

The Creative Process

Have you heard any of these sayings: "Creativity can't be learned," "The way to be creative is to ignore traditional ways of doing things," "It takes a high IQ to be creative," "Taking drugs enhances a person's creativity," or "Creativity is related to mental illness"? They've all been around for a long time. But guess what? *They're all wrong.*

This chapter sets the record straight about creativity. It also details the characteristics of creative people, provides an overview of the creative process, and offers a strategy you can use to develop and apply *your* untapped creative potential.

The human mind, as we have seen, has two phases. It both produces ideas and judges them. These phases are intertwined; that is, we move back and forth between them many times in the course of dealing with a problem, sometimes several times in the span of a few seconds. To study the art of thinking in its most dynamic form would be difficult at best. It is much easier to study each part separately. For this reason, we will focus first on the production of ideas (Chapters 5 through 9) and then turn to the judgment of ideas.*

Although everyone produces and judges ideas, the quality of the effort varies greatly from person to person. One individual produces a single common or shallow idea for each problem or issue and approves it uncritically, whereas another produces an assortment of ideas, some of them original and profound, and examines them critically, refining the best ones to make them even better. The terms *creative thinking* and *critical thinking*, as we will use them throughout the remaining chapters, refer to the latter kind of effort.

*Because it is impossible to separate the two completely, minor elements on judging will be included in our treatment of creativity, and vice versa.

KEY FACTS ABOUT CREATIVITY

Before the mid-1950s, creativity received little scholarly attention. Then one researcher examined more than 121,000 listings of articles recorded in *Psychological Abstracts* during the previous 23 years. He found that only 186 articles—less than two-tenths of one percent of the total—had any direct concern with creativity.¹ Since that finding, interest in creativity has increased considerably, and many books have been published on the subject.² Researchers have examined the lives of creative achievers, probed the creative process, and tested creative performance in every conceivable circumstance and at every age level.

Researchers' efforts have helped deepen our understanding of creativity and overcome the many misconceptions that for so long went unchallenged. You have undoubtedly been exposed to some of these misconceptions and therefore have developed some false impressions about what creativity is and how it works. Replacing those false impressions with facts is an important first step in developing your creative potential. The facts that follow are the most important ones. Some we mentioned briefly in Chapter 1. All are worth returning to and reflecting on from time to time.

“Doing Your Own Thing” Is Not Necessarily a Mark of Creativity

“For many people,” George F. Kneller observes, “being creative seems to imply nothing more than releasing impulses or relaxing tensions. . . . Yet an uninhibited swiveling at the hips is hardly creative dancing, nor is hurling colors at a canvas creative painting.”³ Creativity does involve a willingness to break away from established patterns and try new directions, but it does not mean being different for the sake of being different or as an exercise in self-indulgence. It is as much a mistake to ignore the accumulated knowledge of the past as it is to be limited by it. As Alfred North Whitehead warned, “Fools act on imagination without knowledge; pedants act on knowledge without imagination.”⁴ Being creative means *combining* knowledge and imagination.

Creativity Does Not Require Special Intellectual Talent or a High IQ

The idea that highly creative people have some special intellectual ability lacking in the general population has been widely accepted for centuries. When the IQ test was devised, that idea was given new currency, and anyone who achieved less than a genius-level score (135 and above) was considered to have little or no chance for creative intellectual achievement.

However, when researchers began studying the lives of creative people and comparing IQ test performance with creativity test performance, they made two discoveries. They found that creativity depends not on the possession of special talents, but on the *use* of talents that virtually everyone has but most have never learned to use. In addition, they found that the IQ test was not designed to measure creativity, so a high score is no indication of creative ability, and a low score,

no indication of its absence. In fact, they found that the great majority of creative achievers fell significantly below the genius level.⁵

The Use of Drugs Hinders Creativity

Although many people seem determined to resist this fact, it has long been acknowledged by those who have studied creativity. If liquor and other drugs have been such a boon to original thought, one researcher asks, why hasn't the corner saloon produced more creative achievers? No one, as yet, has answered this question satisfactorily. Nor is anyone likely to. The reason drugs harm creativity, Brewster Ghiselin explains, is that "their action reduces judgment, and the activities they provoke are hallucinatory rather than illuminating." What is needed, he argues, is not artificial stimulation of the mind, but increased control and direction.⁶

The use of drugs and liquor as stimulants is sometimes part of a larger misconception that might be termed the *bohemian mystique*. This misconception is the notion that a dissipated lifestyle somehow casts off intellectual restraints and opens the mind to new ideas. Eliot Dole Hutchinson offers an assessment that most researchers would endorse: "Narrow streets, shabby studios, undisciplined living, and artistic ballyhoo about local color may all have their place in pseudo artistry, but they have little to do with genuine creation. Nor is the necessary creative freedom clearly associated with them at all. Bohemianism squanders its freedom, returns from its hours of dissipation less effective. Creative discipline capitalizes its leisure, returns refreshed, reinvigorated, eager."⁷

Creativity Is an Expression of Mental Health

One common image of the creative person is reinforced by a number of low-budget horror films. That image depicts a wild-eyed mad scientist, shuffling nervously around a laboratory, rubbing hands together evilly and drooling. Many people really believe the image: They view *creative person* and *lunatic* as near synonyms. They are wrong.

In the following passage, Harold H. Anderson summarizes a leading psychological view concerning the relative sanity of creative people. (Endorsers include such respected thinkers as Erich Fromm, Rollo May, Carl Rogers, Abraham Maslow, J. P. Guilford, and Ernest Hilgard.)

The consensus of these authors is that creativity is an expression of a mentally or psychologically healthy person, that creativity is associated with wholeness, unity, honesty, integrity, personal involvement, enthusiasm, high motivation, and action.

There is also agreement that neurosis either accompanies or causes a degraded quality of one's creativity. For neurotic persons and persons with other forms of mental disease [who are, at the same time, creative] such assumptions as the following are offered: that these persons are creative in spite of their disease; that they are producing below the achievements they would show without the disease; that they are on the downgrade, or that they are pseudo creative, that is, they may have brilliant original ideas which, because of the neurosis, they do not communicate.⁸

CHARACTERISTICS OF CREATIVE PEOPLE

Studies of creative achievers have identified a number of characteristics they share.⁹ The following characteristics are among the most prominent.

Creative People Are Dynamic

Unlike most people, creative people do not allow their minds to become passive, accepting, unquestioning. They manage to keep their curiosity burning, or at least to rekindle it. One aspect of this intellectual dynamism is *playfulness*. Like little children with building blocks, creative people love to toy with ideas, arranging them in new combinations, and looking at them from different perspectives. It was such activity that Isaac Newton was referring to when he wrote, “I do not know what I may appear to the world; but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding . . . a smoother pebble or a prettier shell than ordinary whilst the great ocean of truth lay all undiscovered before me.”¹⁰

Einstein was willing to speculate further. He saw such playfulness as “the essential feature in productive thought.”¹¹ But whatever the place of playfulness among the characteristics of creative people, one thing is certain: it provides those people a richer and more varied assortment of ideas than the average person enjoys.

Creative People Are Daring

For the creative, thinking is an adventure. Because they are relatively free of preconceived notions and prejudiced views, creative people are less inclined to accept prevailing views, less narrow in their perspectives, and less likely to conform with the thinking of those around them. They are bold in their conceptions, willing to entertain unpopular ideas and seemingly unlikely possibilities. Therefore, like Galileo and Columbus, Edison and the Wright brothers, they are more open than others to creative ideas.

Their daring has an additional benefit: It makes them less susceptible to face-saving than others. They are willing to face unpleasant experiences, apply their curiosity, and learn from those experiences. As a result, they are less likely than others to repeat the same failure over and over.

Creative People Are Resourceful

Resourcefulness is the ability to act effectively and to conceptualize the approach that solves the problem—even when the problem stymies others and the resources at hand are meager. This ability is not measured by IQ tests, yet it is one of the most important aspects of practical intelligence. One dramatic example of this quality was reported in *Scientific American* more than half a century ago. A prisoner in a western state penitentiary escaped but was recaptured after a few weeks. The prison officials grilled him for days. “Where did you get the saw to cut through the bars?” they demanded. In time, he broke down and confessed how he had managed to cut the bars. He claimed he had picked up bits of

twine in the machine shop, dipped them in glue and then in emery, and smuggled them back to his cell. Night after night for three months, he had “sawed” the one-inch-thick steel bars. The prison officials accepted his explanation, locked him up, and made sure he never visited the machine shop again.

That, however, is not the end of the story. One dark night about three and a half years later, the man escaped again, and the prison officials found the bars cut in exactly the same manner. Though he was never recaptured, the way he escaped is legendary in the underworld. He’d lied about using material from the machine shop the first time. He had been much more resourceful than that. He had used woolen strings from his socks, moistened them with spit, and rubbed them in dirt on his cell floor.¹²

Creative People Are Hardworking

“All problems,” states William Gordon, “present themselves to the mind as threats of failure.”¹³ Only people who are unwilling to be intimidated by the prospect of failure, and who are determined to succeed no matter what effort is required, have a chance to succeed. (Even for them, of course, there is no guarantee of success.) Creative people are willing to make the necessary commitment. It was that commitment Thomas Edison had in mind when he said, “Genius is 99 percent perspiration and 1 percent inspiration”; so did George Bernard Shaw when he explained, “When I was a young man I observed that nine out of ten things I did were failures. I didn’t want to be a failure, so I did ten times more work.”

Part of creative people’s industriousness is attributable to their ability to be absorbed in a problem thoroughly and to give it their undivided attention. But it is derived, as well, from their competitiveness, which is unlike most people’s in that it is not directed toward other people but toward ideas. They take the challenge of ideas *personally*. Lester Pfister was such a person. He got the idea of inbreeding stalks of corn to eliminate weaker strains. He began with 50,000 stalks and worked by hand, season after season. After five years, he had only four stalks left, and he was destitute. But he had perfected the strain.¹⁴ Where others would have succumbed to frustration and disappointment, he persevered because he was unwilling to accept defeat.

Creative People Are Independent

Every new idea we think of separates us from other people, and expressing the idea increases the separation tenfold. Such separation is frightening, especially to those who draw their strength from association with others and who depend on others for their identity. Such people are not likely to feel comfortable entertaining, let alone expressing, new ideas. They fear rejection too much. Creative people are different. This is not to say that they don’t enjoy having the acceptance and support of others or that the possibility of losing friends doesn’t bother them. It means that however much they may want acceptance and support and friendship, they don’t need them the way others do. Instead of looking to others for approval of their ideas, they look within themselves.¹⁵ For this reason, they are less afraid of appearing eccentric or odd, are more self-confident, and are more free to speak and act independently.

Knowing these five characteristics can help you develop your creative potential if you are willing to make the effort to acquire them—or if you already possess them, to reinforce them. It is never an easy task; old habits resist replacement. But even modest progress will make a difference in the quality of your thinking.

APPLYING CREATIVITY TO PROBLEMS AND ISSUES

The two broad applications of creativity that are of special concern to us are solving problems and resolving controversial issues. The terms *problem* and *issue* overlap considerably. Both refer to situations that challenge our ingenuity, situations that have no readily apparent, satisfactory remedy. But an *issue* has an additional characteristic. It tends to divide people into opposing camps, each sure that it is right and the opposition wrong.

The most important ways to apply creativity to problems and issues include taking a novel approach, devising or modifying a process or system, inventing a new product or service, finding new uses for existing things, improving things, and inventing or redefining a concept. Let's look at some examples of each.

Taking a Novel Approach

D. B. Kaplan's, a Chicago delicatessen, approaches menu writing with its tongue well in cheek (and in some cases, in the sandwich). Items include Tongue Fu, the Italian Scallion, Chive Turkey, Ike and Tina Tuna, Dr. Pepperoni, the Breadless Horseman, Annette Spinachello, and Quiche and Tell. The ingredients are as creative as the names.

Humane Society inspectors who found two dogs in a closed car in brutal 92-degree heat used a novel approach in dealing with the dogs' owners. They offered them an alternative to being charged with cruelty to animals: spend an hour inside the closed car themselves in the same heat the dogs endured, while the dogs spent the hour in the air-conditioned Humane Society building.¹⁶

A judge in a Michigan divorce court took a novel approach to the issues of custody and the right to live in the family home. He awarded the house to the *children* until the youngest reached 18. The parents would take turns living in the house and paying the bills. (Both parents lived in the area, so this housing arrangement was workable.)¹⁷

To instill in students a sense of obligation to help those in need, Tulane University Law School set the unusual graduation requirement of performing at least 20 hours of volunteer legal work for the poor.¹⁸

The city of Venice, Italy, sits on a number of small islands in an Adriatic lagoon and has long been subject to periodic flooding. Now there is reason to fear that the rising sea level will eventually flood the city. The most publicized and widely accepted proposal to prevent this disaster is to build 78 moveable, hollow gates at the entrance to the lagoon. These gates could be filled with air and caused to rise up, preventing rising waters from flooding Venice. Not

everyone accepts this novel plan, however. Some scientists say the gates' design is based on outdated tide tables, and thus the gates would eventually have to be replaced. And environmentalists have raised concerns about the increased pollution the gates could cause.

