

REVITALIZING YOUR COMPANY THROUGH CREATIVITY

By A. Brent Strong, Brigham Young University

Does your company kill creativity?

As was said by Bill Dresselhaus in his book *Return on Innovation*, “[A] traditional bureaucratic structure, with its need for predictability, linear logic, conformance to accepted norms, and the dictates of the most recent ‘long range’ vision statement, is a nearly perfect idea-killing machine.” Therefore, to avoid having your corporate climate kill ideas and creativity, you should have some understanding of the creative process and how that can be influenced by the corporate climate.

Even though creativity is the subject of many books, most of them focus on improving **personal creativity**. Few discuss changing the environment of creativity, especially in companies. As Dresselhaus suggested, the corporate environment in many companies does not promote good creativity. This article makes some suggestions that have been demonstrated to improve **corporate creativity**.

Almost immediately you might take one of three quite different stances relative to the creativity in your company. The first stance is that your company is already creative and the comments quoted above do not apply. After all, you might say, “I am creative. Just look at the company I have assembled. It’s not easy to be creative in the composites business. There are many competitors and I have to be creative just to stay ahead of them. Not only that, look at the creative solutions I give to the problems that confront me almost every day.” In most cases, you are right. However, I have found that creative entrepreneurs have trouble passing on their creativity to the rest of their company. Think carefully: **What are you doing, specifically, to improve the creativity of the people who work in your company?**

The second stance that some of you might take in response to the issue of corporations killing creativity is that most jobs in corporations do not require creativity. You might say, “Maybe the designers need to be creative, but I certainly don’t want the quality control people or the machine operators to be creative. They need to do the job as it is outlined, no more and no less.” I have observed few jobs that are so routine that the person doing the job can become so robot-like that they do not have to make judgements and take independent actions. The world of manufacturing is just too varied. For instance, you might find that the quality control inspector suddenly and creatively sees a pattern in the defects and suggests a way to eliminate a major cause of quality problems. Or, an operator who is spraying up a part may find that uniformity can be significantly improved by changing the spray pattern. He might even suggest a new way of adding secondary reinforcement, an area where he used to work but now sees in a different light because he is able to understand more about the entire process. I believe that you will find the following: **Improving corporate creativity will give job enrichment, better performance, and a spirit of excellence in any company.**

The third stance that you might have taken is that you agree with the fact that bureaucracy and procedures in companies can kill creativity, but what can you do. Your people are not highly trained, you are personally too busy to spend much time worrying about creativity in the company, and besides, you don’t know what you can do to help much.

All three of these stances are, to some extent, correct and you might have some attitudes that agree with all three. However, they all lack the insight that comes from seeing a truly creative organization and the tremendous improvements in productivity, personnel attitude, and profits that can come from highly creative corporate climates. Some companies have shown the way, and this article summarizes the steps that these creative companies have taken to be effective.

Steps to improve corporate creativity

1. **Make creativity a centerpiece of corporate strategy.** This may seem obvious, but it certainly is not. Most companies, in fact, focus on many other things besides creativity or its practical manifestation, innovation. They worry about cash flow, lagging sales, poor production, or employee morale. While these worries are certainly legitimate, many such worries are reduced or eliminated by enhanced creativity in problem solving and in creating new products. When creativity is a corporate priority and focus, everyone is involved. As Tom Kelley, CEO of IDEO, a leading industrial design firm has noted in his book *The Art of Innovation*, “The biggest single trend we’ve observed is the growing acknowledgment of innovation as a centerpiece of corporate strategies and initiatives. What’s more, we’ve noticed that the more senior the executives, the more likely they are to frame their companies’ needs in the context of innovation.”

2. **Reward and support creativity.** When creativity is the centerpiece of corporate strategy, the company organization changes to keep the stars of creativity in jobs where their creativity is not swallowed up in bureaucratic duties. These creative people can and should be promoted, as rewards for their efforts and as role models for others, to positions of leadership (visionary leaders) but can be given a “para-manager” to assist them with all the bureaucratic duties such as reports, coordination meetings, human relations, etc. The 1969 book *The Peter Principle* pointed out that many people can be promoted to a level of incompetence by moving them out of their area of strength. Don’t do that with creative people. Back them up with others (usually assistants) to help them in their managerial duties. The additional costs in payroll are usually worth it.

3. **Give time and opportunity to be creative.** Some creative companies, like 3M, ask (insist) that all employees devote a meaningful part of their time (such as 10%) to non-assigned projects. Thus, employees have time to think deeply, read broadly, and otherwise practice the skills of personal creativity that are taught in the many books on improving creativity. For companies,

like 3M that live off new ideas, these personal projects are strategically critical. For others, perhaps smaller companies, the ideas can result in major breakthroughs that could give a significant competitive advantage. In all of the companies, large and small, the improvement in employee involvement in the company and the resulting improvement in employee attitude is worth the small amount of time off, even if no breakthrough products are ever produced.

Sometimes a manager is reluctant to allow employees to be creative because they don't seem to be busy during those times. There is so much that must be done in a typical company, that the manager keeps pressure on everyone to keep busy. This situation is described by Gordon MacKenzie in his book *Orbiting the Giant Hairball*. He describes the city fellow who went into the country and, with some disgust, noted the lazy cows who were just standing around in the field, occasionally munching the grass. He said to the dairy farmer, "How can you allow your producers to be so lazy? They must do more." What the city man didn't understand is that the cows are performing the miracle of turning grass into milk even though there is not apparent action. Stressing the cows to produce more will not result in more milk but, probably, just the opposite.

As suggested by MacKenzie, if we think of the creative process as a line, as shown in Figure 1, the only portion of the process that would reflect measurable productivity would be a short segment at the end of the line. However, the beginning part of the line is also important. This is when the real work of creativity is done, but the activities are often invisible. Nevertheless, they are critical to success.

To allow workers time to be creative requires a change in paradigm for many managers. It probably will require a change in paradigm for most workers too.

4. Establish a culture of paradigm re-examination. In one of the best of the creativity books (*What a Great Idea*), Charles "Chic" Thompson reports a story that illustrates well how a creative culture can be created by senior management through thoughtful actions that challenge

creativity in others. “One day, Corning’s president said to the head of research, ‘Glass breaks. Why don’t you do something about that?’ The directive to the lab then became: ‘We’re going to prevent glass from breaking.’ The lab came up with twenty-five different ways of preventing glass from breaking; eighteen of them worked, and five made money....The end result was the now-famous Corelle line of dinnerware.” As corporate leaders, you should actively try to spark the unique and creative orientation and ask challenging questions.

One of the most important methods of re-examination is to question the nature of how a product works. For example, a designer was given the task of ejecting floppy discs from a new Apple computer. The old method required many parts and was, therefore, prone to many failures. This designer decided to explore radically new methods by looking outside the realm of mechanical ejection mechanisms. He went to a hardware store and just wandered around. He also made it a practice to read extensively outside his field. His company also kept a store of unusual devices that were “interesting” but had no specific connection to any project. In all of that fertile atmosphere, the designer stumbled across a shape-memory alloy that radically changes its shape when heated. This gave the designer a new idea and he was able to make an ejection mechanism by using a small amount of battery power to heat a shape-memory wire that flipped its shape when hot and gave sufficient force to eject the floppy discs. This new device had far fewer parts and far fewer failures than the old ejection mechanism. The designer and his company understood the great concept that looking outside the normal paradigm can often result in new and brilliantly successful concepts. They also understood the truth of the statement by Louis Pasteur, “Chance favors the prepared mind.” The reading and looking done by the designer had prepared his mind to see the value of the shape-memory alloy in his new application.

Some inventions that were discovered accidentally illustrate the value of the prepared mind. Many of these are described in the book *Serendipity* by Royston Roberts and also in

Dresselhaus' book. Figure 2 illustrates some of them.

Another method to question paradigms can be developed by changing the way people think about new products. Tom Kelley reports a trick used at IDEO. "We sometimes find it useful to think of products in terms of Verbs rather than Nouns – not cell phones but phoning. [Not shower stalls, but showering; not boats, but boating.] We try to create products that are made for motion....See products as Verbs – as animated devices that people integrate into their lives – and you'll become more attuned to how people use products, spaces, services – whatever you're trying to improve."

5. Use teams and brainstorm often. Many companies seem to believe that creativity is something done by isolated geniuses. In truth, teams can usually be much more creative than individuals. Even Thomas Edison, the holder of the most US patents, relied strongly on a creative and hard-working team. Quoting a Honda manager, Chic Thompson wrote in his book, "I am always telling the [new product development] team members that our work is not a relay race...Every one of us should run all the way from the start to the finish. Like in a rugby game, all of us should run together, passing the ball left and right and reaching the goal as one united body."

This same team concept is at the heart of IDEO's success. Not only do they have teams as their primary organizational structure, they meet together often, probably daily, in brainstorming sessions of about an hour, to continue to creatively move the projects ahead. Note that they specifically do not go into "retreats" for their brainstorming, but, rather, have brainstorming in their regular locations (although usually in special brainstorming rooms where charts can be placed on the wall and other items are available to facilitate the brainstorming process).

6. Prototype early and often. Prototyping is not only a practice that helps identify problems early in the development process, it is also important in conveying the concept that "It is OK to

fail, but try to fail when it costs the least.” This failure-acceptance climate will encourage creativity. The use of prototypes to identify mistakes is the best practice for achieving a realistic view of the new product (which could be a physical item or a service).

The use of prototypes in developing new products is critical. CAD drawings and other renditions are OK, but there is something magic in holding the new part in your hands. Rapid prototyping is useful for small parts, but is not very practical for the types of products usually encountered in the FRP industry. However, wooden models with a sprayed-on surface work well. You might even use a low-cost wooden mold to make an initial part. Remember, the exact dimensions are not usually the key, but rather, the ability to hold a part that is like what you envision.

7. Create an atmosphere of urgency. Most of us are more creative when there is a strong motivation. Therefore, corporate leadership should instill a climate that motivates all employees to be more creative. Perhaps the most effective of these motivating situations is urgency – urgency from competition, urgency from possible loss of market opportunity, urgency because the greatest profits are gained at the beginning of a product’s life, urgency from goals, etc. When the entire climate of a company has this sense of urgency about new product development, you will be amazed at how effective people can make the development process. Cooperation between departments is improved and jobs just get done better because people are trying to help each other out.

Pyramids and trees

The task of managing people is difficult. This article has, hopefully, suggested that proper management should include some methods to encourage creativity. However, the effective manager also knows that productive companies, especially those doing manufacturing, require significant uniformity and cooperative actions. Therefore, you, as a manager, must find the way to solicit cooperative effort from your employees, but at the same time encourage

individual creativity. One way to do that has been suggested by Gordon MacKenzie in his book *Orbiting the Giant Hairball*. He presents two different models for organizations — one demanding obedience and conformity and the other giving more leeway for individual creativity. Both are illustrated in Figure 3.

The first organizational analogy is a pyramid with management at the top and the workers down below. Management sees the future and proclaims that “We must grow or die!” but finds that growing is difficult because of the shear weight of the structure. Besides, when we step back and think about pyramids, how does one make an actual pyramid larger? Not an easy task!

To grow a pyramid you would have to add another row at the base all the way around and then add blocks one row at a time on top of the new base. However, to fit with the existing pyramid, the new rows would have to be tapered. Thus, you couldn’t just take any block; you would have to do considerable shaping before fitting it in place. When you were finished, the pyramid would be higher, but the outer layer would not be attached to the rest. It would be nothing but an outer encasement. That type of growth would be tenuous.

What is the alternate structure that a company might take to facilitate growing. MacKenzie suggests that it be a tree. He sees top management as the trunk of the tree, giving support and direction to the entity. This trunk-management is also the conduit for nourishment (cash flow) that comes from the roots. The managers and supervisors are the branches which also give support to the actual producers — the leaves and the buds which will ultimately result in the cash crop. Growth is simple because the structure just extends the branches so that more producers can be supported. Creativity is allowed because the actual producers see a wide view, receive energy from their surroundings (the sun and air), and have no structural limitations except to be attached to the tree itself. All the leaves and buds seem to sense their collective responsibility, but there is certainly room to try something different (should cross-fertilization be

accomplished, for instance).

History and creativity

Another way to think about creativity is to examine it historically. Throughout history, people have been most creative during periods where the overall environment was conducive to creativity, such as during the Renaissance, the Enlightenment, and the modern Age of Technology. During other times, such as the Dark Ages, creativity was suppressed. (See Figure 4)

The modern age is one of tremendous creativity with great rewards to very creative people. However, the pressures against creativity are also strong, especially within some companies. By considering the issues and suggestions made in this article, you might be better able to enhance creativity in your company. However, building creativity requires, first and foremost, a commitment at the top. Management must want creativity and be willing to accept the changes in paradigm that it requires. You can, to a large extent, decide what the climate of your company will be – Renaissance or Dark Age. Pyramids or trees.

Some good books on corporate creativity

Crandall, Rick, editor, *Break-Out Creativity*, Corte Madera, CA: Select Press, 1998 (ISBN: 0-9644294-7-0)

Dresselhaus, Bill, *Return on Innovation*, Portland: Dresselhaus Design Group, Inc. (ISBN: 0-9679209-0-6)

Kelley, Tom, *The Art of Innovation*, New York: Doubleday, 2001 (ISBN: 0-385-49984-1)

MacKenzie, Gordon, *Orbiting the Giant Hairball*, Penguin Putnam Inc., 1996 (ISBN: 0-670-87983-5)

Roberts, Royston M., *Serendipity: Accidental Discoveries in Science*, John Wiley and Sons, Inc., 1989 (ISBN: 0-471-60203-5)

Thompson, Charles (Chic), *What a Great Idea*, HarperPerennial, 1992 (ISBN:0-06-

096901-6)