

Managing Innovation:

WHEN LESS IS MORE

Charlan Jeanne Nemeth

CALIFORNIA
MANAGEMENT
REVIEW

Reprint Series

Managing Innovation:

WHEN LESS IS MORE

Charlan Jeanne Nemeth

California Management Review Reprint Series

©1997 by The Regents of the University of California

CMR, Volume 40, Number 1, Fall 1997

Managing Innovation:

WHEN LESS IS MORE

Charlan Jeanne Nemeth

While a "good company" requires unsurpassed management, product quality, and financial soundness, the "most admired" companies are presumed to also have "a spark that ignites the work force and allows the enterprise to respond readily to change. That ingredient is innovation and all the top companies embrace it passionately."¹

Is this really true? Do our most admired companies emphasize innovation as much as execution? I think not. Most companies, even those considered "visionary," emphasize mechanisms of social control rather than innovation. They recognize the power of clear goals, worker participation, consistent feedback, a cohesive work force, and a reward system that underscores desired behaviors and values. In fact, the "spark" that many companies are likely to ignite is not innovation or risk taking, but rather loyalty and commitment to the company. They attempt to create a cult-like culture involving passion and excitement. Through this path, they may achieve productivity and high morale, but at the same time can thwart creativity, innovation, and an ability "to respond readily to change."

Creativity and innovation may require a "culture" that is very different and, in a sense, diametrically opposed to that which encourages cohesion, loyalty, and clear norms of appropriate attitudes and behavior. It is wrong to

I wish to express my appreciation to the Institute for Industrial Relations and, especially, to Prof. Claire Brown for their support in the preparation of this manuscript. I also wish to express my appreciation to Pam Owens who, with the support of the Institute, did a substantial literature review which greatly helped me in this endeavor. Finally, I would like to express my appreciation to the Institute of Innovation, Management and Technology and, especially, Prof. David Teece for their continual encouragement.

assume that the mechanisms of social control that heighten adherence to company rules and expectations can also be easily used to enhance innovation. Desiring and expecting creativity—and even rewarding it—do not necessarily increase its appearance. Motivation and increased effort may permit new variations on a theme, but they are unlikely to stimulate major changes in perspective or reformulation. Quite the contrary. In fact, there is evidence that one must be removed from this social control. One must feel free to “deviate” from expectations, to question shared ways of viewing things, in order to evidence creativity. To use a metaphor from an actual creativity task, one must be able to look “outside the box” to find new insights, e.g., to see a new use for an old product or to recognize a new market.

Minority viewpoints have importance and power, not just for the value of the ideas themselves, but for their ability to stimulate creative thought. Thus, one must learn not only to respect and tolerate dissent, but to “welcome” it. The “trick” is to balance coordinated group activity with an openness to differing views—to create unity in the organization without uniformity.

The “Good” and the “Visionary”

In a recent book, Collins and Porras attempted to analyze “visionary” companies, those so nominated by CEOs as not only “good” or successful, but enduring.² The criterion “endurance” was defined as a company that was founded prior to 1950 and that had multiple product or service life cycles. Examples of those nominated included Hewlett Packard, IBM, Procter and Gamble, Wal-Mart, GE, Boeing, 3M, Nordstrom, Merck, and Walt Disney.

In their analysis, Collins and Porras tried to discern what distinguished “visionary companies” from their less successful counterparts. One particular characteristic stands out. Collins and Porras argue that the visionary companies are marked by a cult-like atmosphere which includes a fervently held ideology,

indoctrination, a high degree of “fit” or uniformity, and elitism. Such comparisons between strong “corporate cultures” and “cults” have been noted by other authors as well.³

A fervently held ideology is assumed to be important because it provides the core values, the glue that will bind the organization. Table 1 illustrates the core values of the “visionary” companies and includes examples, e.g., Nordstrom’s credo of “service to the customer above all else.” Some companies have explicit rules as well as a general statement. Thomas Watson, Sr.,

TABLE 1. “Core Values” (as defined by Collins and Porras)

