Releasing Problem Solving Energies

Before you can solve a problem, you must see it clearly. This might mean turning it upside down and inside out, comparing it to similar situations or imagining how it could be different. This author explains how such techniques can clear your mind and free your imagination so that you can get the job done.

By STEPHEN R. GROSSMAN

Fear of failure and fear of success have been used to explain the gap between where people are now and where they would like to be. Unfortunately, these phrases have become cliches that offer a surface understanding but do not suggest specific paths for overcoming the problem.

Problem solvers need practical techniques for breaking down the barriers to solving individual problems. This article, describes ways of dealing with five common barriers. Because they are practical and action-oriented, the techniques should be useful to entrepreneurs, who frequently prefer imaginative or intuitive approaches to analytical thinking styles.

Fuzzy definition of the future

Many problems aren't solved because the problem solver doesn't know what the solution should offer. He or she may know that the present is unsatisfactory but may have made no effort to describe the conditions that should exist when the problem is solved. Even when an effort to define the future has been made, the definition may consist of abstract statements that are so general they are meaningless. Or, more commonly, statements about the future may be expressed in terms of the way it is to be measured, e.g., "I want to make a lot of money," or "I want to be happy."

Problem solvers need practical techniques for breaking down the barriers to solving individual problems.

I was contacted once by a large insurance company that was having difficulty achieving its goal. About two years before our meeting, the key decision makers had created and endorsed a definition of the company's future. Their goal was to make the company "the number one insurance company in the United States" within five years. Two years later, when they contacted me, they were further away from their goal than they had been in the beginning. Divisions were working at cross-purposes. The sales staff's definition of "number one" was different from the marketing group's, and the actuaries and accountants had their own definitions, as well. Because the groups didn't share a definition of the goal, they found it difficult to work together to achieve it.

Every problem-solving act involves change. If the change is toward something that one has not done before, conceiving of it is a creative act that depends on the ability to reevaluate or reperceive what currently exists. The problem solver must ask, "How can I use what I have in some new way to get where I want to be?"

However, if the goal is not concrete, the problem solver cannot change his or her perceptions of present conditions or determine whether new ideas will eventually lead to the goal. The more abstract the idea of the future is, the more functionally fixed in the present the problem solver is. Techniques that help one develop specificity, then, will also help one realize a future goal.

There are several techniques for generating such specificity. They include:

- *Making the future concrete.* Because the specificity of an idea is the amount of sensorily concrete data it contains, problem

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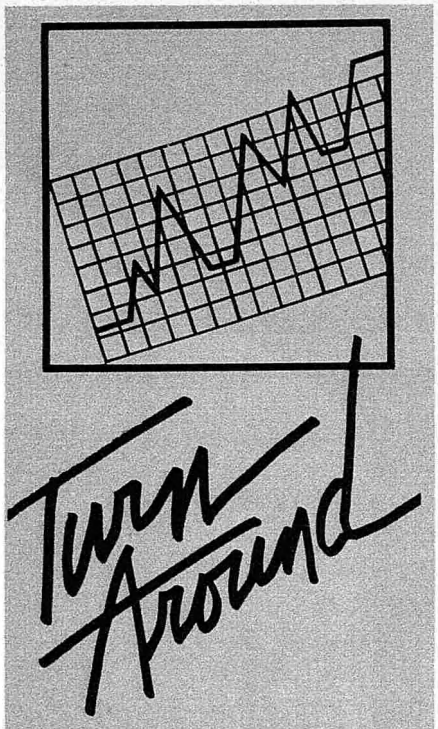

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solvers should strive to state future conditions in language that indicates sensory data. For example, if we compare the two statements, "Hold the meeting on the moon" and "Hold the meeting somewhere else," it is obvious that the first is more specific. "The moon" contains more sensory data than "somewhere else." We know what it might look like, how it might feel to jump 20 feet in the air in a reduced gravity environment, how hot or cold it might be. If one can imagine a future state in such concrete terms, the road to it will be easier to perceive.

■ *Asking how.* To increase the specificity of an idea, one might simply consider how it is going to be accomplished. If the insurance company managers had asked how they were going to become number one, they might have developed a more focused image. Pursuing the five Ws may also help: Who is involved? What is going on? Where is it happening? When is it happening? Why is this what I want?

■ *Five sensing.* In this technique, the problem solver assumes that the problem is solved and describes what is happening in terms of the five senses—the sounds, sights, smells, tastes and textures. For example, the insurance company might have assumed that they had achieved the goal of being number one and described a typical dialogue between a client and a company representative.

■ *Using metaphors.* Metaphors are figures of speech in which one idea or object is substituted for or compared to another. When a poet compares a woman's lips to ripe, red cherries, we can imagine how they would look. Questions such as, "What else looks like, acts like, sounds like or feels like my idea of success?" also may help one think more concretely and creatively.

■ *Fantasizing.* Fantasy is a powerful technique for clarifying the future. The problem solver might assume that he or she has unlimited money or that he or she is not subject to physical or social laws.

At this point, the reader may question the value of some of the techniques. If a fantasy is impractical or impossible to implement, then how can it be useful in solving a real problem? The utility of fantasies depends on the problem solver's ability to flex or distort the image. Rather than considering the rightness or wrongness of an image, take from it what is useful.

In a treatise on lateral thinking, deBono suggests four questions for approaching and using a seemingly impractical idea: What can I extract that is useful?; What would the moment-to-moment consequences be if the idea were implemented?; What general principles does the idea suggest?; and What are the differences between this idea and other situations I have experienced?[1]

I worked with a group that solved a production problem by distorting a seemingly impossible solution. A step in the production line was wrapping an item in newspaper, but the operators were reading the newspaper and slowing production. Management first suggested using blank paper or foreign language newspapers, but blank paper was too expensive and foreign papers were in short supply.

Finally, in a problem-solving session, a staff member joked, "Poke their eyes out!" (a solution that obviously could not be implemented). However, once the idea had been verbalized, someone else quickly suggested hiring blind people to do the job. The sighted people were placed in other positions within the company, the company was able to provide jobs for the handicapped and production rose 14 percent. By flexing the image, rather than considering it as a literal solution, the problem solvers developed a new idea and solved the problem.

Logical paradox

Another situation that hinders problem solving is the logical paradox. Any problem has three parts—the present state; the desired future state; and the operators, or sequence of events, ideas or pathways that take the problem solver from the present to the future state. A logical paradox occurs when the operators seem to present a contradiction.

For example, a manager may be told to cut expenditures by 10 percent and increase productivity by 15 percent. If one assumes that there is a direct relationship between resources and production, the two orders seem contradictory. In such a case, contradictory elements inhibit logical problem solving.

A problem solver can stimulate alternative thought patterns by temporarily reversing one or more of the basic assumptions of the situation in order to view it from a different and more beneficial perspective.

In *assumption reversal*, the problem solver lists several assumptions about a system in need of change. The assumptions should be so basic that the problem solver does not consider them consciously when thinking about the system. Then he or she systematically reverses in-

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dividual assumptions and identifies new connections that may help solve the problem.

As an example, consider the problem of improving restaurants. Some assumptions about restaurants include:

- Restaurants serve food.
- Restaurants are located outside the home.
- Restaurants serve food to people.
- People pay for the food.
- Restaurants prepare the food.

If we reverse one of the assumptions so that it reads, "Restaurants don't serve food to people," the statement yields several new ideas:

- People can cook their own food in the restaurant.
- Restaurants may cater to pets rather than people.
- A restaurant school can teach people how to cook.
- A cooperative restaurant may be run by the people of the community.

One of these transformations could lead to an idea for dog and cat pit stops adjacent to restaurants on highways. These would provide animal food and an area where dogs could be walked while their owners ate in the main building.

One might also reverse a logical sequence, starting with what is desired and working back to the present. Or one might interject irrelevant information into a problem situation and try to develop connections between the information and the problem under consideration. The major idea in all these reversals is purposely and systematically to block traditional thought patterns in order to come up with new ways of tackling a problem that seemingly has no logical solution.

Improper problem definition

Problem-solving models often advise spending a great deal of time defining the problem before looking for a solution. But there is more than one way to define any problem, and alternative definitions may help one see the problem more clearly. These alternatives may include:

- *Self-empowering definitions.* An exercise developed at the Creative Problem Solving Institute in Buffalo, N.Y., begins by having the facilitator ask the participants to name and identify 25 species of birds. Usually, no more than one of 30 persons can do this. The group then sees a slide listing 36 common birds.

Asked the same question again, almost all participants respond that they could have named the birds.

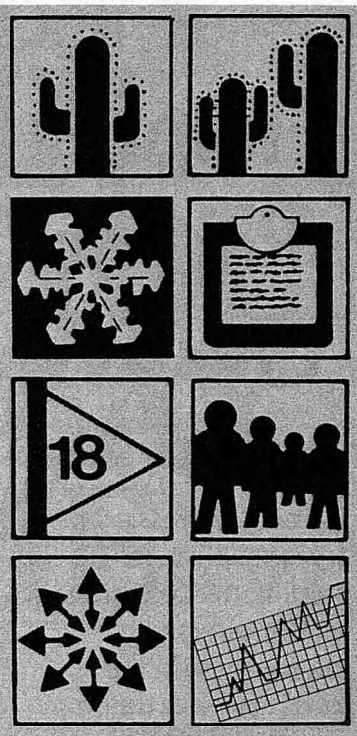
The point of the exercise is to show people that they know more than they think they do. People also are more capable of solving problems than they at first think they are. The attitude with which one approaches a problem often determines whether one will be able to solve it at all.

If problem solvers would begin every problem definition with a five-word prelude, "In what ways might I," they would take responsibility for solving the problem and be able to look on the problem as an opportunity to be realized rather than an insurmountable obstacle. For example, the wish to go to Europe may never be realized if one simply thinks that it costs too much. However, it might be easier to find a solution by looking at the problem differently and asking: "In what ways might I raise the money? In what ways might I reduce travel costs? In what ways might I work in Europe?"

A simple exercise for increasing creative potential and power is to make a contract with oneself that for the next five minutes every thought will be about the problem, and every thought will begin with "in what ways might I. . ." If the only thought to occur is that one cannot come up with ideas, the problem might be stated, "In what ways might I stimulate idea generation?"

- *Broader problem definitions.* A problem definition that is too narrow may hinder problem solving. When troubleshooting a noisy tissue paper machine a few years ago, I had to wear ear protectors, two rubber plugs connected by a metal band. When the band broke and I could find no other protectors, I tried unsuccessfully to glue it back together.

My initial definition of the problem was, "In what ways might I fix my ear protectors?" But when I could not come up with a viable solution quickly, I broadened the problem definition by asking why I wanted to fix the protectors. The answer was that my hearing would be protected, so I rephrased the problem, "In what ways might I protect my ears?" I



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then thought of the solution immediately. I put two pieces of the tissue paper into my ears and successfully and safely discharged my responsibility.

This simple problem illustrates that a situation will appear in an entirely new light if one asks what will be accomplished the instant the problem is solved. The experience is similar to examining a large painting from a distance of one inch, then looking at it again from a few feet. The longer perspective makes the context easier to see.

■ *Reworded problem statements.* Changing the verb or rearranging the subject and object in a problem statement may give the statement a new meaning. For example, a manager who needs an employee's cooperation to implement a plan might state the problem as, "In what ways might I get the employee to cooperate?" But the manager could develop more productive points of view by rephrasing the problem as: In what ways might I help the employee?; In what ways might I ask for the employee's help?; and so on. Sometimes small changes in the wording of a difficult problem statement can make significant changes in one's perspective.

Insufficient discomfort with the present

A business associate who is a key decision maker in a large corporation continually complains about the state of affairs in his company. He talks of updating his resume and moving to an organization that is more dynamic, futuristic and flexible. Somehow, however, his resume still collects dust, and he continues to work for the same employer.

The explanation is quite simple. He derives a great deal of satisfaction from his present position. His job is relatively secure, he knows exactly what is expected of him and he is compensated well for his time. His major source of discomfort is the gap between what he knows he could produce in the right environment and what he is producing now. This discomfort is not acute enough to cancel out the positive benefits of the situation, however, so he does not leave.

A person who fails to solve a problem that is not beyond his or her intellect or imagination simply may not want to. Rather than wasting energy seeking solutions to a problem one has no intention of solving, one might more profitably look for new opportunities in the present situation.

For example, he might determine that his dissatisfaction with his present situation arises from two principal causes, his inability to have an impact on his profession and the lack of working relationships with people of the same profession. Examining the situation for ways he could modify his activities, he might discover that he could alleviate his dissatisfaction by writing papers for publications in professional journals, becoming more active in professional associations, developing hobbies or starting a club or group with people who enjoy the same activities. In other words, once he has examined the real sources of his dissatisfaction, he can solve the problem while maintaining the positive value he derives from his present situation.

Lack of short-term goals

An important reason that many groups and individuals don't develop effective, implementable solutions is a lack of short-term goals. Short-term goals are meaningful indicators along the way toward a solution. For a problem solver, these signs function much as road signs do for the traveler. They describe a sequence of events that must occur before the problem solver can arrive at the desired future state.

Short-term goals serve several purposes: keeping the problem solver focused on the problem; positively reinforcing the problem solver by providing feedback on accomplishments; increasing the chances of success by forcing mid-course corrections; and allowing for maximum creativity in the accomplishment of the final objective by forcing the problem solver to reconsider the direction if one of the intermediate objectives cannot be accomplished.

Large corporations use many sophisticated techniques for this kind of planning. However, one can achieve virtually the same results for a smaller company by drawing up a time frame for accomplishment of one's goals and working backwards to determine what must take place before the problem can be solved. Such an exercise in logic may not be pleasant for entrepreneurs, who, studies show, do not prefer logical, analytical activity. But the entrepreneur who finds it difficult may solicit the help of a computer analyst, accountant or engineer.

Reference

1. deBono, E. (1972). *Po: A device for successful thinking.* New York: Simon & Schuster.