Devising or Modifying a Process or System

The Dewey decimal system and the Library of Congress system are two techniques that were invented for classifying books. (Even more basic to learning, of course, is the invention known as the alphabet.)

Several decades ago, a new surgical procedure was devised for combating periodontal disease and making it possible for people to keep their teeth throughout their lives. The procedure involves cutting back diseased gum tissue and scraping accumulated plaque from the teeth. (Left untreated, periodontal disease can cause teeth to loosen and fall out.)

Over the years, several procedures have been developed for determining the health of a fetus. Both amniocentesis and chorionic villus sampling involve the extraction of amniotic fluid; ultrasound involves the bouncing of sound waves off the fetus to form an image.

Between the 1880s and the 1980s the principal tool of criminal investigation was the fingerprint. Today it is DNA testing. Every individual who ever lived has his or her own distinctive genetic makeup. A strand of hair or a spot of urine, saliva, or semen left at a crime scene can be compared with a DNA sample of a suspect and be a significant factor in determining guilt or innocence.

Reacting to widespread criticism of the 1988 presidential campaign as superficial, a member of Congress from Indiana, Lee Hamilton, proposed a change in the traditional debating format. His idea was to have each candidate speak alone for an hour, presenting his or her ideas on a single issue and responding to in-depth questioning by a panel of experts. The presentations would be videotaped simultaneously for sequential televising at a later time.¹⁹ (Unfortunately, the idea has not been implemented in subsequent presidential campaigns.)

Inventing a New Product or Service

In 1845, a man needed money quickly to pay a debt. "What can I invent to raise some money?" he thought. Three hours later, he had invented the safety pin. He later sold the idea for \$400. Virtually all the products we use every day have similar, though perhaps less dramatic, stories. The hammer, the fork, the alarm clock, the electric blanket, the toothpaste tube, the matchbook—these and thousands of other products first occurred as ideas in a creative mind. And new ideas are occurring every day. One you may not have heard of is Graffiti Gobbler, a chemical compound that can remove ink or paint from wood, brick, or steel.²⁰

The laundromat, the car wash, and the rent-a-car agency are examples of successful services that have been invented. When the rent-a-car service became quite expensive, some enterprising people invented rental services providing older, high-mileage cars in good working condition. (One such agency is called Rent-a-Wreck; another, Rent-a-Heap.) A public-spirited psychiatrist invented a

service for insomniacs called Sleepline that offers an eight-minute recorded message ("Sleep is coming . . . slower . . . deeper . . .") to help people sleep.²¹

The way people view movies changed when companies such as Blockbuster and Hollywood Video were created. But those companies were challenged when Netflix and similar services made it possible to receive DVDs first through the mail and then directly and without delay over the Internet.

Finding New Uses for Existing Things

No matter how old something is, new uses can always be devised for it. Consider how many kinds of nails, nuts, bolts, and brushes have been developed from the original ideas. Even the water bed, a relatively new variation on the bed, has been given a new use: to simulate the warmth and protection of the womb for premature babies.²² In some cases, apparently useless objects can be put to good use. For example, a St. Louis barber combines hair clippings with peat and other substances to form an unusually rich potting soil that he believes may help restore drought-ravaged soil in parts of Asia and Africa. And at least one college student devised a use for empty beer and soda cans: He punched holes in the top and bottom, ran heavy cord through them, and hung the cans in close rows as window curtains.

Agricultural crops have long been used for unusual purposes. Cotton lint, for example, is used to manufacture explosives, and ground-up tobacco is used for insecticide. Scientists have also found new uses for the largest surplus crop in the United States: corn. These uses include de-icing materials, adhesives, disposable bottles, and biodegradable garbage bags. Such creative ideas promise to reduce dependency on oil imports and to reduce pollution.²³

New uses for the computer and the laser continue to multiply, such as this one that combines the two: A Cleveland firm markets a computer device that measures a person for a suit of clothing and then forwards the information to a factory where lasers cut the fabric.²⁴

Improving Things

Far more patents are issued each year for improvements in existing things than for new inventions. There is a very good reason. Nothing of human invention is perfect; everything can be made better. Consider the development of the light, from the prehistoric torch to the latest flashlight, or that of the camera and the automobile.

Developments in the telephone, for example, include call block, call trace, priority call, return call, repeat call, and caller ID, as well as the many variations of the cell phone. Each of these features was developed in response to a particular need that was not being met by the existing equipment.

The use of creativity to improve things is nowhere more evident than in the computer industry. Every few months a significant breakthrough is announced in hardware or software, and minor improvements are constantly being made.

Inventing or Redefining a Concept

We tend to regard the many concepts that help us think and deal with reality as fixed and eternal. Yet that is not so. Concepts are invented, just as products and services are. The concepts of taxation and punishing criminals, for example, may

be very old, but they were once new. Numerous other concepts are relatively recent. It is hard to imagine how mathematics could even be used without the concept of zero. Yet that concept, in the sense of a number, was invented in India around A.D. 500.²⁵ Similarly, the concept of the corporation originated in the sixteenth century, and our ideas of progress and worldly success in the seventeenth. The concept of the zip code is very recent.

The concept of childhood we are familiar with—as a stage of innocence with its own special characteristics—dates back only a few centuries. Before then, children were treated as little adults. The historian J. H. Plumb writes: “Certainly there was no separate world of childhood [in earlier times]. Children shared the same games with adults, the same toys, the same fairy stories. They lived their lives together, never apart. The coarse village festivals depicted by Bruegel, showing men and women besotted with drink, groping for each other with unbridled lust, have children eating and drinking with the adults.”²⁶

STAGES IN THE CREATIVE PROCESS

Being creative means more than *having* certain traits. It means *behaving creatively*, addressing the challenges we encounter with imagination and originality. In short, it means demonstrating skill in applying the creative process. Although authorities disagree over the number of stages in this process—some say three, others say four, five, or seven—the disagreement is not over substantive matters. It is merely over whether to combine activities under one heading or several. There is no real disagreement about the basic activities involved.²⁷

For ease in remembering and convenience of application, we will view the creative process as having four stages: searching for challenges, expressing the particular problem or issue, investigating it, and producing a range of ideas. Each of these stages will be the subject of a separate chapter, but a brief overview of the process will enable you to begin using it right away.

The First Stage: Searching for Challenges

The essence of creativity is meeting challenges in an imaginative, original, and effective way. Often, challenges need not be sought out; they come to you in the form of obvious problems and issues. For example, if your roommate comes home night after night at 2 or 3 A.M., crashes into the room, and begins talking to you when you are trying to sleep, you needn't be very perceptive to know you have a problem. Or if you find yourself in the middle of a raging argument over whether abortion is murder, no one will have to tell you that you are addressing an issue.

However, not all challenges are so obvious. Sometimes, the problems and issues are so small or subtle that very few people notice them; at other times, there are no problems and issues at all, only *opportunities to improve existing conditions*. Such challenges arouse no strong emotion in you, so you will not find them by sitting and waiting—you must look for them.

The first stage of the creative process is the habit of searching for challenges, not at one specific time, but constantly. Its importance is reflected in the fact that you can be creative only in response to challenges that you perceive.

The Second Stage: Expressing the Problem or Issue

The objective in this stage is to find the best expression of the problem or issue, the one that will yield the most helpful ideas.* “A problem properly stated,” noted Henry Hazlitt,²⁸ “is partly solved.” Because different expressions open different avenues of thought, it is best to consider as many expressions as possible. One of the most common mistakes made in addressing problems and issues is to see them from one perspective only and thus to close off many fruitful avenues of thought.

Consider the prisoner deciding how to escape from prison. His first formulation of the problem was probably something such as “How can I get a gun and shoot my way out of here?” or “How can I trick the guards into opening my cell so I can overpower them?” If he had settled for that formulation, he would still be there (where he belonged). His ingenious escape plan could have been devised only as a response to the question “How can I cut through those bars without a hacksaw?”

Often, after expressing the problem or issue in a number of ways, you will be unable to decide which expression is best. When that happens, postpone deciding until your work in later stages of the process enables you to decide.

The Third Stage: Investigating the Problem or Issue

The objective of this stage is to obtain the information necessary to deal effectively with the problem or issue. In some cases, this will mean merely searching your past experience and observation for appropriate material and bringing it to bear on the current problem. In others, it will mean obtaining new information through fresh experience and observation, interviews with knowledgeable people, or your own research. (In the case of the prisoner, it meant closely observing all the accessible places and items in the prison.)

The Fourth Stage: Producing Ideas

The objective in this stage is to generate enough ideas to decide what action to take or what belief to embrace. Two obstacles are common in this stage. The first is the often unconscious tendency to limit your ideas to common, familiar, habitual responses and to block out uncommon, unfamiliar ones. Fight that tendency by keeping in mind that however alien and inappropriate the latter kinds of responses may seem, it is precisely in those responses that creativity is to be found.

The second obstacle is the temptation to stop producing ideas too soon. As we will see in Chapter 9, research has documented that the longer you continue producing ideas, the greater are your chances of producing worthwhile ideas. Or as one writer puts it, “The more you fish, the more likely you are to get a strike.”

There is one final matter to be clarified before you will be ready to begin practicing the creative process: How will you know when you get a creative idea? By what characteristics will you be able to distinguish it from other ideas?

*In the case where there is no real problem or issue but only an opportunity to improve an existing condition, you would treat the situation *as if it were* problematic, saying, for example, “How can I make this process work even more efficiently?”

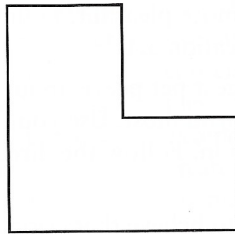
A creative idea is an idea that is both imaginative and effective. That second quality is as important as the first. It's not enough for an idea to be unusual. If it were, then the weirdest, most bizarre ideas would be the most creative. No, to be creative an idea must work, must solve the problem, or must illuminate the issue it responds to. A creative idea must not be just uncommon—it must be *uncommonly good*. This is the standard you should apply when looking over the ideas you produced.

When you have produced a generous number of ideas, decide which seems to be the best. Sometimes that will be a single idea; other times it will be a combination of two or more ideas. At this point your decision should be tentative. Otherwise, you will be tempted to forgo the valuable critical thinking process by which ideas are *evaluated*.



WARM-UP EXERCISES

- 5.1 Four friends have a large garden in the following shape. They want to divide it into four little gardens the same size and shape, but they don't know quite how to do this. Show them.



- 5.2 How many uses can you think of for old socks, stockings, or panty hose? Be sure to guard against setting unconscious restrictions on your thinking and to resist the temptation to settle for too few ideas.
- 5.3 Every change of season brings a new clothing fashion for men, women, and children. Invent as many new fashions as you can. (If you wish, you may include out-of-date fashions in your list, as long as they have not been popular in recent years.) Observe the cautions mentioned in Exercise 5.2.



APPLICATIONS

- 5.1 For each of the following problems, apply stages two through four of the creative process. Record all your thoughts as they occur, and be prepared to submit them to your instructor. When you have finished with the last stage, state which of your solutions is best and briefly explain why.

DEC 4, 1995

THE END OF THE WORLD WHEN THE AUTHOR, AN OLYMPIC MARATHONER, LEARNED THE 1968 GOLD MEDALIST IN THAT EVENT HAD BEEN IMPRISONED IN ETHIOPIA FOR THREE YEARS WITHOUT HAVING BEEN CHARGED WITH A CRIME, HE BEGAN THE RACE OF HIS LIFE: TO JUSTICE

KENNY MOORE

We began by casing the Ethiopian central prison. We drove a dented 1967 VW Beetle slowly down a muddy, unmarked Addis Ababa street, passed the Libyan Embassy, turned right and tried not to stare at a haphazard compound of cement and corrugated sheet-metal buildings. Across the road, in the rain, goats and trucks bleated and brayed at each other. Men urinated against a wall. An arch marked the main gate. In the lee of a crumbling yellow plaster watchtower, a half-dozen guards wearing thin blue overcoats watched us go by, eyes instantly locked on the faranjoch, the foreigners. A thought came: the things you do for Olympic brotherhood.

Or maybe simply the idea of Olympic brotherhood. Captive inside the prison was a man I had not seen in 23 years. I had never had more than fragmentary conversations with him. We had simply raced each other in two Olympic marathons. Was it a conceit to think, because of that, I knew him? Knew him well enough to believe he couldn't possibly deserve to be in there? Knew him well enough to try to outwit the Ethiopian prison system to get that simple message to him?

The man was Mamo Wolde, the 1968 Olympic marathon gold medal winner. Last May, Amnesty International revealed that in '92 Mamo had been rounded up with thousands of other Ethiopians suspected of involvement in the horrid human-rights abuses of the Communist regime that had been deposed the year before. He had been imprisoned, without having been formally charged with a crime, for the past three years.