“Respect and concern for individual employees”	Hewlett-Packard
“Exceed customer expectations”	Wal-Mart
“Being on the leading edge of aviation; being pioneers”	Boeing
“Respect for individual initiative”	3M
“Service to the customer above all else”	Nordstrom
“We are in the business of preserving and improving human life”	Merck

founder of IBM, for example, not only had core values of “respect for the individual” and “listen to the customer,” but he had rules. There was a dress code which included dark suits. Marriage was encouraged; smoking was discouraged and alcohol was forbidden. At Disneyland, there is a strict grooming code, one which does not permit facial hair or dangling jewelry.⁴

Newcomers to the organization are indoctrinated into this prevailing ideology by various socialization techniques. The ideology may be succinct. For example, Nordstrom’s employee “handbook” consists of a single 5”x8” card with the rule: “Use your good judgment in all situations. There will be no additional rules.” While there may not be additional rules, there is considerable “on the job” socialization, including guidance in the form of approval and disapproval by peers and continual ranking and feedback as to performance. There are also intensive orientations, universities, and training centers.

Another common technique includes a mythology of “heroic deeds,” which is essentially an oral history of people who have exemplified the ideology of the company—for example, extraordinary service to a customer. And, finally, there is the usage of unique language, mottoes, and corporate songs, all of which foster cohesion and a sense of group belonging.

Why It Works: Majority Power

That such a cult-like climate would enhance morale, loyalty, and adherence to normative prescriptions is not particularly surprising. These companies have used well-established principles of social control and, in so doing, recognize the importance of normative prescriptions, of the power of the judgments and approval of peers. This power of peers is one of the most established findings in social psychology. When people are faced with a majority of others who agree on a particular attitude or judgment, they are very likely to adopt the majority judgment. Literally hundreds of studies have documented this finding.⁵ Even when using objective issues (such as judging the length of lines) people will abdicate the information from their own senses and adopt an erroneous majority view. The question is: Why?

The available evidence suggests that there are two primary reasons for adopting normative or majority views, even when incorrect. One is that people assume that truth lies in numbers and are quick to infer that they themselves are incorrect when faced with a unanimous majority. The other reason is that they fear disapproval and rejection for being different.⁶

It is difficult to overestimate the power of these majority views. In the early studies with unambiguous and easy judgments of line length, fully 35% of the judgments were against the individual’s own senses and in conformity with the erroneous majority judgment.⁷ In later studies using color judgments, conformity was as high as 70%.⁸ Given that participants in these studies were

relative strangers, one can only imagine the magnitude of this pressure when the majority members are valued co-workers, colleagues, and bosses.

People worry about being different, about not being accepted—and worse, about being ridiculed or rejected. The evidence suggests that this is not a baseless fear. It is a highly predictable reaction. When a person “differs,” especially when the group is cohesive and is of importance to the members, that “deviate” can be certain of receiving the most communication, usually aimed at changing his or her opinion. If such persuasion is unsuccessful, the person is often disliked, made to feel unwelcome, and may ultimately be rejected.⁹ Such reactions can be found in even temporary groups with little at stake in the issue. It is exacerbated when the group is important and the issue is relevant to the group itself.

Recent work shows that majorities not only shape judgments and behavior, but they also shape the ways in which individuals think. We now have numerous studies showing that, when faced with a majority view that differs from their own, people tend to view the issue from the majority perspective.¹⁰ In an attempt to find the majority to be correct, they not only adopt the majority position, but they convince themselves of the truth of that position by how they think about the issue. They consider the issue only from the majority perspective, trying to understand why the majority takes the position it does.

Faced with a majority, people search for information in a biased manner. They consider primarily information that corroborates the majority position. They also tend to adopt the majority strategy for solving problems to the exclusion of other strategies. They are also relatively unable to detect original solutions to problems.¹¹ In some sense, they “brainwash” themselves by finding and focusing on information consistent with the majority view.

An important limitation to the power of the majority appears to lie in the issue of unanimity. Numerous studies have documented that a single dissenter can break the power of the majority. Further, the dissenter need not agree with anyone else. It is not a question of providing support for a given viewpoint; it is a question of the majority being fragmented and divided.¹² This element is one reason why dissent can have value.

Enhancing the Power of the Majority

Many “visionary” companies seek to enhance the power of the majority so as to increase adoption of company principles. They not only have clear values, goals, and indoctrination techniques, but they tend to promote interaction with like-minded individuals (i.e., within the company) and reinforce it with an intolerance for dissent. Much like cults, many of these companies tend to isolate the individual from the “outside world.” They promote socializing *within* the organization and try to inhibit the maintenance of relationships outside the

corporate family. These are powerful mechanisms for promoting cohesion and consolidating opinion.

One of the best documented findings in social psychology is that discussion among like-minded individuals increases both the extremeness of the views and the confidence in them. After discussion, groups of "risky" people become more risky; groups of "cautious" people become more cautious. Groups of people who favor segregation become more extreme and sure of their position. So do groups of people who favor integration.¹³ They don't just become more "like" each other; they all become more extreme as well as more alike. Furthermore, people are more likely to *act* on their beliefs after discussion with like-minded individuals. Thus, promoting interaction within the company and shielding people from dissenting views is likely to make the individuals adhere to the company ideology more strongly and to act in accordance with it.

The sense of identification with the organization is further enhanced by the usage of mottoes, slogans, and company songs such as those sung at IBM and Wal-Mart.¹⁴ Some even invoke a special language. For example, Nordstrom employees are "Nordies." Disneyland employees use theatrical language, e.g., a job is a "part," being on duty is "onstage." Such promotions of the "ingroup"—especially when they are coupled with a definition of another corporate entity as an "outgroup"—further augment a sense of pride and even superiority relative to the other group. Many successful companies purposely imbue their employees with the belief that they are the "best." Procter and Gamble, IBM, and Nordstrom epitomize the type of company where such elitism reigns. With this sense of confidence and belonging can come a fervent adherence to company ideology and to the preservation and even enhancement of the basic company philosophy. Thus, many have argued that such cult-like atmospheres are highly productive and filled with enthusiasm.

A corresponding element of this "ingroup" promotion is a tendency to monitor and punish deviance. The "visionary" companies are particularly intolerant of dissent. They "eject like a virus" those who do not fit with the corporate culture. If you don't want to be "Procterized," you don't belong at P&G; if you are not dedicated to the clean living and service atmosphere at Marriott, then stay away. Diversity is tolerated—even welcomed—as long as it is accompanied by a belief in the company ideology.¹⁵

The Other Side: Creativity

One might ask how can you argue with a corporate culture, cult-like or not, that results in high morale, enthusiasm, a clear vision, a sense of belonging, and a dedication that translates into profits? How can you question the value of coordinated group activity which may account for the success of large-scale projects (e.g., Boeing's launch of the 747 or Disney's entry into Epcot Center and Disneyland)? But does this type of corporate culture also promote creativity? Or an ability to respond readily to change?

There are authors and executives who suggest that the same techniques of clear goals, indoctrination, cohesion, consistent feedback, and reward systems can be used to foster innovation—even a “cult-like culture of change.” The premise is that one can have the camaraderie, a sense of “can do,” and a dedicated commitment to the company’s ideology while, at the same time, having flexibility, innovation, and an ability to adjust to changing circumstances.

Many companies recognize the need to “reinvent themselves,”¹⁶ whether they call it “self renewal” (Motorola), “individual initiative” (Philip Morris), or being a “pioneer” (Sony). However, can one create a culture that promotes creativity, openness to new ideas, and innovation while at the same time having people indoctrinated in a similar ideology? Can the ideology itself be innovation? With feedback and appropriate rewards, does it work? The available research on creativity suggests it may not be that easy. Good intentions and great effort do not necessarily result in creativity. One can work very hard while engaging in convergent (single perspective) thinking that is unlikely to produce anything original. In fact, there is evidence that the atmosphere most likely to induce creativity is one diametrically opposed to the “cult like” corporate culture.

The Nature of Creativity

Much of creativity starts with the proper posing of a question. And it seems aided by an ability to break premises, by being able to look “outside the box.” Using that metaphor, the task of joining all the dots in Figure A below in 4 straight lines without lifting pen from paper (and without retracing any lines) is made solvable by adding two hypothetical dots (*) outside the box (Figure B). Who said that you can’t connect more dots than required?

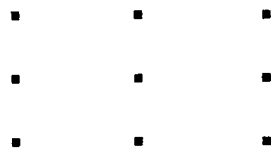


Figure A

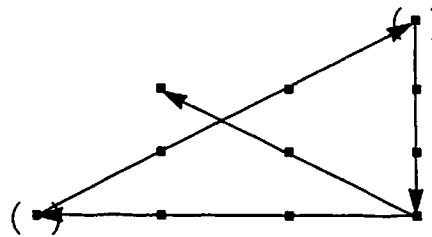


Figure B

Though this task serves as a metaphor, there is ample evidence that the unreflective adoption of premises and old patterns of solving problems is detrimental to creativity. If individuals are given a series of problems for which a given solution “works,” they will tend to use that solution even when it is no longer the best one. An obvious better solution will not be detected.¹⁷

In light of this, a firm might want to recruit relatively unconventional people and be careful about the extent to which it tames that unconventionality. Thomas Watson of IBM recognized this in his continual reference to “wild

ducks." Borrowing from Kierkegaard, Watson was fond of telling the story of a man on the coast of Zealand who liked to watch the ducks fly south each fall. Well intentioned, he began to feed the ducks in a nearby pond only to find that, with time, they stopped flying south. They wintered in Denmark, feeding on what he provided. After several years, they grew so fat and lazy that they hardly flew at all. The message: You can make wild ducks tame, but you can never make tame ducks wild again.¹⁸

Many companies have recognized how easy it is to thwart creativity. As expressed by Enron's President Richard Kinder, a good idea is fragile "like a lighted match, easily blown out by the cold winds of rigid management."¹⁹ In a good deal of literature, however, it isn't rigid management that thwarts creativity. It is much more basic and much more insidious. People in general are loathe to suggest an original idea for fear of the ridicule and rejection. In fact, most attempts to raise the level of creativity explicitly understand that one must try to do two things: ensure that the individual's creativity is not stifled by conformity pressures or fears of social embarrassment; and take advantage of creativity enhancing forces (e.g., reinforcement for contributing or cross-stimulation).

Brainstorming, for example, explicitly asks people to generate as many ideas as possible, to refrain from evaluating or criticizing their own or others views, and to build on ideas that are proposed (piggybacking).²⁰ While there appears to be modest success with such a technique, the fear of disapproval and the reluctance to voice ideas remains. Even with these admonitions, groups are still less creative than individuals alone.²¹ When people are in group interaction, it is not easy to lessen the concerns about embarrassment and ridicule. Status tends to make it worse. People are particularly unlikely to challenge persons of higher status. Prof. Bennis of the University of Southern California estimates that at least 7 out of 10 in American business hush up when their opinions are at odds with their superiors. Even when they know better, they allow their bosses to make mistakes.²²

Such problems are apparent in many different kinds of decision-making groups. In studies of Cabinet level "fiascoes," such as the Bay of Pigs, Janis found that groups marked by cohesiveness and a strong directive leader are especially likely to seek "uniformity."²³ As a result, they suffer under the illusion that there is unanimity when, in fact, there is not. Silence is often assumed to indicate assent. Then, out of a fear of ridicule and a sense of futility, each individual is reluctant to voice a differing view. Dean Rusk, for example, had strong doubts about the Bay of Pigs invasion but did not express them at the Cabinet level meetings. Arthur Schlesinger later rebuked himself, writing: "In the months after the Bay of Pigs I bitterly reproached myself for having kept so silent during those crucial discussions though my feelings of guilt were tempered by the knowledge that a course of objection would have accomplished little save to gain me a name as a nuisance."²⁴

Thus, managers need to be aware of the fact that most of us are quite fragile when it comes to expressing "differing" views. People usually test the

waters to see what is acceptable and, in the process, may unwittingly censor their own thoughts as well as their verbal expressions. Contrary to what strong leaders with strong cultures may think, the directiveness and strength of the leader can actually thwart creative thought and the expression of divergent views. It is even more likely when the group is highly cohesive. These are precisely the elements that are believed to cause "groupthink," the strain to uniformity that overrides a realistic appraisal of alternatives."²⁵

Creativity at the Top: Implementation vs. Innovation

Some of the admired companies—those reputed to have not only good management and financial success, but innovation—appear to be those whose *leader* had the creative idea. Under these conditions, a strong corporate culture emphasizing uniformity, loyalty, and adherence to company expectations would be advantageous. It is advantageous precisely because it can operate in a relatively monolithic way—full of energy, morale, and a tendency not to consider alternatives or problems. This is not the same as promoting creativity from within the organization. Cohesion, convergent thought, and loyalty help to *implement* an idea but tend not to enhance the *production* of a creative idea. Rather, flexibility, openness, and the welcoming of dissent are especially useful for stimulating creative thought.

Several companies showing creativity made the "most admired" list and illustrate creativity by top executives. One such example is Enron, whose CEO, Kenneth Lay, found himself with a large national network of gas lines. Trained as an economist, he favored free markets and disliked federal regulation. Yet, in viewing his national map differently than others, he saw it as a network to buy gas where it was cheap and sell it where it was needed. Thus, he found himself promoting deregulation. He created spot markets and, in the process, changed the industry. It paid off. Enron was named one of the "most admired" companies by *Fortune* magazine and ranked No. 1 in innovation.

Another example is Mirage Resorts, ranked No. 2 in innovation. CEO Steve Wynn had the idea: giving customers of the gambling industry outstanding service, food, and entertainment. His Treasure Island resort was the first designed to generate more income from non-gambling than gambling sources. And he found a way to make his employees enthusiastic about service. He spent as much on the employees' cafeteria and corridors as on those used by "guests." He essentially created a culture of cohesion and high morale, all adhering to his core ideology of service. Again, the idea appears to be an insight of an individual—and, importantly, of the CEO himself. In that context, the cohesive culture that he created is an advantage, primarily in terms of implementation.

Honda is still another example of creativity at the top. Two owners, Honda and Fujisawa, the former the motorcycle enthusiast, the latter the businessman, merged their talents and developed the Honda 50cc Supercub in 1958.

It was a marketing success, strongly appealing to small commercial enterprises in Japan. It was lightweight, affordable, and yet had strong horsepower.

When they tried to enter the U.S. market, however, there were several problems. Motorcycle enthusiasts in the U.S. were a special breed and the emphasis was on size and power. Thus, Honda feared introducing their small bikes for fear of hurting their image in the macho U.S. market and, instead, introduced their larger motorcycles, the 250cc and 305cc bikes. However, it was the failure of these bikes that inadvertently led to the success of the smaller 50cc Supercub. Not content with using an intermediary, the Honda executives themselves drove the smaller 50cc bikes around Los Angeles on errands and, in the process, attracted attention and enquiries, including one from Sears. It was the failure of their larger bikes that led to the willingness to permit distribution of the Supercub. And the rest is history.

Honda is said to have “redefined” the U.S. motorcycle industry. After their “You meet the nicest people on a Honda” campaign, nearly one of out every two motorcycles sold was a Honda.²⁶ The history of this invention is not dissimilar from most creative efforts. It is a combination of talent and drive, but also a series of miscalculations, serendipity, and learning. Again, however, it was the leadership that manifested the creativity.

The problem with creative ideas generated by the CEO and implemented by a cohesive, strong culture that promotes uniformity is that the beneficial outcomes are dependent on the CEO. He had better have the best ideas because his ideas are likely to be implemented—right or wrong—in such a culture. This is part of the reason why some worry a bit about Microsoft. While tied for third place in Financial Executive’s survey for “best boss,”²⁷ Bill Gates is seen as the quintessential “modern-day robber baron” who can create a monopoly without it appearing to be one, and who can make a product like Windows as addictive as the products of RJ Reynolds. Yet, Cusumano and Selby point out that Microsoft’s weakness is precisely its dependence on Bill Gates.²⁸ He is the undisputed leader of Microsoft, but he is also one human being. With increasingly complex scenarios and potentials, