, our passion for logic tells us that the choice should be a matter of some indifference. As human beings, our passion for passion suggests that we should choose to view the full portion because we know that our perceptions of situations can be profoundly affected by our attitudes toward them. Achieving success as an engineer requires persistent pursuit of intermediate and long-term goals over an extended period of time, and such persistence is much easier to sustain if we approach our work—and our lives—with zest and enthusiasm.

People show their passions in different ways, and I am not recommending that we all wear our emotions on our sleeves. I am suggesting, however, that some externalization of our positive emotions can have a positive impact on our approach to the challenges of life, and can also help brighten the world of those around us. Organizations that learn to wear a little passion have a positive glow of productivity about them. Of course, it is just as easy, perhaps easier, for organizations and the individuals within them to become gripped by a negative, can't-do attitude. Such working environments are not a pretty sight.

There are a number of practical ways to stay positively oriented; one of the most important is to be doing something you enjoy—something you find engaging. Another habit is to simply smile and laugh more often. Smiles and laughter are contagious and can have therapeutic value when things aren't going just right.

Another helpful habit is trying to emphasize the good that often eventually comes from initially stressful situations. Many clouds *do* have a silver lining, and we would all do well to spend more time thinking about the eventual positive consequences of today's mishaps. Moreover, we should make efforts to see the current good in bad situations. The doughnut may presently have too large a hole, but there is still an edible portion.

Together these habits can help us get past everyday stresses and obstacles and reach eventual success.

## SUMMARY

This chapter has examined the importance of good human relations and has considered a number of ways to help us smooth our dealings with other people. The basic principle from which all good human relations flow is seeing things through the eyes of others. Asking questions helps us make the critical shift from our own viewpoint to that of another person. If questions help get us into their minds, praise helps get us into their hearts, helping them feel good about the things they do well.

We have also considered the harm that can come from criticism and have suggested that criticism should be applied cautiously and with care. We have considered how apologies should be offered when we discover one of our own mistakes. We have examined some of the reasons why apologizing is so difficult. We have even looked at a way to apologize when another person may also bear some of the responsibility for a conflict. The role of enthusiasm in keeping ourselves and those around us upbeat, positive, and looking forward to the challenges ahead has also been considered.

## EXERCISES

1. During the course of a day, make a list of your mistakes, both big and small. Write a short paragraph considering whether the number is larger or smaller than you thought it would be.

2. Keep two lists during the course of a week. On one, record the number of times you are complimented and on the other record the number of times you are criticized. Write two paragraphs comparing and contrasting the quantity, quality, and severity of praise and criticism you experience.

3. During the course of a day, couch all requests for action in the form of questions (e.g., "Could you do X?"). During the course of the next day, give all orders as commands (e.g., "Do X."). Write a paragraph comparing and contrasting the response to the two approaches.

4. Imagine that you are being interviewed for a job. Make a list of 10 questions your interviewer might ask. Make a list of 10 questions to help clarify, deflect, or redirect an interviewer's questions when they are unclear, unanswerable, or inappropriate.

5. Imagine you are a company representative sent to interview a candidate for a job. Write a paragraph describing specific characteristics of the ideal candidate. Now think of these characteristics from the interviewer's perspective. What ramifications does each have for a potential job candidate's interviewing behavior?

6. At a social occasion, make an effort to hold two types of conversations. In one, make statements and assertions. In the other, ask lots of questions. Write two paragraphs comparing and contrasting the two types of conversation.

7. Write a brief essay describing the characteristics of an employee your boss would want to have. Discuss the ramifications for your own behavior.

8. An engineer in your group has told you that an engineer on another team has presented an idea of yours as his own. In a short paragraph describe the steps, if any, you would take to handle such a situation.

9. Bill, an engineer in your firm, has written you a "flame," a highly critical e-mail message chastising you for some design work you did a year ago. Should you fire back a return flame to Bill, call him on the phone, see him in person, write a critical

memo to his boss, spread rumors questioning his mental state, write a reply via official memorandum, or take some other action? In a brief paragraph describe why you selected your particular course of action. Also, compare and contrast the effectiveness of in-person visits, e-mail, written memos, and the telephone in handling negative situations.

10. Joan, an engineer in your firm, has performed superbly in connection with a project you're working on. Should you ignore her, take credit for her actions, thank her in person, thank her by phone, thank her by letter with copies to appropriate managers, or take some other action? In a brief paragraph describe why you selected your particular course of action. Also, compare and contrast the effectiveness of in-person visits, e-mail, written memos, and the telephone in handling positive situations.

11. Form a team of three and role play a hypothetical job interview, with two of the group playing interviewers and the third playing the job candidate. Take turns until everyone has played the candidate.

12. Form a group of three and role play a hypothetical sales call, with one group member acting as the salesperson and the other two acting as prospective buyers at the same target company. Exchange roles until everyone has taken a turn as the salesperson.

13. Form a group of five. Sit in a circle and take turns offering praise to other members of the group. After each statement of praise, the other group members may challenge the remark by saying, "Flattery." If two or more members say, "Flattery," the praiser gets no points. If one or none says, "Flattery," the praiser receives a point. After five rounds, the praiser with the most points wins.