50 Activities for Developing Critical Thinking Skills

Dr. Marlene Caroselli

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Critical Thinking: "What" and "Why"

The Analysis Factor

Today's employee is bombarded with organizational oxymorons. In this age of paradox, we are expected to keep our heads above water shored by contradiction. Learning is a life-long process, yet we are forced to absorb it in machine-gun bursts. Advice broken down into sound bites is offered to us constantly, yet we are asked instead to draw big pictures, envision far-off, uncertain futures, and operate from strategic, well-planned positions. We absorb facts coming at us faster than the speed of light, yet we struggle for the clarity and creativity critical if we are to make wise use of this new knowledge. And we know one thing with certainty: We have to do more with less, and we must do it in far less time.

Continuous learning and the imaginative application of it are needed if the organization itself is to continue. Imaginative thought, described by Tom Peters as the "only source of real value in the new economy," originates with well-informed employees who employ critical thinking to translate knowledge into competitive advantage. By critical thinking, we refer to thought processes that are quick, accurate, and assumption-free. (They are often creative as well.) Such processes help us view, with a critical eye, the problems, decisions, and situations that require appropriate reaction and action.

"Critical," after all, is derived from the Greek word *krisis,* which means "to separate." When life presents us with turning points, when we are faced with situations that require decisive action, when we need plans that will yield positive consequences, then we also need critical thinking. Such thinking allows us to separate ourselves from the crisis that can suck us into disaster and permits us, instead, to forge new pathways to success.

Non-traditional thinking, grounded in traditional, logical thought, enables us to determine exactly what the crisis is and how to move beyond it. Let us use this true story involving a medical crisis as an example.

A middle-aged man called his doctor in the middle of the night. He described the pains his wife was having, diagnosed them as appendicitis (which he himself had experienced), and told the doctor he was bringing the woman into emergency.

The doctor, however, was much less concerned. He diagnosed the problem as stomach cramps, advised the man to give her ginger ale, and suggested that an appointment be made in the morning for an office visit. The man, fortunately, persisted.

Not used to having his medical judgment questioned, the doctor spoke authoritatively: "It *cannot* be her appendix," he declared. "I distinctly remember removing your wife's appendix eight years ago. And I have never heard of a woman having a second appendix!"

Before hanging up and driving his wife to the hospital, the man shot back, "Did you ever hear of a man having a second wife?"

Had the doctor thought more critically, he would have realized the flaws in his logic. He would have used the basic precept on which rational thought is based: The Principle of Identity. This principle would have led him to accept the logic of the statement that no woman can have two appendixes, and then to question the identity of the woman. Had he done so, he would have not only accepted his own statement as true, but would have realized that a second woman could have that second appendix.

Another principle, The Principle of Excluded Middles, asserts that a statement is either true or false—it cannot be both. Thinking about "excluded middles" will help us examine the statements we make and the attitudes we possess, the very fixedness of which can prevent us from solving problems and actually create new ones. A statement like "Leaders such as Adolf Hitler effect positive change" cannot be simultaneously both true and false. This statement is actually predicated on two separate premises, the second of which is questionable:

- 1. Leaders effect positive change.
- 2. Adolf Hitler was a leader.

Critical thinking about these two statements requires us to define what is meant by the word "leader" and then to determine if the example of Hitler falls within the established criteria. Critical thinking also requires us to clarify terms that not only confuse but that may create expensive misunderstandings. This sentence, for example, has two possible meanings:

"Your consultant may not charge a fee for his or her location services."

The phrase "may not" could mean "is not permitted to." It could also mean, however, "may not opt to charge a fee, although he or she *could* charge one if he or she wished to."

The Creativity Factor

More than logical, linear thought is required when change slams us into the wall labeled "no established precedent." Non-traditional thinking is required to create the non-traditional systems needed for the non-typical situations that present themselves with ever-increasing rapidity. There are times when breakthrough thinking is the only force that can move us beyond the mundane and into the rarefied stratum of true innovation. With logical thought, we analyze what is there. With creative thought, we contemplate what *isn't* there. "Vision" was defined by Jonathan Swift as "the art of seeing the invisible."

Imagination is what takes vision out of its tunnel. And once freed from a confining place, vision can become an innovation-driven reality. Creative thought is not the private domain of the rare few who are able to see something new when others look at something old. Rather, each of us has an unlimited reservoir of creative potential. Unfortunately, as we mature, we manage to surrender our remarkable ability to envision, an ability Einstein himself regarded as more important than knowledge.