Learning that, from a tiny item in the Los Angeles Times, had jerked me to my feet. Mamo Wolde? He and countryman Abebe Bikila were the greatest one-two punch in Olympic marathon history. Abebe won in Rome in 1960 (barefoot, finished in torchlight under the Arch of Constantine), and in Tokyo in '64 (shod, did calisthenics on the stadium infield after destroying the world best time), thereby beginning the great African distance running avalanche.

In Mexico City in 1968 a leg injury forced Abebe to drop out after 10 miles. Mamo, who had already taken the silver in the 10,000 meters, won that marathon, making it three in a row for Ethiopia. I placed 14th in Mexico City, but I remember Mamo only as a black-and-green wraith, vanishing ahead after 15 miles, his pace remorseless. He won by three minutes.

So the whole of our relationship was based on something that happened in the last 11 miles of the 1972 Olympic marathon in Munich. Mamo was so soundless of foot and breath that often I only knew he was running beside me by the sight of his distinguished widow's peak. With six miles to go, Frank Shorter was a minute ahead of us and increasing his lead. But when Mamo and I looked back, we seemed to have left the rest of the field behind.

We both run with our toes pointing out slightly, so at times our shoes brushed. "I'm sorry, I'm sorry," Mamo would say.

On a rough path in Munich's English Garden, with five miles to go, a dehydration cramp shot up my right hamstring. Mamo watched me slow and hop, grabbing my leg, and then he turned and ran on. He looked back one last time. This is what I cannot forget. His face was filled with regret. He seemed to be saying it wasn't supposed to happen this way. We were supposed to race on together, and the stronger would take the silver and the other the bronze. In fact, Belgium's Karel Lismont caught us both and finished second. Mamo got the bronze. I followed in fourth, on my twinging thigh, some 30 seconds behind, a gap that gave me a clear view of Mamo over the last couple of miles but no hope of catching him.

The postrace scene has long since taken on a strobe-light selectivity. I can clearly see how stunned Shorter was at winning. But I don't see Mamo. We must have shaken hands, congratulating, consoling, but if we did, the memory is gone.

I never saw Mamo again. He went home to Addis Ababa, where he had been promoted to captain in the Palace Guard of the aging Emperor Haile Selassie and was promised a nice house, like the one that had reportedly been given to Abebe before he died in 1973. Mamo never got it. In '74 Haile Selassie was overthrown by Ethiopian military leaders who, under Mengistu Haile Mariam, created a ruthless, hugely paranoid Communist government known as the Dergue, the Amharic word for committee.

Mengistu outlawed private land ownership and put collective urban planning under the authority of local councils called kebeles. This fueled resistance in northern Ethiopia's rural areas, and Mengistu met the opposition with terror. For 17 years all human assembly was assumed to be subversive. Ethiopians needed written permission for a wedding party. Chatting on a street corner could lead to interrogation by council tribunals or Revolutionary Guards--armed citizen enforcers.

Ethiopians deemed disloyal were killed by the thousands. The Dergue reportedly made its morgues run at a profit. A family claiming the body of a loved one was charged 10 Ethiopian birr (\$1.60) for each bullet used in the execution. Since more holes meant more revenue, death squads reportedly were asked to observe a two-bullet minimum.

All this seemed to mean that Mamo, who had been identified with the deposed emperor, could be in great danger. Being an Olympic champion and a national hero does not ensure safety in a nation that is ruled by fear of counterrevolutions and whose leaders are always on the lookout for a rallying point for insurgency.

Yet Mamo was hardly that. He had never seemed a martial sort of man or even ambitious beyond his sport. He seemed to owe his captain's rank more to his Olympic success than to personal or political connections to Haile Selassie. He was not of a rebellious tribe. The only Ethiopians he seemed to want to inspire to action were his country's young runners, several of whom he coached. But so effectively did the Dergue embargo information that for years if I thought of Mamo at all, it was only to wonder what had become of him amid benighted Ethiopia's incessant war, famine and purge.

In May 1991 the Dergue, having lost military aid from the collapsing Soviet Union and East Germany, was overthrown by the Ethiopian People's Revolutionary Democratic Front. Mengistu, who was responsible--through his Red Terror and by blocking aid to famine victims--for hundreds of thousands of deaths, escaped to Zimbabwe.

In late 1991 the new Ethiopian government rounded up more than 2,000 alleged officials of and collaborators with the Dergue, many of whom surely do deserve punishment for the regime's homicides. In this sweep, Mamo Wolde was caught up and imprisoned. In '92 Ethiopia created a Special Prosecutor's Office to investigate, charge and bring to court the suspects. But in May of this year Amnesty International said that no charges had ever been filed against Mamo and that it had seen no evidence to suggest that he was implicated in human-rights abuses. Amnesty appealed to Ethiopia to either charge or release those in his situation. Ethiopia did neither. In August, Mamo was still confined in the Ethiopian central prison, in a section known as the End of the World. There he would sit, prosecutors had told Amnesty, until more important cases were dealt with. But Amnesty did not learn what crime, if any, Mamo was suspected of. Ethiopia was still being gallingly tightfisted with information. I started calling African contacts, trying to learn more.

I wasn't alone. After word of Mamo's plight got out, the International Olympic Committee and the International Amateur Athletic Federation (IAAF), the world governing body of track and field, demanded explanations from Ethiopian sports officials. But since those officials were also members of the Ethiopian government, they got back only hand-wringing. "We have been advised to await the verdict of the court," said Sibehat Belya, vice president of Ethiopia's National Olympic Committee. At the World Track and Field Championships in Goteborg, Sweden, in August, IAAF officials admitted that all they could do was inquire and exhort.

Whether they knew him or not, all the Olympians I spoke to were astounded to learn of an Olympic champion's imprisonment. Not that they felt a gold medal guaranteed moral perfection, but what is more at the heart of the Games than the forsaking of violence? So sacred did they hold the Olympic truce that the ancient Greeks put down their arms on the battlefield in the days of the Games. Who can look on an Olympic 100-meter final or heavyweight wrestling final and not see combatants subsuming the most powerful human ambitions into peaceful competition?

Such was the feeling of another 1972 Olympian, 800-meter bronze medalist Mike Boit of Kenya, who is now his country's commissioner for sports and represents Africa on the IAAF Athletes' Commission. I was in Goteborg covering the championships when I ran into Boit, who urged me to go to Ethiopia, try to see Mamo or at least discover all I could about his case and condition, then lay the information before the Athletes' Commission. "The combined voices of Olympians," he said, "must be heard."

So I flew to Addis Ababa, which is set 7,500 feet above sea level, on dark, hilly earth that was then being turned to black mud by cold rain. The essential fact of Ethiopia is that it is high, up to 10,000 feet above sea level. Its central mountains claw from the sky virtually every drop of moisture blown northwest from the Indian Ocean and so become the source of the Blue Nile. Their long rain shadow is the Sahara Desert.

Ethiopia is a country most known for its suffering and poverty, yet few people have a richer history than the Ethiopians do. They, perhaps fancifully, claim that the highlands were first settled by a great-grandson of Noah named Ethiopic. Some 97 generations later, his descendants were ruled by the queen of Sheba, who traveled to Jerusalem, bedded King Solomon, converted to Judaism and bore him a son, Menelik. Menelik brought back to Ethiopia not only a thousand people from each of the 12 tribes of Israel, but also the Ark of the Covenant (What is said to be the Ark can be found this day in the St. Mary of Zion Church in Axum). Menelik was first in the Solomonic dynasty of emperors that ended some 237 monarchs later, with Haile Selassie.

Christianity, which arrived in Ethiopia in the fourth century, came under assault in the seventh century when the great plateau region was encircled but never conquered by Islam. For nearly a thousand years even the trade routes to the highlands were cut off by the stalemate between the forces representing the two religions. This long isolation produced, to many Western minds, one of the world's most feudal, xenophobic, argumentative cultures. British novelist Evelyn Waugh, who covered Haile Selassie's coronation in 1930, wrote of "the prevarications, the evasions ... the lethargy and cunning.... Tricking the Europeans was a national craft."

These were the people I would persuade to let me visit their rejected national hero? These were the people who would tell me why he was locked up? Fortunately I was not alone. Antonin Kratochvil had flown in from Prague. A former Czech freedom fighter whose natural photographer's combativeness had been sharpened by life and work in repressive regimes, he was very clearly the right man for the job. Yet photographing the slaughter in Rwanda had made him sensitive to the ever-present possibility of violence. I said I trusted him to not take too many chances.

"Give me your little plastic camera," he said. "I can hide it in my scarf when we go to the prison."

Maybe trust is too strong a word.

Even before we left for Ethiopia, we were faced with a choice. Ethiopian Olympic officials wouldn't talk to us unless the Ministry of Information certified us as journalists. But once the government knew we were journalists, we assumed, there would be no way we were going to be allowed near a prison, let alone Mamo.

So we bagged the officials and came in on tourist visas. Kratochvil planned to say he was a designer and trainer. My pitch would be personal: As an old friend and competitor of Mamo's, I would say I was stopping over in Addis simply to see him and cheer him up.

I tried this out first in a phone call to the Special Prosecutor's Office. I was transferred to a prosecutor named Abraham Tsegaye. His English was precise, his tone unnervingly bland. He said that some trials of the architects of the Red Terror had begun but that the courts were in a "period of hiatus" to allow defense attorneys more time to prepare. At present, he said, there were 1,300 detainees. "No charges have been filed against Mamo Wolde," he said, "but we are preparing to make charges when the courts resume, perhaps in two or three months."

I took a breath and asked the crucial question: "What are you charging him with?"

"With taking part in a criminal act."

"What criminal act?"

"A killing...."

I went queasy. I had come all this way on the strength of a backward glance. Suddenly it didn't seem such an ironclad guarantee of innocence. "What killing?"

"Mamo Wolde is suspected of being involved in killing one person while he served as a Dergue Revolutionary Guard."

"Revolutionary Guard? How could he have been a Dergue Revolutionary Guard? He was in Haile Selassie's Imperial Guard."

"The Imperial Guard was disbanded by the Dergue," said Abraham. "The Revolutionary Guard was then organized in 1975 along Communist lines to incite the public to 'defend' the revolution against its enemies. Mamo could have joined."

I grabbed at a straw. "What do you mean, 'could have'?" I said. "Did he or didn't he?"

"I don't know," said Abraham. "I'm basically a spokesman."

"Who accused Mamo of this crime?"

"The victim's family. Of the possibility of his collaboration with others."

"Was there a hearing before a judge?"

"Yes.... Well, perhaps not a hearing in the way you mean, with testimony. Our investigator gathered statements. Then the court sat with the investigator and Mamo Wolde and looked at the file and decided there were sufficient signs of his implication. So the court ordered him taken into custody."

"Did Mamo Wolde have access to a lawyer?"

"Not now. Not until he is charged."

"If I was detained for three years without charge, I'd sure have a lawyer."

"Well, in your country every time you shake hands with someone, you need a lawyer. In Ethiopia it is not such a way."

"Can you give me permission to visit Mamo?"

"I'm sorry. I don't have that authority."

He hung up. I must have looked ashen. Kratochvil brought me a glass of water and said prosecutors always put the worst face on things. Then he brightened. "Does Mamo have a wife?" he asked.

Mamo did indeed, and when we called her, she invited us to visit. So, on the last day of August, on a rocky lane not far off a main road, some children directed us to a door in a long, corrugated metal wall. As we pounded on it, the reverberations seemed to carry around the block.

A young man admitted us to a yard where corn and squash grew. He led us around a small house made of mud over a framework of sticks and held together with a coat of paint. In the back doorway, dressed in their Sunday best, were Mamo's wife, Aberash Wolde-Semhate, 24, and their five-year-old daughter, Addiss Alem Mamo, and three-year-old son, Tabor Mamo. Tabor's brave little handshake was cold and trembling. The young man who had let us in was Samuel, Mamo's 19-year-old son by his first wife, Aymalem Beru, who is now dead.

Inside we were shown to a dim sitting room. The wood floors were smooth and clean. Incense was in the air. Aberash poured us glasses of talla, a home-brewed beer. "If a guest does not accept the food and drink offered in an Ethiopian home," our interpreter had warned us, "the host feels so bad, it's like a natural disaster."

Aberash lifted her glass and solemnly apologized for Mamo's not being able to welcome me into his house. As we drank, I lifted my eyes and saw, hanging on the wall, Mamo's Olympic gold medal for the Mexico City marathon and his silver from the 10,000. The Munich marathon bronze was nowhere in sight.

"I am so thankful for this," Aberash said. "For your remembering that your runner friend still lives."

I admitted to her that I didn't really know Mamo that well. So Aberash opened a photo album and gave us a thumbnail sketch of her husband. He was born 64 years ago in Ada, about a marathon's distance southeast of Addis Ababa. He is a member of the Oromo tribe. "He is a strict [Ethiopian] Orthodox Christian," she says. "During the Dergue, party committee meetings were on Sunday mornings to keep members from going to church. Mamo solved that by going to church before dawn."

Aberash was introduced to Mamo seven years ago, shortly after his first wife died. "Before, when I was in school, I ran a little, not seriously," she said. "But I read about and I loved them, both of our heroes, Abebe Bikila and Mamo."

She dropped her eyes, a little embarrassed. I don't know what I expected to find in Mamo's home, but the simple, rustic room and Aberash's tender loyalty hardly seemed consistent with a totalitarian absentee master. I took heart, and I asked the questions that I feared the most.

"Had Mamo indeed been a Revolutionary Guard?"

"He told me he was nothing," said Aberash. "He was on a kebele committee--a committee for development--and also coached."

"The prosecutor's office said he will be charged in a killing," I told her. "Was he involved?"

"No," Aberash said. "No. Here is what happened. This was in 1975, at the height of the terror. Mamo said one night he was phoned by [a top kebele official] and ordered to put on his dress uniform, with his pistol, and go to a certain nightclub. Mamo thought this was protocol, that he was to meet an important visitor. When he got there, he saw that the official and some others had a boy with his hands tied. He was about 15. He might have been in some youth group fighting against the Dergue. The official ordered Mamo not to talk. Then the official and another man took the boy out and shot him. Then they told Mamo to go there, to the body of the boy. At first he refused, but at that time to refuse an official was to be dead yourself, so finally he went. The boy was dead. The official told Mamo to shoot the body again because there had to be two holes. The policy. Mamo said he went to three meters [10 feet] away and shot and purposely missed. Lots of people saw him miss. In 1992 many witnesses said Mamo didn't kill anybody. Only one accused him. The official who shot the boy wants to blame Mamo to save himself. But the prosecutors said they had to keep Mamo in detention until they bring charges. But they never do. He just waits."

As I listened, I looked again at Mamo's medals. The Mamo in Aberash's story had acted as I imagined I might act if plunged into a world of such choices. I began to revive a little.

Mamo had been receiving a small pension from his government service. When he was imprisoned, the money stopped. "I couldn't feed my children," said Aberash. "I applied to the athletics people, and now the IOC gives a little every month." Also, Samuel has dropped out of school and gotten a job as a welder's assistant.

Mamo was briefly allowed out of prison twice, once when he was ill and once when he told Aberash he thought he was being freed. Each time he stayed in Addis Ababa with his family. Each time he was re-arrested. In a way, this was the most galling thing I learned, since it seemed to prove that Mamo is no risk to flee his country. "He wants to go to trial," said Aberash. "He wants to clear his name."

If he has to wait, I wondered, why couldn't he wait at home?

Mamo's latest detention had lasted two years and six months by the time I arrived in Addis Ababa. His health had not been good. "He was very sick in prison, with bronchitis, liver and stomach problems," said Aberash. "He's lost a lot of hearing in one ear. He was in the prison hospital for a month and a half, in the winter."

Prison food is terrible, but families are allowed to bring supplemental rations four days a week. "On Tuesdays and Thursdays the guards take the food and tell me to leave," said Aberash. "But on Saturdays and Sundays family members can go in and see the prisoners for a few minutes. You are lined up in a field, six feet apart, with a fence in between. I think Saturday you should try to come along."

So Saturday at noon, loaded with chocolate, cookies and cigarettes for Mamo to use in barter, Kratochvil and I drove Aberash to the prison. She had warm chicken stew in a plastic carrier. She did not believe the prosecutor was being truthful when he told us that Mamo would soon be charged.

Outside the prison gate perhaps 200 people--women and children and old men--were shuffling into one end of an open shed that had four long rows of benches. At the other end guards took names and allowed 20 people at a time to enter the prison. Through the open gate we could see them being searched. Kratochvil had my tiny panoramic camera hidden in his voluminous white scarf and was blazing away at the prison and the people.

Many of the visitors were obviously middle class. The children stared at the faranjoch out of wonder rather than want. Down the rows went urchins selling peanuts, bad fruit and Olympic lottery tickets that had Abebe Bikila's picture on them. I bought five tickets for 10 birr. The seller shook my hand and wished me luck. I began to feel a wild hope. We just might waltz in here.

But when we stood up with Aberash and the people near her and moved toward the gate, we were cut out as if we were hyenas among goats. A comely female guard explained to us that foreigners were simply never allowed to visit a prison. It was a matter of national security.

While Aberash was inside, the guard went on to say that the only one who could conceivably authorize our entry was the police commissioner. As we were asking his whereabouts, Aberash came out. There were tears in her eyes. "Mamo said to tell you that your remembering, your coming has restored his morale and his faith," she said evenly. "He feels both great happiness and sadness. Happy at your coming. Sad that he can't greet you properly."

I had the same emotions. It suddenly hit me what a long shot I must have seemed to him. Hell, what a long shot I really was. It was good to have let him know he wasn't forgotten, but I was damned if I was going to go home without seeing him now.

Working our way up the chain of command, we went to four police stations in search of the commissioner. Our story became better with each telling, until Mamo and I were long-separated brothers. The higher their rank, the farther out of uniform the Ethiopian police officers were. The shift commander's candy-striped shirt was no match for his paunch. He had a Texas longhorn on his huge belt buckle. He told us that the commish wasn't available until Monday morning. We made an appointment.

The next day we gave Aberash and Samuel a lift back to the prison. Kratochvil had brought a larger camera this time, and he took a picture of Aberash in the waiting shed. His action was seen, and suddenly we were encircled by police. One of them kept repeating that they'd had problems with people saying terrible things about their country. "Everybody in every country," guard after guard repeated, "had to know taking pictures of prisons and police stations was forbidden."

Kratochvil said he had not taken any pictures of the prison, just of Aberash, and offered them the film. They took it, but this did no good. One guard, a skinny, wasted man with a warped hand, kept yelling that we were incredibly cunning foreigners, and it was their duty to consider everything we said a lie and simply arrest us. Finding himself in the minority, he held out for summoning higher authority.

Aberash stood up for us so forcefully that she was instantly made to sit down in the waiting shed and was ordered to shut up. Calls were made, and we were told to wait. After half an hour Kratochvil, our interpreter and I were ordered in through the gate and put on a butt-polished wooden bench against a wall facing a sandy courtyard. "Now we are detained," said Kratochvil.

We waited. The prisoner's visiting family members were being searched in front of us. The female guards who were going over the female visitors were anatomically thorough, to the point of running a hand up under skirts and deep into crotches.

We waited. I told the members of my team that no one is as patient as a marathoner, and they should hang in. All nodded. I took myself literally and strove for that frame of mind you want in the first 20 miles: alert but with aggressiveness in check, anxieties suppressed. And as has been known to happen in a marathon, a familiar question arose: What the hell was I doing here?

The answer came more easily than it does on the road. I wasn't just hoping that Olympic commonality might mean something to some sadistic prison guards. I was trying to do a little good. I remembered what Irish miler Eamonn Coghlan had said to me a few years back, when I told him that I was envious of his sub-four-minute miles after he turned 40: "Runners don't exactly win men out of bondage. But journalists can."

Well, this was the first time I'd had a chance, so it didn't seem hard to discipline myself to be calm. Besides, how brutal could a night in an Ethiopian prison be when Mamo had done a thousand of them?

As if in answer, a guard loudly slammed a magazine into his AK-47 and watched our reaction. "So arrogant," whispered the interpreter.

I looked at the ground. If one of these guards had an accident with his gun, this tiny peak of black basalt protruding through red pumice could be the last thing I'd see. I am not an adrenaline junkie. It didn't take getting into this fix to teach me that risks have to be well justified. But once you are in a fix, it doesn't really matter whether your aim is noble or base; you have no choice but to see it through.

In my mind, I started listing recent events of suffering--the Serbs shelling the Sarajevo marketplace, Zaire's president trying to force a million refugees back into Rwanda, Kashmiri separatists decapitating a Norwegian tourist--as if to imply that Mamo's was but a drop in the bucket, that his suffering was not worthy of real sacrifice to alleviate.

This was a sign that my nerve was eroding exactly the way it does in a long, hard marathon. Your thoughts turn fatalistic. There is no hope of winning now, you think. It's as good as over. Why keep hurting?

This you learn to fight. It's never over. If you can't win, you can pass someone. If you can't finish, you can shoot for the next aid station, and then the next. So I tore my thoughts from hopeless mass misery and fixed them on Mamo Wolde, the specific, fragile, 64-year-old man locked in a cage a hundred yards away, and I was back running with him in Munich. This time, when my cramp hit, when he turned and winced, I imagined him finding words. "Hold on," he said to me. "Hold on."

Suddenly a four-door pickup roared in, and a young man with a leather jacket and blue suede shoes got out and inspected us. This was someone who identified himself simply as Major Negesse, and all around deferred to him. The whites of his eyes were the color of strawberry jam. We explained everything all over again to him, after which he went inside and called his superior.

We waited. It seemed a good sign when a uniformed guard moved us into the shade on the other side of the courtyard. But from there the interpreter could hear the insatiable hunger for our heads expressed by the man with the crippled hand.

We'd been held for four hours. It clouded over. We were moved back across the courtyard. They kept asking for our passports. We kept saying we'd left them at our hotel.

Over the wall wafted the melodic voices of a women's choir from the nearby Ethiopian Orthodox church. Amid their angelic music, our salvation arrived, in the person of a man introduced to us as Captain Shanbel, maybe 35, with a pointed, freckled nose. He was holding a hissing walkie-talkie. In English he told us that we had to prove who we were. We asked him to let us go get our passports at the hotel. He said we could, with an escort.

Outside the gate Aberash and Samuel were still waiting. They were told to go home, so they watched us set off across Addis Ababa with a policeman in the back-seat of our car and a huge armored vehicle with half a dozen officers in it right behind. You should have seen the face of the Hilton doorman when we pulled in.

As Kratochvil and I ran inside, Kratochvil dashed ahead and was safely up in an elevator before officers Neguesse and Shanbel caught up with me in the lobby. By the time they'd accompanied me to my room, appropriated my passport and told me that I had nothing to worry about as long as my papers were in order, Kratochvil had already flushed the undeveloped film of the previous day's photos of the prison. The officers took his camera for good measure. We said we would see them on the morrow, and then spent an hour calling everyone we knew. We tried to sound calm. We've, uh, been in the prison and, uh, they held us all day, and now they have our passports. If you don't hear from us, say, by tomorrow night, you probably should contact the U.S. Embassy....

We got up early the next day and drove through mists to the office of the police commissioner, who took one look at us and said he wouldn't be responsible for faranjoch. Be serious. We had to go to the Ministry of Internal Affairs. The interpreter swallowed hard.

The downstairs courtyard at the ministry looked like a crowd scene from Gandhi. Hundreds of rain-soaked people were mobbing the office that issued exit visas. By contrast, the tiny office for foreigners had cobwebs on the desk. We were sent upstairs to a room where the sign on the door read only the chief. It had bustling secretaries. The power went out. The secretaries opened the curtains. The power returned. After an hour we were ushered in.

The chief was Internal Affairs Minister Mahete. She wore a red dress. Her angular face was forceful, and she looked a little sour, perhaps because on her desk was a volume titled Immigration Laws of the United States.

As the interpreter made our pitch, I tried to seem nonthreatening. I must have looked like one of the kids begging at the stoplights. She stopped the interpreter, made some calls, shook her head, called in a secretary and dictated a three-sentence letter to the prison authorities. She had given me permission to see Mamo.

At the prison we held her letter before us like a cross toward a vampire. The gate rolled open. The guards who had hassled us the day before looked at the document and fell back against the walls. We were given an escort down a stony path. The buildings--one with no roof--were spread apart, with weedy land between.

Major Neguesse bowed us into his office. He gave us back our passports and camera. His eyes were still red, but now he looked almost friendly. He said he hoped we understood that they had only been doing their duty. We understood.

"Well, then, let us see your friend."

A cluster of guards led us down a sloping path toward a two-story building that could have been an old theater. Wooden rails on posts ran out under an awning from its double doors, as if to keep a great many men in line. No prisoners could be seen, only guards. I peered in through the doors. A staircase led up. Guards were coming down it, and among them was a slender man in a green-and-white sweater and a distinguished widow's peak.

I threw aside my guards. He fought through his. He and I embraced on the steps. He was bony through the sweater, but warm and strong. And excited. "It all comes back," he said. "I remember you had a goatee."

"I thought you would be gray."

"Thank you, thank you from my family for this. Remember me to the brothers, the Olympic brothers."

"You are remembered," I said. I told him I was carrying the best wishes of the IOC, the IAAF and at least a dozen friends from the Olympic movement, as well as a standing invitation to be grand marshal of the Honolulu Marathon, back in the islands where I now live. As the list went on, he lifted his eyes and arms. "These are words from God," he said.

I hugged him again. He didn't seem bruised. He had on flip-flops and blue socks. I said, "We just have to get you out of here."

"This is a good government now," he said, an eye going to the listening guards. "It will release me soon, I'm sure. It will see that the charge was false. It will realize it was a bad man trying to save himself."

"Is there anything that you need?"

"I never got my house from the emperor. I had to live all these years in the mud house you saw. All I need in the world is to get out, remake it in stone and live with my children in safety."

We had maybe eight minutes together. A guard must have given Mamo a sign, but I didn't catch it. He took my forearms in his hands. "It restores my soul," he said. "It is something I can feel in my body, that people outside the country remember." Then they led him back upstairs.

Later I would call prosecutor Abraham once more. He now felt Mamo might be charged "before the end of the year." Every time I asked, it seemed, the date receded further.

Granting that Mamo had to stand trial, I said, could he not be bailed out in the interim? The prosecutor replied that Mamo's was not a "bailable offense."

"It's been three years," I said. "Doesn't the Ethiopian constitution guarantee a speedy trial?"

"It does," he said. "But it doesn't say how speedy. Remember, we are investigating a government that conducted systematic, state-supported human-rights abuses for 17 years. So guarantees of rights may not apply in these extraordinary circumstances. But I assure you, the delay is not intentional. It's simply budgetary. We have so few resources."

I was inclined to believe him. But I was also emboldened, by my sharpened sense of the man Mamo Wolde is, to include in this account the prosecutor's telephone number and address (011-251-1-120-828, or P.O. Box 6842, Addis Ababa), so that the world's Olympians and human-rights activists might respectfully remind Ethiopia that justice delayed is justice denied.

There was a feast that night at Mamo's house. Aberash, who had been astounded at our success, prepared traditional injera, a wheel of spongy, sour, fermented bread made from a grain called teff. This we used to sop up several kinds of wat (stew). The talla flowed, and at the end Aberash performed an elaborate coffee ritual, roasting the beans on the charcoal brazier, grinding them in a mortar and then putting them in a pot on the same coals.

While she waited for the coffee to strengthen, she warmed frankincense in a little clay pot. The children crept quietly into the fragrant room. The rain rang on the roof. Even Kratochvil seemed to be at peace, although he had revealed that he had taken my little disposable camera in his pocket into the prison, and that it had practically killed him not to be able to photograph my reunion with Mamo.

It seemed absurd then that I had thought that coming here had been some sort of moral risk. We were Olympians, Mamo and I. In the rage of competition we had obeyed the rules. We had each denied the voice of our inner killer and settled things the honorable way. I had always known that much about him, and it was always ample reason to press his captors for fairness.

The traditional Ethiopian coffee service has three rounds. We drank two and left the third, to symbolically ensure our return.

I closed my eyes, savoring, and in that moment I saw Mamo again, in his threadbare sweater, going up those prison stairs. But this time I was the one to turn around and give the long look back. This time, I was the one to cry out that this is wrong, to tell him that this isn't the way things should be happening.

B/W PHOTO: PHOTOGRAPHS BY ANTONIN KRATOCHVIL [Aberash Wolde-Semhate holding photo of Mamo Wolde]

COLOR PHOTO: JERRY COOKE Memories of their 1972 duel compelled the author to visit Mamo's house. [Kenny Moore running against Mamo Wolde]

B/W PHOTO: PHOTOGRAPHS BY ANTONIN KRATOCHVIL [See caption above--Kenny Moore talking with person in doorway of Mamo Wolde's house]

COLOR PHOTO: BETTMANN NEWSPHOTOS Mamo's golden moment came in Mexico City. [Mamo Wolde on medal stand]

B/W PHOTO: PHOTOGRAPHS BY ANTONIN KRATOCHVIL At the prison, as at home, Aberash (center) waits for Mamo. [Aberash Wolde-Semhate and others]

B/W PHOTO: PHOTOGRAPHS BY ANTONIN KRATOCHVIL For almost all Ethiopians, life is a marathon through poverty and squalor. [Ethiopian street scene]

B/W PHOTO: PHOTOGRAPHS BY ANTONIN KRATOCHVIL This shrine is the sole reminder that this is the home of a champion. [Awards and trophies arranged around framed photo of Mamo Wolde]

B/W PHOTO: PHOTOGRAPHS BY ANTONIN KRATOCHVIL The view from the author's ancient Beetle is of Mamo's neighborhood. [View of Mamo Wolde's neighborhood from Kenny Moore's car]

B/W PHOTO: PHOTOGRAPHS BY ANTONIN KRATOCHVIL Despite his medals, Mamo is separated from Addiss Alem. [Addiss Alem Mamo and hand holding medals]

The Role of Criticism

In the first chapter of this book, you learned that there are two phases to thinking: the *creative* phase, in which ideas are produced, and the *critical* phase, in which they are evaluated. Since then we have discussed the creative phase in detail. Now we turn our attention to the critical phase.

This chapter explains why critical thinking is necessary and gives you an overview of how critical thinking strategies are applied to problems and issues.

G. K. Chesterton once described a poet as a person with his head in the clouds and his feet on the ground. That description also fits good thinkers. They are able to entertain the boldest ideas, the undreamed-of solutions to problems—yet they are also able to fit their ideas to the exacting demands of reality. They are not only imaginative but practical as well. We have examined the former, creative phase of thinking. Now we will examine the latter, critical phase.

Critical thinking, as we define it here, means reviewing the ideas we have produced, making a tentative decision about what action will best solve the problem or what belief about the issue is most reasonable, and then evaluating and refining that solution or belief.

WHY CRITICISM IS NECESSARY

The role of criticism in problem solving is important for two reasons. First, no solution is ever perfect. However creative it may be, there is always room for improvement. Even the best ideas seldom occur in refined form. Like fine gems, they must be cleaned and polished before their potential worth is realized. Second, in many cases solutions cannot just be put into effect; they must first be

approved by others. Ideas for the improvement of the office or factory, for example, may require the approval of an employer or supervisor. Ideas about overcoming difficulties in family relationships may depend on the cooperation of other family members. And creative solutions to social problems often require the support of government leaders or the endorsement of the voters. In such cases, the best idea in the world is of little value until others are persuaded of its worth.

Criticism is equally important in resolving issues. A viewpoint may seem eminently reasonable, the ideal ground for compromise between opposing views, yet contain subtle flaws. Sometimes these become evident only when the idea is translated into a course of action.

In the early 1970s, for example, in response to the issue of fairness in divorce settlements, the idea of “no-fault” divorce became law in California, and in subsequent years, in most other states. It was considered at the time an ingenious way to permit a marriage to be dissolved easily and fairly, without squabbling and bitter accusations. Later, many critics identified an effect of no-fault divorce that no one anticipated when it was instituted: the impoverishment of divorced women and their children.¹

Although there can never be a guarantee that even the most thorough criticism will reveal every flaw in an idea, your responses to issues are more likely to be reasonable if you subject your ideas to rigorous evaluation before reaching a judgment. Critical thinking reduces your chance of error.

FOCUS ON YOUR IDEAS

The focus of this and the following chapters is not on criticism of other people’s solutions. It is rather on a much more difficult, even painful, criticism: that of *your own* solutions. Like everyone else, you are vulnerable to a variety of errors. You may receive inaccurate reports from others, including the media. In addition, you may misunderstand accurate reports, fall prey to rumor and hearsay, let emotion color your judgment, and suffer lapses in logic. For these reasons, the ideas you produce need criticism.

Ironically, though you are undoubtedly ready to criticize others’ ideas freely, like most people you are probably blind to the need for criticism of your own thinking. There are at least two reasons for this. First, your ego is inclined against self-criticism. Once you have settled on an idea, you feel a proprietary interest in it. “It is mine,” you tell yourself, “so it must be good.” And once in that frame of mind, you are ready to defend the idea against all attack, even the attack that your own good judgment might mount against it. The situation is something like that of a dog with a bone. The dog will cling to it tenaciously and growl and snarl when anyone approaches, not because the bone is worth anything (it may long since have been chewed out), but simply because it is the dog’s possession.

Another reason you will be reluctant to evaluate your own ideas is that their familiarity makes it difficult to see flaws in them. The longer you work on a problem or an issue, the more accustomed you become to its details. And once your effort yields a solution, you may be so enamored of it that you have difficulty seeing it objectively.

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OVERCOMING OBSTACLES TO CRITICAL THINKING

This blindness toward imperfections in your ideas will make it tempting to approach criticism of your ideas with, at best, mock analysis followed by a vigorous nod of approval. There are two ways you can safeguard against this mistake. The first is to say to yourself, before you begin to take a critical look at any idea, "I know this idea is going to look good to me and that I am going to feel it's pointless to look for flaws. That's natural. I thought of it, so I want it to be perfect. *But I'm going to disregard this reaction and force myself to examine it critically.*"

The second safeguard is to use your ego to advantage. Whenever you find yourself ready to stop evaluating your idea before you really should, reflect for a moment on how it would feel to have a serious flaw pointed out by someone else, particularly by someone you don't much care for. Visualize the situation; imagine yourself squirming with embarrassment and awkwardly offering face-saving excuses. Such a mental picture ought to motivate you to continue evaluating your idea.

APPLYING CURIOSITY

We have seen how curiosity increases awareness of problems and issues, enabling you to feel dissatisfactions and annoyances more consciously and to regard them more productively as challenges and opportunities. We have seen, too, that curiosity keeps your mind dynamic and contributes to the playfulness Einstein regarded as "the essential feature of productive thought." That same curiosity is also a valuable aid to critical thinking.

Perhaps you've had the experience of adding up a column of figures and getting the same answer—the *wrong* answer—again and again. Psychologists have long recognized that when we travel a particular mental route a second or third time, we often follow our earlier footsteps without realizing that we are doing so. That's what happened when you added up those figures. You had the impression that each new total was fresh and independent. In reality, though, you were trapped by your initial miscalculation.

That same kind of mistake can occur when you examine your ideas critically. You can look at an idea again and again and still not see its flaws. To be effective, you need to examine the idea from different perspectives. That's where curiosity comes in. By approaching criticism inquisitively—asking "How will my idea work when it is applied?" and "How will others react to it?"—you will increase your chances of finding the imperfections and complications that need to be addressed.

AVOIDING ASSUMPTIONS

To assume is to take something for granted, to expect that things will be a certain way because they have been that way in the past or because you want them to be that way. It's natural to make assumptions. Everyone makes them continually.

You assume, for example, that your professor will be in class when class is scheduled, that the cafeteria will not serve lunch two hours early, that your car is safe from vandalism in the college parking lot, that the bank that has always cashed your checks will continue to do so, and that the elevator is really going up when the indicator says it is. Making such assumptions is reasonable, even if on occasion they prove to be incorrect.

Nevertheless, it is important to be careful about what you assume. And when you are evaluating and refining your ideas, you should make a special effort to identify assumptions you may not have detected previously. The reason is not only that unexpected outcomes can cause you embarrassment but also, and more importantly, that *what you take for granted you will not examine critically*. Assumptions obstruct the evaluation process.

It would be impossible to list all the assumptions it is possible to make. However, the following assumptions occur often enough, and interfere with critical thinking seriously enough, to warrant special mention.

1. *The assumption that others familiar with the problem or issue will share your enthusiasm for your ideas.* Although this might seem to be a reasonable expectation, it seldom is. The more familiar people are with a problem or issue, the more likely they are to have their own ideas.
2. *The assumption that small imperfections in your idea will not affect people's acceptance of it.* When other people's ideas differ from yours, they are likely to magnify flaws in your ideas without even realizing it because, subconsciously, they are looking for an excuse to reject your ideas. Small imperfections may provide that excuse.
3. *The assumption that if your idea is clear to you, it will be clear to others.* If you've ever sat in a classroom and heard a teacher offer an explanation that didn't make the slightest sense to you, you should appreciate the confusion this assumption can cause. *Your* understanding of what you are expressing does not constitute clarity. If you want the solution and its presentation to be clear, you must *construct* it to be so and not just assume that it is.
4. *The assumption that the people who stand to benefit most from your idea will accept it automatically without any persuasion on your part.* This assumption has caused creative people incalculable grief. For example, when Elias Howe invented the sewing machine, he knew it would be a boon to the garment industry by revolutionizing garment construction and making the clothing business much more profitable. He may very well have assumed that the mere unveiling of his invention would be sufficient to have the leaders of that industry praise it and him. But reality didn't match that assumption. Howe couldn't get a single American firm interested enough to buy the machine. He was forced to go to England to find a favorable reception. To spare yourself disappointment, never assume that the value of your ideas will be universally recognized. Expect to have to persuade other people.

REFINING YOUR SOLUTIONS TO PROBLEMS

Refining your solutions means making good ideas even better—that is, making the results of your creative thinking more effective, more workable, more attractive. Although much of what you will be doing in this stage is finding flaws and complications, the emphasis is not negative but positive. Your aim is to *improve* your ideas.

Not every idea, of course, requires refinement. With the problem of the string that slips out of your sweatpants, for example, there is little or no need for refinement and no need to present the solution for others' approval. Once you have decided on a solution, you can just implement it. Most of the important problems and issues you will encounter, however, are more demanding.

Later chapters will develop the refinement and presentation of ideas more fully. The basic approach that follows will enable you to begin using these steps and developing skill in applying them even while you are studying each in greater depth. The approach consists of asking and answering these four questions.

1. How exactly will your solution be applied? List all steps and all important details.
2. What difficulties could arise in its implementation, and how would these best be overcome?
3. What reasons might others find for opposing this solution? What modifications could you make to overcome their opposition?
4. Who, specifically, will have to be persuaded of the merit of your solution? What kind of presentation would be most likely to persuade them?

A SAMPLE PROBLEM

The following problem was included in Chapter 9's applications.

You are the editor of the college newspaper. Your staff consists of two other people who limit their work to a few hours a week. To get the paper out each week, you've had to spend many more hours than your course load permits. On several occasions, you've stayed up all night and slept through the next morning's classes. You've tried putting ads in the paper to get more staff members, but no one answers them.

Let's say you identified the problem as "How to reward students for joining the staff." (This is one good expression of the problem, though not, of course, the only one.) Let's say further that after investigating the problem and producing a number of possible solutions, you chose *giving some form of college credit*

CHAPTER

11

Refine Your Solution to the Problem

This chapter takes a closer look at the application of critical thinking in *solving problems*. (Issues are treated in Chapter 12.) In this chapter you will learn how to work out the details of your solution, how to find imperfections and complications, and how to improve the solution so that it can withstand other people's criticism.

How might the human voice be carried over distances beyond the normal range of hearing? That was the problem facing Alexander Graham Bell. The solution, as we all know, was the telephone. But how did Bell actually invent it? Most of us probably have the vague notion that once he got his creative idea, he merely retired to his workshop, built a model of the machine, sold it, and became rich and famous. In fact, it wasn't that simple. Although Bell was an expert in sound, he knew virtually nothing about electricity. Before he was able to make his idea a reality, he had to learn all about electricity and then put his knowledge to work and solve the technical problems.

The refinement of solutions to problems does not always demand learning an entirely new field, but it is seldom the easy matter many people assume. As Eliot Hutchinson explains:

There is nothing trifling, incidental or dilettantish about this business of [refining solutions]. It is work, days and nights of it, months and years of it, the perspiration that is nine-tenths genius. And it tires, discourages, exhausts . . . The history both of art and of science is largely the history of man's personal endurance, his acceptance of labor as the price of success. To be sure, some men dash off a brilliant piece of work, spread themselves for a time. But 90 percent of reputable authors, no matter how sure their technique, and well-nigh all reputable scientists

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THREE STEPS IN REFINING

Because refinement can spell the difference between success and failure, you should approach it very seriously. Yet there is no reason to be frightened by the task. It usually requires no special gift or talent. Rather, it is achievable by anyone who is willing to work hard and patiently. Three steps are involved: working out the details of the solution, finding imperfections and complications, and making improvements.

Step 1: Working Out the Details

The first step means determining exactly how your solution will be applied. It's easy to overlook this step or to ignore its significance. After all, most of the things we use every day and take for granted—the concepts, the processes and systems, the products and services—appear to us in refined form. We seldom have occasion even to imagine how they appeared in rough form or to appreciate the difficult challenges their refinement posed for their creators.

Consider the ballpoint pen. It was first conceived of in the United States in 1888 by John Loud. He even obtained a patent for his idea of using a rotating ball to deliver the ink to the paper. Yet he never was able to refine the pen enough to make it write cleanly. In 1919, Laszlo Biro of Hungary reinvented this pen, but he was unable to complete his design and market his idea until 1943—and even then the ink came out in splashes. Finally, Franz Seech of Austria worked out the basic difficulties in 1949 (the key to his pen's performance was fast-drying ink) and marketed his pen successfully. Thus, 61 years elapsed from conception to refinement.²

When William Addis, a prisoner in a British jail, got the idea for the first toothbrush in 1870, he faced a number of challenges to his ingenuity. (In case you didn't know, before 1870 people cleaned their teeth by rubbing them with a rag.) What would be the right size for the invention? What shape would be best? What should it be made of? What kind of bristles would work best? How should they be held together? What could be used to contain the bristles? Addis saved a bone from his supper; bored tiny holes in it; obtained some bristles from his prison guard; cut, tied, and glued them together; and inserted them into the bone. When he was released from prison, he marketed his invention and became a business success.³

The refinement of the typewriter posed even greater challenges. How to place the keys, how to arrange the keyboard, how to make the keys strike, how to hold the paper, how to make the carriage move so that the keys wouldn't strike the same place over and over, how to move from line to line without turning the carriage by hand, how to ink the keys—these were just some of the details that had to be worked out. In light of such numerous and complex

problems, it is perhaps not surprising that before Christopher Sholes and Samuel Soulé completed their first working model in 1867, *51 other inventors* had tried and failed.⁴

We could cite many other examples of the refinement difficulties facing the originators of most new ideas. The point is that even the most creative idea does not become useful until the details of its application are worked out. The following approach will help you work out the details of your solutions more effectively:

If your solution involves *doing* something (as, for example, in a new process), answer these questions.

- How exactly is it to be done, step-by-step?
- By whom is it to be done?
- When is it to be done? (According to what timetable?)
- Where is it to be done?
- Who will finance it?
- What tools or materials, if any, are to be used?
- From what source will they be obtained?
- How and by whom will they be transported?
- Where will they be stored?
- What special conditions, if any, will be required for the solution to be carried out?

If your solution involves *making* something (as in a new product), answer these questions.

- How will it work? Explain thoroughly.
- What will it look like? Be specific as to size, shape, color, texture, and any other relevant descriptive details.
- What material will it be made of?
- What will the product cost to make?
- Who will pay for it?
- How exactly will it be used?
- Who will use it? When? Where?
- How will it be packaged?
- How will it be delivered?
- How will it be stored?

Step 2: Finding Imperfections and Complications

After you have worked out the details of your solution, your next step is to examine those details for imperfections. Remember that despite the normal tendency to regard your solution as perfect and to view this step as unnecessary, it is almost certain that your solution, like any other, contains at least minor flaws. Remember, too, that your success in persuading others of your solution's value will depend in no small part on your willingness to improve your idea in any way you can.

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Until you are experienced in examining solutions critically, the biggest difficulty you are likely to encounter is knowing what kinds of imperfections and complications to look for and how to go about looking for them. The following four approaches will prove helpful both in overcoming that initial difficulty and in ensuring that your analysis will be comprehensive.

1. *Check for common kinds of imperfections.* The following areas are the ones in which imperfections most commonly occur. (Not every one, of course, will apply to every type of solution.) Although the list is not exhaustive, and therefore you should not limit yourself to it, it is an excellent starting point for examining most solutions.
 - *Clarity:* Is the solution difficult to understand?
 - *Safety:* Does the solution create any danger for those who use it or those for whom it is used?
 - *Convenience:* Is the solution awkward to use or implement?
 - *Efficiency:* Does using the solution involve significant delays?
 - *Economy:* Is the solution too costly to build or implement?
 - *Simplicity:* Is the solution unnecessarily complex in design or format?
 - *Comfort:* Is the solution uncomfortable to use?
 - *Durability:* Is the solution likely to break or malfunction?
 - *Aesthetics:* Will most people find the solution ugly or unappealing?
 - *Compatibility:* Does the solution clash with any other product or process it should harmonize with?
2. *Compare the solution with competing ones.* Examine the existing product or process your solution is designed to replace, or study another proposed solution competitive with yours. Determine how the existing product, process, or competing solution is superior to yours. (Although your solution should be superior in most major respects, it may be inferior in one or two minor respects. Any such area should be considered an imperfection.)
3. *Consider what changes your solution will cause.* Ask yourself what will occur if your solution is implemented. Don't overlook even minor changes. Decide which of them, if any, will cause complications.
4. *Consider the effects your solution will have on people.* Look among the physical, moral, emotional, intellectual, and financial areas of life to see how any would be affected. Be sure to consider even the remote effects that might occur on any person or group. Most of the changes you list will undoubtedly be beneficial. But those that are in any way undesirable will often signal imperfections or complications in your solution.

Step 3: Making Improvements

The third and final step in refining your solution is to make improvements that will eliminate imperfections. Here, classified according to the types of solutions they are usually associated with, are the kinds of improvements you will find applicable in most situations.

For a new or revised concept:

- Change the terminology—make it simpler, easier to remember, more eye-catching.
- Change the way it is explained—use different illustrations, analogies, and so on.
- Change the application—use it in different situations or in different ways.

For a new or revised process, system, or service:

- Change the way it is done, the step-by-step approach.
- Change who does it.
- Change the place where it is done.
- Change the tools or materials used.
- Change the source from which the tools or materials are obtained.
- Change the place the tools or materials will be stored.
- Change the conditions required.

For a new or modified product:

- Change its size, shape, color, texture, and so on.
- Change its composition (the material it is made of).
- Change the way it is used.
- Change who will use it or when or where it will be used.
- Change the way it is packaged or delivered.
- Change the way it is stored.

Whenever you address an imperfection and are trying to think of ways to improve your solution, be sure to consider using the approaches for producing ideas explained in Chapter 9. Specifically, you should consider *forcing uncommon responses*, *using free association and analogy*, *looking for unusual combinations*, and *visualizing the possibilities*. Each imperfection and complication is, after all, a mini-problem in itself and will therefore respond to the creative process much as the larger problem did.

Most important, be sure not to settle for the first improvement that occurs to you. Instead, extend your effort to produce ideas, and withhold judgment of any one idea until you have produced a generous number of possibilities.

Occasionally, you will encounter an imperfection that requires you to return to the second stage of the creative process and investigate the matter more deeply—much as Alexander Graham Bell did when he took time out to master the principles of electricity. In extreme cases, you may even find that your solution is too badly flawed to be workable. At such times, you will feel as if all your efforts were wasted. But they will not really have been wasted. *To find out what does not work is an important step toward determining what does.*

TWO SAMPLE PROBLEMS

The First Problem

Now let's apply this approach to some cases and note how it works. The first case concerns Rocco, the manager of the movie theater. His problem was discussed in Application 7.4: "In recent years, a number of competitors have cut

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Evaluate Your Argument on the Issue

In this chapter you will learn how to identify and overcome errors in reasoning. This is a special step that applies only to issues because resolving issues involves finding the most *reasonable* belief.

Two broad kinds of errors are examined—errors affecting the truth of your ideas and errors affecting the quality of your reasoning. A step-by-step approach to evaluate arguments is also included.

Because your main objective in addressing an issue is not to find the most effective action but to determine the most reasonable belief, your main task in refining an issue is to evaluate your argument to be sure that it is free of error. Two broad kinds of error must be considered. The first affects the *truth* of the argument's premises or assertions. The second affects the argument's *validity*—that is, the legitimacy of the reasoning by which the conclusion was reached. A sound argument is both true and valid.

■ ERRORS AFFECTING TRUTH

Errors affecting truth are found by testing the accuracy of the premises and the conclusion as individual statements. The first and most common error in this category is simple factual inaccuracy. If we have investigated the issue properly and have taken care to verify our evidence whenever possible, such errors should not be present. We will therefore limit our consideration to the more subtle and common errors:

- Either/or thinking
- Avoiding the issue
- Overgeneralizing
- Oversimplifying

- Double standard
- Shifting the burden of proof
- Irrational appeal

Either/Or Thinking

This error consists of believing that only two choices are possible in situations in which there are actually more than two choices. A common example of either/or thinking occurs in the creationism-versus-evolution debate. Both sides are often guilty of the error. "The biblical story of creation and scientific evolution cannot both be right," they say. "It must be either one or the other." They are mistaken. There is a third possibility: that there is a God who created everything but did so through evolution. Whether this position is the best one may, of course, be disputed. But it is an error to ignore its existence.

Either/or thinking undoubtedly occurs because, in controversy, the spotlight is usually on the most obvious positions, those most clearly in conflict. Any other position, especially a subtle one, is ignored. Such thinking is best overcome by conscientiously searching out all possible views before choosing one. If you find either/or thinking in your position on an issue, ask yourself, "Why must it be one view or the other? Why not both or neither?"

Avoiding the Issue

The attorney was just beginning to try the case in court when her associate learned that their key witness had changed his mind about testifying. The associate handed the attorney this note: "Have no case. Abuse the other side." That is the form avoiding the issue often takes: deliberately attacking the person with the opposing view in the hope that the issue itself will be forgotten. It happens with lamentable frequency in politics. The issue being debated may be, for example, a particular proposal for tax reform. One candidate will say, "The reason my opponent supports this proposal is clear: it is a popular position to take. His record is filled with examples of jumping on the bandwagon to gain voter approval." And so on. Of course, what the candidate says may be true of the opponent, and if it is, then it would surely be relevant to the issue of whether the opponent deserves to be elected. But it is not relevant to the issue at hand, the tax reform proposal.

Avoiding the issue may not necessarily be motivated by deceit, as the preceding examples are. It may occur because of unintentional misunderstanding or because of an unconscious slip to something irrelevant. But it is still error, regardless of its innocence. To check your reasoning, look closely at each issue, and ask whether your solution really responds to it. If it doesn't, make it do so.

Overgeneralizing

Overgeneralizing means taking a valid idea and extending it beyond the limits of reasonableness. Here are some examples.

- Women who have abortions are poor and unmarried.
- Politicians are corrupt.

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- Conservative Christians are intolerant.
- Men have trouble expressing their feelings.

Each of these statements could be true at times. That is, we could find examples of poor, unmarried women who have had abortions; corrupt politicians; and so on. Yet, in each case, we could also find examples that do not fit the assertion. That is what makes these statements overgeneralizations. (The fact that your overgeneralizations do not take the most extreme form—stereotypes, which we discussed in Chapter 3—should not make you complacent about correcting them. They still mar your arguments, usually significantly.)

To find overgeneralizations in your arguments, be alert to any idea in which *all* or *none* is stated or *implied*. (That is the case in each of the preceding four examples.) Occasionally, you will find a situation in which *all* or *none* is justified, but in the great majority of cases, critical evaluation will show that it is not. To correct overgeneralizations, decide what level of generalization is appropriate, and modify your statement accordingly. For example, in the four cases discussed, you would consider these possibilities:

Some Many Most All	... women who have abortions are poor and unmarried.
A specific number of	

Some Many Most All	... politicians are corrupt.
Certain types of	

Some Many Most All	... conservative Christians are intolerant.
In certain cultural conditions	

Some Many Most All	... men are incapable of expressing their feelings.
In certain cultural conditions	

Oversimplifying

There is nothing wrong with simplifying a complex reality to understand it better or to communicate it more clearly to others. Teachers simplify all the time, especially in grade school. Simplification is only a problem when it goes too

far: when it goes beyond making complex matters clear and begins to distort them. At that point, it ceases to represent reality and misrepresents it. Such oversimplification is often found in reasoning about causes and effects. Here are three examples of this error.

- The cause of voter dissatisfaction in the 2010 election was high unemployment.
- The American Nazi Party has a beneficial effect on the intellectual life of the country. It reminds people of the constitutional rights of free speech and assembly.
- A return to public executions, shown on prime-time television, would make crime less glamorous and thus, in time, make us a less brutal, more civilized society.

These statements contain an element of truth. Yet they do not fairly or accurately represent the reality described. They focus on one cause or effect as if it were the only one. In fact, there are others, some of them significant.

To find oversimplifications in your arguments, ask what important aspects of the issue your statements ignore. To correct oversimplifications, decide what expression of the matter best reflects the reality without distorting it.

Double Standard

Applying a double standard means judging the same action or point of view differently depending on who performs the action or holds the point of view. It can often be recognized by the use of sharply contrasting terms of description or classification. Thus we may attack a government assistance program as a welfare handout if the money goes to people we don't know or don't identify with but defend it as a necessary subsidy if it goes to our friends. Similarly, if one country crosses another's border with a military force, we may approve the action as a "securing of borders" or condemn it as "naked aggression," depending on our feelings toward the countries involved.

Be careful not to confuse the double standard with the legitimate judgment of cases according to their circumstances. It is never an error to acknowledge real differences. Accordingly, if you find you have judged a particular case differently from other cases of the same kind, look closely at the circumstances. If they warrant different judgments, you have not been guilty of applying a double standard. However, if they do not warrant different judgments—if your reasoning shows partiality toward one side—you have committed the error and should revise your judgment to make it fair.

Shifting the Burden of Proof

This error consists of making an assertion and then demanding that the opposition prove it false. This is an unreasonable demand. The person making the assertion has the burden of supporting it. Though the opposing side may accept the challenge of disproving it, it has no obligation to do so. Suppose, for example, you said to a friend, "There was widespread voter fraud in the last election," your friend disputed you, and you responded, "Unless you can disprove my claim, I am justified in believing it." You have shifted the burden of proof.

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Having made the assertion about voter fraud, you have the obligation to support it. To overcome this error in your arguments, identify all the assertions you have made but not supported, and provide adequate support for them. If you find you cannot support an assertion, withdraw it.

Irrational Appeal

This error bases your position on an unreasonable appeal. The most common forms are the appeal to *common practice* ("Everyone does it"), the appeal to *tradition* ("We mustn't change what is long established"), the appeal to *fear* ("Awful things could happen"), the appeal to *moderation* ("Let's not offend anyone"), and the appeal to *authority* ("We have no business questioning the experts"). Of course, there is nothing necessarily wrong with defending common practice or tradition, warning about dangers, urging moderation, or supporting the views of experts. It is only when these appeals are used as a *substitute* for careful reasoning—when they aim at an audience's emotions rather than their minds—that they are misused. To correct irrational appeals, refocus your argument on the specific merits of your ideas.

ERRORS AFFECTING VALIDITY

Errors affecting validity do not occur within any individual premise or within the conclusion. They occur instead in the reasoning by which the conclusion is drawn from the premises. Therefore, to determine whether an argument is valid or invalid, we must examine the relationship between the premises and the conclusion. The logical principles governing validity are the substance of *formal logic*, the area of logic concerned with the various forms of argument. Since a detailed treatment of formal logic is beyond the scope of this book, we will focus on an essential error that commonly occurs in controversial issues: the *illegitimate conclusion*.

An illegitimate conclusion is one that does not follow logically from the premises preceding it. Before examining an illegitimate conclusion, let's first look at a *legitimate* one.

Anything that shortens people's attention span harms their concentration. Television commercials shorten people's attention span. Therefore, television commercials harm people's concentration.

This conclusion is legitimate because if anything that shortens people's attention span harms concentration, and if television commercials do shorten that span, they therefore must harm people's concentration. Commercials, after all, are a thing, so they fit in the *anything* specified in the first premise. When we are checking for the validity of the reasoning, remember, we are not checking for the truth of the premises or conclusion. That concern is a separate matter. Thus even a ludicrous argument could be technically valid. Here is an example.

Anything that gives people indigestion harms their concentration. Television commercials give people indigestion. Therefore, television commercials harm people's concentration.

Persuading Others

Some people manage to gain support for their views quite readily, even in controversial matters, whereas others meet strong resistance. What is the reason for this difference? Do persuasive people have a special talent that others lack? Or is their success due, instead, to habits and skills they have developed? Although talent is surely a factor, persuasiveness is for the most part *learned* behavior. This chapter shows you how to evaluate your audience, anticipate their objections, and present your ideas to advantage.

Boris Noodnik is just finishing his presentation to the Parent-Teachers' Association meeting: "To summarize my proposal, ladies and gentlemen, every teacher in our school system should make students write a composition of one to three paragraphs every day of the school year and make helpful suggestions for improvement on each paper submitted. This is the only sensible way to have our students become proficient in their use of the written word." He pauses while the audience applauds his presentation and then asks, "Are there any questions?"

A woman in the back of the room raises her hand. Boris acknowledges her, and she stands to speak. "Mr. Noodnik," she begins, "I have done some rough calculating while you were making your presentation. Each teacher in our system has, on the average, 27 students in a class. Figuring an average of 7 minutes to correct a composition (a conservative estimate), it will take each teacher an additional 15 hours a week to correct those papers. Teachers already do most of their planning for class in the evenings and on weekends. Just when do you expect them to find the time to correct all those papers?"

Boris's face reddens. "Uh-h-h, well, u-h-h-h, ma'am," he stammers, "ah, let me see . . . I'll have to check out those figures. I really don't know right this

minute.” Poor Boris. However viable his idea seemed to him, and perhaps to many in the audience, it is very likely dead now.

Although readers’ reactions are less dramatic and less potentially embarrassing than the reaction of a live audience, they are no less real or critical. Readers may not be able to stand up and ask the hard questions in person, but they can and do still *think* them. This is hardly surprising. Persuasive communication asks the audience to replace ideas they know and accept with ideas they have never heard before or ideas they have considered and rejected. In many cases, it also asks that they cooperate in the implementation of the ideas, investing time and money and taking risks.

Persuasion will not occur for you automatically, any more than it did for Boris. And achieving it will take more than thinking proficiency. This does not mean that creative and critical thinking are unimportant; as we noted time and again in previous chapters, they are essential. You must have quality ideas before you are likely to persuade intelligent people. However, producing quality ideas is not enough—you must also assist your audience in *recognizing* the quality of those ideas. To do this, you must

1. Understand why people reject ideas
2. Know the particular audience you wish to persuade
3. Anticipate your audience’s objections
4. Present your ideas to advantage

■ UNDERSTANDING WHY PEOPLE REJECT IDEAS

The more that people’s ideas and beliefs are challenged, the stronger their objections are likely to be. That has been the pattern throughout history. For example, when Nicolaus Copernicus presented his original idea that the Sun, rather than Earth, is the center of the solar system, he was not applauded but scorned. Martin Luther responded to the idea by saying, “This fool wishes to reverse the entire scheme of astronomy.” And John Calvin said mockingly, “Who will venture to place the authority of Copernicus above that of the Holy Spirit?” Thirty-one years later, Copernicus had the deathbed reward of seeing his ideas published—but even then they were not accepted.

When Galileo took up Copernicus’s cause, he fared no better. He was thought to be a madman and would have been executed as a heretic had not good friends in high ecclesiastical offices interceded for him. The price he had to pay for his life to be spared was public renunciation of the idea he knew to be true.

Women scientists of that era—particularly midwives and physicians—faced another peril: being tortured or executed as witches. An estimated 40,000 women were executed for witchcraft during the seventeenth century alone, and the practice continued well into the nineteenth century. For this reason, only the most brilliant women could succeed in the sciences. One example is Maria

Gaetana Agnesi, the gifted eighteenth-century linguist, mathematician, and philanthropist, whose writings were essential to the foundations of integral calculus. Although she was called the “witch of Agnesi” for her mathematical genius, she was fortunate enough not to be persecuted as a witch. To this day, however, her most famous mathematical formula is called the Witch of Agnesi.

Even the most constructive and helpful ideas were rejected at first. When Charles Newbold invented the cast-iron plow, farmers rejected it because they believed it would pollute the soil. When Horace Wells first used gas as an anesthetic to pull teeth, his peers ridiculed him. Joseph Lister’s pioneering of antiseptic surgery was dismissed as needless housekeeping. William Harvey’s discovery of the blood’s circulation was rejected for 20 years and earned him derision, abuse, and the loss of much of his medical practice. Secretary of State William H. Seward’s purchase of Alaska from Russia for *two cents an acre* was considered a mistake and dubbed “Seward’s Folly.” Before Chester Carlson finally found a company that took an interest in his copying machine, known today as the Xerox copier, five years had elapsed and more than 20 companies had rejected his idea. The lesson in all these cases, and thousands of others like them, is that negative reactions to new ideas are predictable.

The reasons that people commonly cite for rejecting ideas are worth remembering because they provide a basis for anticipating future objections:

- The idea is *impractical*.
- The idea is *too expensive*.
- The idea is *illegal*.
- The idea is *immoral*.
- The idea is *inefficient*.
- The idea is *unworkable*.
- The idea will be *disruptive of existing procedures*.
- The idea is *unaesthetic* (that is, ugly or lacking in taste).
- The idea *challenges accepted beliefs*.
- The idea is *unfair* (that is, it favors one side of the dispute without any evidentiary basis).

KNOWING YOUR AUDIENCE

The purpose of this step is to determine what your audience knows about your subject, what they don’t know, and most importantly, what opinions they hold. Their opinions have very likely been shaped by a variety of factors, including age, gender, educational background, religion, income, race, nationality, and business or professional affiliation. You will seldom be able to learn all these details about an audience, but it is worth the effort to learn as many as you can. Even more important, you should consider the variety of views your audience might take of the issue and determine which of those views are most probable. The following questions provide a helpful checklist.

Is Your Audience Likely to Have Been Influenced by Popular Misconceptions? This question does not suggest that your audience is stupid or uneducated. As we saw in Chapter 1, there is a great deal of confusion today about such matters as free will, truth, knowledge, opinion, and morality. Many intelligent and educated people have fallen victim to ideas and attitudes that cripple their creative and critical faculties. In many cases, your audience will appreciate your insights only if you first help them get beyond their misconceptions.

Is Your Audience's Perspective Likely to Be Narrow? This question directs you to consider how your audience's tendency to mine-is-better thinking, face saving, resistance to change, conformity, stereotyping, and self-deception may interfere with their comprehension of your views. A clue to the way those tendencies are likely to influence your audience on a particular problem or issue is the way they have influenced *you* in the past. (The more honest you are with yourself about your own occasional irrationality, the more sensitive you will be to your audience's irrationality.)

Is Your Audience Likely to Be Unobservant About Important Considerations? We noted in Chapter 6 that most people give up their curiosity at a rather early age and never fully regain it. Chances are your own experience with the Chapter 6 applications and the later applications in this book have made you more aware of the difficulty of developing curiosity, even when you make a conscious and sustained effort to do so. If your audience has not made such an effort, their observation may be careless, and so they may have missed many of the subtleties of the issue you are speaking or writing about. By considering what they are most likely to have missed, you can determine what you need to explain more fully.

Is Your Audience's Understanding of the Problem or Issue Likely to Be as Clear as Yours? We have seen how many people rush into a problem with only a vague notion of exactly what the problem is. You have learned the value of expressing the problem or issue in a number of ways and then selecting the best and most promising expression of it. Many members of your audience may not have done so. And if they haven't, they won't realize that your view of it is the best one. It may help open them to persuasion if you discuss the various views of the problem or at least explain your view and its advantage over other views.

Is Your Audience Likely to Be Familiar with the Facts You Found in Your Investigation? It is easy to forget that once you have investigated a problem or issue, particularly a complex one, you have a tremendous advantage over those who have not investigated it. Their ignorance of the facts can be an obstacle to accepting your solution. By learning what facts and interpretations they are likely to be unaware of, you are identifying matters that deserve emphasis in your writing or speaking.

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Does Your Audience Appreciate the Various Solutions Possible? Have They Considered Them Critically? Again, your effort to produce as many solutions as possible to the problem or issue sets you apart from most of your audience. The best way for them to appreciate your solution's soundness is to realize that other solutions are deficient. As long as they remain convinced that some inferior solution will work, they are not likely to be impressed by your solution. But if you show them how the others *don't* work, that their imperfections and complications are too great to overcome easily, you will have helped them to accept yours.

ANTICIPATING YOUR AUDIENCE'S OBJECTIONS

Your aim in anticipating others' reactions is twofold. First, you want to identify the *valid* objections others may raise to your idea so that you can modify the idea and eliminate the objections. Second, you want to identify the *invalid* objections so that you can respond to them in your presentation.

Two techniques are especially useful in anticipating an audience's reaction: *brainstorming* and *imaginary dialogue*.

The Brainstorming Technique

This technique is an adaptation of the third stage of the creative process: the production of ideas. The aim here is to think of as many possible objections to your solution as you can. Here's how to use this technique. Look back at the list of common negative reactions, and use them as a checklist to guide your brainstorming. In other words, first ask whether anyone might find your solution *impractical*, and then list as many possibilities as you can think of; next, ask in what ways people might find your solution *too expensive*, and list the possible ways; and so on, proceeding through all the common reactions.

Caution is in order here. Whenever you use the brainstorming technique, be sure to withhold all judgment so that the flow of ideas isn't interrupted. Keep in mind that extended effort will always reward you: some of the most helpful reactions will not occur to you until you have purged your mind of obvious and familiar ideas. When you've completed brainstorming all 11 common reactions, then you can decide which possibilities are most likely to occur. The better you have gotten to know your audience, the easier this will be.

The Imaginary-Dialogue Technique

As the name implies, this approach consists of imagining yourself discussing your solution with someone who objects to it. For the best results, think of a specific person, preferably someone you know quite well and are sure would disagree with you. Be sure to put aside any feelings of awkwardness or embarrassment while using this technique. If you find yourself thinking, "What would people think of my talking to myself this way?" remember that no one need know and that you are not doing it out of compulsion but as a deliberate strategy to aid your thinking.

Here is an example of how the imaginary-dialogue technique works. You will recall that in Chapter 2 (pages 42–43), we discussed the case of Ralph, the

father who befriended the coaches and used that friendship to gain a special advantage for his son Mark over the other players. We decided that Ralph behaved immorally—that though his actions achieved some good (the development of his son's skills), they caused more harm: they deprived other players of the opportunity to develop their basketball skills, probably caused those players to become bitter, and undoubtedly caused Mark to believe that it was acceptable to disregard other people's rights and needs to achieve his own goals.

If you were addressing the larger issue this case raises—the issue of at what point a father's helping his son or daughter athletically slips from morally acceptable into morally unacceptable behavior—and attempting to resolve the issue by offering guidelines for parents to follow, you would want to anticipate negative reactions. And if you wanted to use the imaginary-dialogue technique to help stimulate your speculation, what better person would there be to talk with than Ralph himself? Surely, he would not look on your disposition of his case favorably.

Just how would you conduct the dialogue in your imagination? First, you'd make an assertion expressing your view. Then you'd put yourself in his position, enter his frame of mind, and answer for him. Next, you'd express a second view, construct the answer he'd probably give to it, proceed to a third view, and so on. The resulting dialogue might go this way.

YOU: Your actions were immoral, Ralph.

YOU-AS-RALPH: That's ridiculous. All I did was help my boy.

YOU: But you developed those friendships with the coaches so that you could use them later. That's dishonest.

YOU-AS-RALPH: You mean I have no right to choose my friends, that I have to avoid friendships with coaches if my boy is an athlete?

YOU: Not at all. There's a difference between developing a friendship because you like someone and developing it to use the person for your son's advantage.

YOU-AS-RALPH: It's a rough world out there. A boy needs an advantage to get ahead.

YOU: But you gained that advantage at other people's expense. Look at what you did to the other boys on the team.

YOU-AS-RALPH: I can't be concerned with them as much as I am concerned about my own son. That's unrealistic.

YOU: That's true enough. But we're not talking about your being concerned or not concerned. We're talking about specific actions you took, deliberately, that hurt them.

YOU-AS-RALPH: But they didn't have the interest or the talent my Mark had.

YOU: That was not for you to judge. It was the coaches' decision to make. Besides, if you were so sure of your son's talent, there would have been no need for you to gain an unfair advantage for him. His talent would have given him all the advantage he needed.

YOU-AS-RALPH: I did it because I love my son. Is it immoral to help your own flesh and blood?

YOU: Is it an act of love to teach your son that the rules of decency and fairness don't apply where his desires are involved, that he can do whatever he wants to because he's special?

The dialogue shows the benefit of this approach to your thinking. Used properly, it not only reveals the negative reactions you are likely to get from others but also helps you develop better responses to shallow or uninformed reactions. In actual practice, however, you needn't detail your own responses while you are conducting the dialogue. It is sufficient to contribute just enough to move the dialogue along, to prod the "other person" to respond. The most important part of the dialogue, after all, is not your views but the other person's thoughts and feelings about them. The more you are able to focus on the other person's reactions, the more you will gain the insights necessary to make an effective presentation.

There is no limit to the number of imaginary dialogues you can conduct. If your audience is complex and you have reason to expect a variety of reactions, you should consider doing numerous dialogues.

One final point: After you become used to the imaginary-dialogue technique and develop your confidence in using it, you will notice that a dialogue will often gather enough momentum to require little conscious direction from you. It will, in a sense, direct itself. When this happens, don't worry. It is a good sign, an indication that you have fully engaged your imagination and given yourself to the intellectual exchange with your imaginary opponent. Let the dialogue continue; what develops will usually be very useful. If it begins to turn away from the important concerns involved, just steer it back again.

PRESENTING YOUR IDEAS TO ADVANTAGE

No doubt you have noticed that the way people are approached in one-on-one situations often influences their reactions, sometimes strongly. For example, "Why did you behave so stupidly?" will get a very different reaction than "What went wrong?" Similarly, a courteous request is more effective than a rude demand, and emotional restraint is more favorably received than a wild outburst. The same principle applies in the presentation of ideas both in speaking and in writing. The following guidelines will ensure that your presentations invite acceptance rather than rejection of your ideas.

Respect Your Audience

Whenever there is strong disagreement over ideas, particularly controversial ideas, there is also heightened potential for ill will. Once we feel strongly about a point of view, we can easily conclude that those who disagree with us are stupid

or villainous or both. That kind of attitude not only poisons debate but also makes persuasion difficult or impossible.

Since people are not likely to be persuaded by someone who shows disrespect for them, respecting your audience is not merely a matter of courtesy or good sportsmanship; it is a psychological imperative. You may be inclined to believe that you don't really have to respect your audience, that you can get by with pretending. But that is a mistake. Your own experience surely demonstrates that respect and disrespect are difficult to hide. Your manner or expression will usually betray strong feelings no matter how you try to hide it. Attitudes tend to show through what you say and the way you say it.

What can you do to make yourself feel respect for people whose views you disagree with? First, you can remember to distinguish between the idea and the person. It is possible for a decent, admirable person to have a foolish idea or for a disreputable person to have a sound one. Second, in the case of a controversial issue, you can remind yourself that disagreement is more likely to reflect the complexity of the issue than any shortcoming in those who differ with you.

Begin with the Familiar

First impressions may not be very reliable, but they are generally quite strong and therefore difficult to overcome. If you begin your presentation on a point your audience is unfamiliar with or opposed to, they will be wary or opposed throughout your presentation. At best, it will be difficult to change their reaction. That is why it makes sense to begin on a point they are familiar with, if possible a point on which they agree with you. This approach puts the psychology of first impressions to work for you instead of against you.

Beginning on a familiar point does not, however, mean that you should be dishonest and hide your disagreement. You are merely preparing your audience for the point of disagreement—helping them to see your solution more objectively than they otherwise would—and not avoiding disagreement. There is nothing deceitful about this approach, nor does it require that you *manufacture* a point of agreement. If you look carefully, you will usually be able to find at least several significant points of agreement, even when your basic views are sharply divergent. As a last resort, if you can't find anything else that you and your audience are likely to agree on, you can begin by stating the significance of the issue and pointing out that it, like all controversial issues, tends to fan emotions more than is helpful for debate.

Select the Most Appropriate Tone

The concept of tone is a subtle one. Tone may be defined as the mood or attitude suggested by a presentation. It is therefore closely related to the idea of respecting your audience. Certain tones are always inappropriate in persuasive writing and speaking. The now-hear-this tone, for example, goes beyond being authoritative to being *authoritarian* and suggests that the presenter is forcing his or her views on the audience. Another inappropriate tone is the only-an-idiot-would-think-as-you-do tone, characterized by mocking and sarcastic remarks. Still another inappropriate tone is the you've-got-to-agree-right-now-because-there's-no-time-left tone. Serious problems and issues demand careful consideration; it is irresponsible to make any important decision impulsively. Demanding an instant

decision from your audience, therefore, only makes them suspicious of your motives. "If the writer [or speaker] really has a solid case," they reason, "why doesn't he or she want to give me time to examine it carefully and ponder it?"

The safest and most appropriate tone in persuasive writing and speaking is the calm, objective, courteous tone. This will reflect quiet competency and a sense of balance toward the issue, as well as a proper view of your audience.

Emphasize the Evidence for Your View

Some writers and speakers believe that the most important factor in persuasion is the clear and forceful statement of their viewpoint. They are mistaken. The most important factor is *the evidence on which their viewpoint rests*. The reason is simple. Evidence alone enables the audience to decide whether an idea is deep or shallow, wise or foolish, valid or invalid. To state your viewpoint is to say what you believe; to provide evidence is to *demonstrate* that what you say is worthy of other people's endorsement.

The amount and kind of evidence you need will depend on the particular idea you are defending and the type of investigation you conducted. In one case, the evidence may consist of eyewitness testimony and published or unpublished reports. In another, it may include expert opinion, experiment, statistics, survey, observational study, research review, and your own experience or that of people you know. (For a discussion of each of these, refer back to Chapter 8.) But it is safe to say that for each sentence presenting your judgment or conclusion, you ought to have at least two or three supporting sentences.

In all but the most restricted presentations, in which you are *required* to be brief, you should consider including all the significant results of your investigation of the issue. In addition to presenting those results, explain what they mean and why they are important. Where the data include your experiences and observations, try to re-create the experiences and observations for your audience. Make them see as you saw, feel as you felt. If they have never had similar experiences, this will be difficult, so aim for vividness wherever possible and try to convey a sense of the immediacy and drama of the original event. In addition, make your interpretation clear and reasonable.

Answer All Significant Objections

You may think that if you identify any valid objections to your solution and modify your solution to eliminate them, you have done enough. That view is incorrect. Even invalid objections may act as obstacles. Therefore, you must deal with all objections directly and thoroughly. Do this subtly and smoothly, without reminding your audience that it is their objection and without interrupting the flow of your presentation.

THE IMPORTANCE OF TIMING

There is one additional element in building a persuasive case. It is not, properly speaking, a guideline for preparing your presentation. Nevertheless, it does have a major bearing on your presentation's effectiveness. This element is your *timing*

in presenting your case. Many an insight has been defeated by simply being presented at the wrong time. People's attention, interest, and openness to ideas are not constant. At some times they are greater than at others. It is not always possible to appraise an audience's state of mind, particularly when the audience is large and complex. Nevertheless, you should be aware of the most favorable conditions for persuasion and, whenever possible, time your presentation accordingly. Those conditions are as follows:

1. The audience should recognize that the problem or issue exists and be aware of its importance. A controversial issue should be currently in the news or at least have been there recently. If you have reason to believe the audience is not aware of the problem, use the first part of your presentation to create that awareness.
2. The audience should be relatively free to address your idea. That is, they should have no other pressing concerns commanding their attention.
3. The audience should have no commitment to a competing solution. It is not likely they will be interested in considering your solution to a problem or issue if they have endorsed another, competing solution. In such cases, your wisest course of action is to withhold presentation until the competing idea proves unworkable.



WARM-UP EXERCISES

- 14.1** You have just heard a friend make the following statement. Decide whether his or her reasoning is sound or unsound. Then write a paragraph or two explaining your judgment.

I would vote this year if I could be reasonably sure any of the candidates would do a good job. But I have no way to be sure, so it's a waste of time to vote.

- 14.2** Follow the directions for Exercise 14.1.

Physical fitness is very fashionable today. Yet the great philosophers agree that the mind is more important than the body. So the physical fitness movement should be opposed.

- 14.3** Follow the directions for Exercise 14.1.

No honest lawyer would agree to represent a person accused of a crime because if the person is innocent, he doesn't need defending, and if he is guilty, he doesn't deserve defending.