To illustrate, a famous longitudinal study of creative potential followed a group of students over a 17-year period. The *same test* was administered each time to these students. When the students were five years old, 92% of them were found to be "very creative." By age ten, that figure had dropped to 37%. When the children were fifteen, they were tested again. At this age, the number of children deemed "very creative" had dropped to 12%. Finally, the same students were tested in college. How many were found to be "very creative" at this age? Only 2%!

Critical thinkers use both types of thinking, depending on the demands of the situation. The ideal is to be "lateralized" in your thought processes, meaning that you can employ either type of cognition equally well.

Creative thinkers are able to leave behind perfectly logical answers that, unfortunately, are not solving the problems. Instead of persevering, trying to force-fit a round solution into a square problem, such thinkers are willing to explore a different approach. Creative thinkers are risk-takers.

A simple exercise will illustrate what we mean. The following combination of letters represents a sentence from which one particular vowel has been removed. If you can figure out what that vowel is and re-insert it eleven times, in eleven different places, you will be able to determine what the sentence is saying.

VRYFINXMP LARXCDSW HATWXPCT

Most problem-solvers soon realize the missing letter is "e," probably because the word "very" seems to jump out at them. They work very hard to construct the sentence with "very" as its first word. "Very" is *not* the first word, however; "every" is. When conviction and determination prevent us from exploring alternative options, we limit our potential for thinking critically. (The whole sentence reads, "Every fine exemplar exceeds what we expect.")

The Speed Factor

Caught in the middle of a veritable knowledge explosion, we find, more than ever before, that (s)he who hesitates may indeed be lost. With amazing frequency, individuals are showing a reluctance, for example, to use so-called snail-mail to transmit their thoughts when electronic mail can connect us with people halfway around the world in mere seconds. This reluctance has its parallel in organizations wary of employing those whose thinking processes move at a snail's pace.

Management guru Tom Peters likes to point out that in 1985, a typical memory chip held a million bits of information. In less than a decade, the number had increased to sixteen million. Projections for the year 2030 include 16 terabits or 16 *trillion* bits of information. As he in his inimitably down-to-earth vernacular expresses it, "We ain't seen nothin' yet."

Speed in and of itself is a necessary, but not sufficient, condition for critical thought. It must be supplemented with either creative or analytical thought—and sometimes with both. Hasty reactions unaccompanied by deliberate thought can have disastrous results at both personal and corporate levels.

The Benefits of Critical Thinking

When crises arise in our personal or professional lives, we are often required to respond quickly. The quick response, however, is always predicated on accurately identifying the problem. Such attention to the input enhances the likelihood that outputs will be positive. This focus on improved outcomes that are faster, better, cheaper and of higher quality is what continuous improvement is all about.

Management studies underscore the need to develop our collective smarts. Consider the following:

A recent report by Kepner-Tregoe, Inc. found two-thirds of managers and hourly workers estimating that less than 50% of their collective brainpower was being used by the organizations for which they worked.

Introduction

In the Kepner-Tregoe study cited above, only 8% of managers and 7% of hourly workers would compare their organizational thinking to a Ferrari, in terms of quality and speed. However, there is a renewed interest in the subject of learning today. Individuals, teams, and whole institutions are devoting themselves to sharpening cerebral skills. The need to think critically is truly a valuable commodity. In some respects, it is a necessity.

50 Activities for Developing Critical Thinking Skills is designed for decision-makers and problem-solvers who don't always have the luxury of advance preparation.

Given sufficient lead time, most of us could prepare responses or presentations reflective of our abilities, and come up with replies and responses worthy of our backgrounds and training. But what happens when we are called upon to make a statement "on the spot," to make a decision without having all the facts, to solve a problem that will only be exacerbated by delay? Often, we become paralyzed by the urgency of the moment. Our thought processes stop. Our organizational abilities abandon us. But the ability to think quickly and speak quickly formulated thoughts is not an innate ability. *It can be developed*. The exercises in this book parallel Lee lacocca's advice to would-be executives: "The best thing you can do for your career is learn to think on your feet."

The collection included in **50 Activities for Developing Critical Thinking Skills** also emphasizes creative thinking, and stresses communication skills in keeping with recent research findings. Consultant Andrew Sherwood considers communication and financial knowledge the most valuable of all workplace skills.

Running through the fabric of all these activities, though, are problem-solving threads. Dr. Roger Flax surveyed 1,000 executives and found that the skills most needed among employees were problem-solving, writing, and time management, in that order. It's been said that at the most basic level, everything comes together; it is all intellectually integrated, if we regard life as a series of problems to be solved. Quick thinking, creative thinking, and problem-solving skills *all* help us to think critically.

Format of the Book

The three most important aspects of critical thinking—quick thinking, creative thinking, and analytical thinking—are covered by a series of skill-building exercises.

Quick Thinking. What enables one person to respond to an unexpected prompt fluidly and flawlessly, while another person stumbles and mumbles and fumbles for words? Often the distinguishing factor is that one person does not practice thinking on one's feet, while another person does. The practice exercises in this section are useful, but they are also entertaining. They will develop critical thinking skills—especially important in those situations that force us to keep our wits about us.

Creative Thinking. Unfortunately, many perfectly able problem-solvers damn themselves by declaring that they are not creative and should not be expected to come up with creative solutions. The truth is that we all have creative potential. We may have allowed the potential to be submerged, but it lies within us, nonetheless. The exercises in this section show participants how to strip away layers of self-doubt, self-criticism, and self-cynicism in order to re-discover their creative cores.

Analytical Thinking. Despite the plethora of problems confronting us on a daily basis, few of us have had formal training in problem-solving. The exercises in this section employ tools

for solving problems logically (based on the scientific approach of defining the problem, generating a list of possible solutions, selecting a solution, and then implementing, evaluating, and making adjustments as needed). The Five-Why tool will force us as problem-solvers to uncover the root cause of the problem, which will lead to a solution that permits expedient and results-oriented action.

For Quick Reference

This matrix sequences the activities as you will encounter them in each of the three sections, specifies the amount of time required for each of the three sections, and specifies the amount of time required for each activity, in terms of minutes. The basic construct of the activities is depicted as well: Individual assignments call for reflection and self-assessments; Tasks for Pairs require participants to work as partners. There are also Small Group exercises, in which three or four participants tackle a problem or challenge together. Finally, there are Large Group activities, asking six or more participants to collaborate.

The Letter "P" designates the need for advance preparation, which is minimal in all cases. The typical advance preparation involves the duplication of materials and the arrangement of seats in ways that are most conducive to participant involvement.

Time (min.)	Exercise	Individual	Pair	Small Group	Large Group
20	The Name Game				√P
15	Attending to Attention			√P	
25	Rhymed Reductions				√P
15	The Endless Question		√P		
20	The Questionable Question			1	
15	The K-W-I-C Technique	√P			
15	Verbal Velocity				1
20	On a Roll with Roles			√P	
15	Juxtaposed Pairs			√P	
25	Presidential Pairs				√P
20	The Umbrage Not Taken		√P		
5	If the Hat Fits	√P			
20	Brainstorming/Brainsqueezing	√P			
10	Perceptual Shifts	√P			
15	Table Turning			√P	
25	Organizational Oxymorons			√P	
25	Stratification			√P	

Quick Thinking

Introduction

Creative Thinking

Time (min.)	Exercise	Individual	Pair	Small Group	Large Group
15	Particular Virtues				√P
20	Per Mission				✓
15	Perspicacious Perspectives	1			
15	Turnarounds			√P	
20	Peerless Recognition			√P	
15	(Finger) Food for Thought		√P		
15	Try! Umph!			√P	
25	Left is Right. So is Right.		√P		
25	Ms. Matches and Mr. Matches	√P			
20	Cre8—GetN2It			√P	
15	Think Outside the Locks				√P
15	Thinking Is an Art	√P			
15	A Kin to Kinesthesia			√P	
10	Low and High Logos			√P	
15	Blues on Parade		√P		
20	Scrambled Pegs		√P		
25	Ban Banalogies			√P	

Analytical Thinking

Time (min.)	Exercise	Individual	Pair	Small Group	Large Group
35	Crisis Critiques			√P	
25	Trend-Spotters			√P	
30	The Triple-A Approach				√P
15	"Meta" for You			\checkmark	
20	A Foolery of Fun		√P		
5+	Whisps and Whisper				√P
20	Patterned Organization		√P		
15	Pro 'n' Con'd				√P
25	Direct Responses				√P
20	What's on First				√P
20	In Your Sights				\checkmark
20	Giving Problems a Why'd Berth				√P
15	Leaning Toward Lao-Tzu			1	
25	Resource-Full			√P	
15	Living Problems, Lively Solutions			1	
25	Mother Necessity, Father Time		\checkmark		

Format of the Exercises

Each activity begins with an *Overview* or brief explanation of what the activity entails and its significance for critical thinkers.

This is followed by the *Objective*, which is written as an answer to the question, "What does this activity do?" Objectives are typically written from the facilitator's or the participant's perspective, but we have chosen to write these as clear statements of purpose.

The *Supplies* listed in the third entry are standard supplies for adult learning situations, inexpensive and readily available in most training rooms.

The *Time* listed is an approximation; it may vary according to the number of participants and their levels of expertise. Allow additional time for optional extended activities (designed to reinforce key points), or when using the debriefing questions that appear at the end of each activity. The activities can be expanded to considerably longer periods when these two optional elements are built in.

Complicated or excessive *Advance Preparations* sometimes discourage a facilitator from using specific activities. For this reason, activities have deliberately been kept simple and user-friendly.

Introduction

The *Participants/Applications* section provides information on the ideal number of participants and the most appropriate times and places for the activity within the instructional sequence.

The actual lessons begin with an *Introduction to Concept*. These mini-lectures contain background information that permits easy transitions to the concepts being presented. They contain the text the facilitator can use or paraphrase to introduce the lesson. Examples are provided throughout the Introductions when illustrations are required.

The *Procedure* is a sequential listing of the steps to be followed as the activity is conducted. As simply as possible, the facilitator is given information essential to each exercise in order to maximize the effectiveness of the instructions.

Included in the *Procedure* are suggestions for *Extending the Activity*. These will help reinforce the concept being presented or the skill being reinforced, and can be used immediately following the activity or at a later time as a review or refresher exercise.

Workplace Connections are suggestions for extending the learning beyond the classroom. They encourage the facilitator and the participant to apply the lessons learned to other situations and expand upon the basic concepts presented.

Questions for Further Consideration have been included at the end of each activity in order to strengthen the application between training and the actual work that attendees do when they return to their offices or workplaces. The questions can be asked by the facilitator before the session begins (the list could be sent to attendees several days prior to the start of the course), during the session, or at the end of the session as a means of debriefing and achieving closure. Ideally attendees will continue to ask and answer these questions long after the training program itself has concluded. Three distinct groups of people within any organization will benefit from **50 Activities for Developing Critical Thinking Skills:**

- 1. Trainers will enrich their presentations by including fast-paced, interactive exercises that stimulate both thought and group cohesiveness, regardless of the topic of the meeting or lecture.
- 2. Learners will benefit from exposure to a wide array of strategies for framing problems and formulating solutions.
- 3. Organizations will profit because improved thinking on the part of employees always leads to improved contributions. Intellectual capital that is not capitalized on represents the losses to which Dr. W. Edwards Deming refers: "The greatest losses are unknown and unknowable."

Adaptability of 50 Activities for Developing Critical Thinking Skills

Although this book was designed with the corporate trainer/facilitator in mind, the activities lend themselves to any classroom setting (from academic settings to the adult training programs offered by public and private businesses). We encourage you to share them with others, whether they sit before you as learners or beside you as co-workers.

To paraphrase Thomas Mann: "The activity, even the most challenging activity, brings us together. It is silence that isolates." I first alluded to the need for verbal connectedness nearly twenty years ago, when I left education for a new life and a new career on the West Coast. I wrote then in *The New York State English Record*, "Those of us who are leaving education, temporarily or permanently, may feel a need to break the 'chain reaction' of which Neruda speaks in *Goodbyes:*

I spread myself, no question; I turned over whole lives, changed skin, lamps, and hates, it was something I had to do, not by law or whim, more of a chain reaction..."

This collection was also something I had to do. It permits me to say "Hello" again.

#48: Resource-full

Overview:	After exposure to two interesting problems, participants will employ the Force-Field Analysis to focus their thinking on resources that could be tapped in the process of solving a given problem.
Objective:	To develop the use of analytical thinking via a structured format.
Supplies:	FlipchartMarking pens
Time:	Approximately 25 minutes
Advance Preparation:	Draw the Force Field Analysis (as shown in step 4 of the procedure) on the flipchart but keep it covered until the appropriate time.
Participants/ Application:	This exercise works with any size group at any point when a cerebral energizer is needed. The exercise can be used to begin a session if a question like this is posed to the group: "What do you envision as the ideal state of affairs as far as [name topic of course you are facilitating] is concerned?" The analysis required by the Force Field Tool can also be related to various discussions that arise during the course of the day. If used as an end-of-session exercise, the question for the group would be, "Where do we go from here?" This question will lead to the broad division of forces (both restraining and driving) that will help participants achieve an ideal state.

Introduction to Concept:

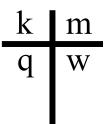
Often, we fail to find the solutions we need because we fail to use the resources we have. We wear blinders, it seems, that prevent us from using what is right in front of us or right inside of us. Or we impose imaginary limits upon ourselves and assume that we are not allowed to proceed in a particular fashion. In truth, though, there are fewer rules or impediments than we think there are.

A good example of how available resources aren't always used to solve an important problem is this one involving a creative engineering class at M.I.T. The instructor had placed two ping-pong balls at the bottom of a metal cylinder, which was bolted to the floor of the science lab. The cylinder was about seven inches wide and about five feet high. The students had one full hour to remove the ping-pong balls from the cylinder. They could not leave the room but were free to use anything in the room. The professor encouraged them to work together, reminding them that if they found a solution, they would all pass the final exam and if they did not, they would all fail. They all failed. Had you been in that room, how would you have solved the problem? [Pause. Elicit solutions.]

Procedure:

 The answer to the M.I.T. problem is "water," which students could have taken from the faucets in order to float the balls to the top. After challenging the class with the M.I.T. problem, ask participants to solve this next problem. [Note: It is important to set up this problem by using a colored magic marker to draw the lines and a different color to draw the letters.

In the following diagram, which letter does not belong?



- 2. Call on various participants to explain their answers and then give the correct one: The letter "t," which most people don't even "see," is out of place because it is bigger, thicker, and of a different color than the other letters.
- 3. Psychologist Kurt Lewin devised a problem-solving tool that asks us to consider the current state of affairs and to juxtapose it with an ideal state of affairs. Having done that, we now consider what driving forces (indicated by a plus sign) will help us achieve the idealized state by using existing resources. Next, we think about the restraining forces (depicted by a minus sign) that may be preventing us from achieving the desired conditions.
- 4. Continue with this mini-lecture:

The Force Field Analysis is depicted as a large "T," as you can see here. [Show diagram on flipchart.] It's a valuable tool for analyzing a problem, ascertaining its causes, and evaluating the resources available for achieving the desired effect. An example of a problem that might be subject to such analysis is the illiteracy rate in America—1 out of 5 adults is functionally illiterate. That is the current status; ideally, there would be no such thing as illiteracy. The next step involves asking what forces could be used to bring us to the ideal state. Finally, we would consider what forces are causing the rate to be so high or keeping us from reaching the idea. By reviewing the two columns, we can next decide the course of action that should be pursued.

#48: Resource-full

Current state: Ideal state:	20% illitera cy 100% litera cy	
Driving	Forces (+)	Restraining Forces (-)
government intervention volunteer program public service ads athletes as mentors involvement of business community		busy lives too much television high dropout rates single parent homes immigration

- 5. Divide the class into small groups of four or five and give each team a sheet of chart paper. Have each group identify a problem at the top of the chart paper and report its current and ideal states. The problem could be one currently facing them as businesspeople or us all as a society.
- 6. Give each group another group's chart paper and ask members to list both the Driving and the Restraining forces for the problem listed.
- 7. After about 15 minutes, return the papers to the original groups and ask them to add further Driving and Restraining forces and then to select the one force (in either column) that—if they could direct their energies to it—they think could most effect the ideal solution.
- 8. Call on a spokesperson from each team to report on their selection.

Extending the Activity:

- 1. Have participants interview one another to learn what special talents/knowledge/abilities they have. Keep a classroom or corporate list of these resources and draw upon various individuals at various times for various projects.
- 2. Periodically do a brief force field analysis of issues raised by participants that relate to the subject matter of the course.
- 3. Begin the class with a large force field analysis addressing this issue: "How can we maximize the investment in training, after the training?" The current research is discouraging: Less than half of participants in training programs return to work and effect changes based on the new learning they have acquired. The ideal, of course, would be to have every participant put to use the new skills/concepts they acquired immediately after their return to the workplace.
- 4. Begin a collection of instances when slavish adherence to rules results in loss to an individual or organization. For example, after transferring to a new school in Seattle, a youngster asked his parents if he could go back to his old school. The reason for his request: The new school did not permit boys to work in the library. The no-boys rule meant considerable intellectual loss for the new school because... the fourth-grader who returned to View Ridge was none other than Bill Gates!

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Workplace Connections:

- 1. If participants have not been asked by their supervisors, "What is the greatest contribution you can make to this organization?" encourage them to at least ask the question of co-workers or team members with whom they work.
- 2. We sometimes overlook available resources because we have not tapped the wealth of historical precedents. Suggest that participants study what has gone before in order to accomplish what is yet to be. In other words, what has been done in the past that might facilitate the solutions currently being sought or implemented?

Questions for Further Consideration:

- 1. What rules do you feel should be changed?
- 2. What do you think Tom Peters means when he says, "If you have gone a whole week without being disobedient, you are doing yourself and your organization a disservice?"
- 3. What resources—human and other—remain untapped in your organization?
- 4. Do you agree with author James Fixx, who asserts, "In solving puzzles, a self-assured attitude is half the battle?"
- 5. Kurt Lewin, originator of the Force Field Analysis method, has a model of change that calls for "Thawing," "Changing," and "Refreezing." Assume you wanted to make some positive change in the workplace. How, what, where, when, and possibly who would you thaw, change, and refreeze?

#49: Living Problems, Lively Solutions

Overview:	"Autonomy of object" refers to the problem-solving process of making a problem come alive in order to find a possible solution. Participants will work in small groups to solve a problem of their own choosing in this manner.
Objective:	To provide participants with a problem-solving tool.
Supplies:	None required
Time:	Approximately 15 minutes
Advance Preparation:	Arrange the group, if logistics permit, into subgroups of five members.
Participants/ Application:	Because this exercise generates lively discussion, it works well as an ice- breaking activity. Applicable to any size group, it can also be used during the training session or at its conclusion. All that is needed for these last two applications would be a problem that arose naturally during the preceding training.

Introduction to Concept:

"Autonomy of object" is a technique requiring the problem-solver to actually personify the problem by placing it in the context of a different time or a different place. Interesting and novel solutions to the problem are frequently embedded within the mental associations we normally make with a particular era.

Let us say that graffiti is a problem in a given neighborhood. If the problem were personified, the graffiti might be seen as a bandit in the Wild West era. The Wild West might make you think of a "posse," and conceivably a posse would be formed to patrol the neighborhood looking for the offenders. This scenario might also make you think of sheriffs. By extension, then, perhaps the police could be asked to patrol more often than they currently do, or could be turned to for advice. Wild west-thinking might also lead you to badges, with their shiny, reflective surfaces. These thoughts could result in an invitation to a chemist to discuss chemicals that might be sprayed on select surfaces to deflect the paint.

Procedure:

- 1. Begin by listing numerous problems on the board or flipchart. Use problems related to workplace issues, if possible.
- 2. Prepare a second list, with input from participants, of various eras/locations different from the present. For each era and location, free-associate words related to those times and places.
- 3. Divide the class into small groups next and ask participants to select a problem and an era or location. They will then devise a possible solution by making the problem come alive (as was done with the graffiti-as-bandit situation).
- 4. Have the groups share their solutions.

The 2 activities in this download are free to use in training at a single corporate site.

#49: Living Problems, Lively Solutions

Extending the Activity:

- 1. Have a current copy of the local newspaper available. Distribute a section or several pages to each group. Ask them to use the autonomy-of-object procedure to make the problem come alive and then to identify a lively solution for the problem.
- 2. Discuss the simple technique of *personification*, which makes an inanimate object come alive. Extend the discussion to workplace situations by asking participants to first list issues that concern them, and then to regard those issues from a new perspective by completing one or more of the following prompts:

"If this problem could talk, it would say..." "If this problem could think, it would realize..." "If this problem could hear, it would have known..." "If this problem could create, it would have made..." "If this problem could be dressed, it would look like..."

Workplace Connections:

- Ask a group of five supervisors/managers to volunteer to do the following: They will use the autonomy-of-object technique to ameliorate a workplace situation. Then, they will report back to their respective subordinates the success they had with the technique. If it worked well for them, encourage the supervisors to occasionally solve problems this way with their subordinates.
- 2. A genius has been defined as someone who shoots at something nobody else can see and hits it. To generate this kind of visionary thinking, ask for a volunteer to call participants at least once during the next six months with this question, *"What are you looking at that no one else can see?"* To be sure, there are no guarantees that such prodding will result in lively solutions. But it may very well increase the number of invisible targets being hit.

Questions for Further Consideration:

1. The autonomy-of-object technique works because it stimulates thoughts we would not have had without the special context in which we place the problem. What other techniques do you know of to stimulate free association or brainstorming?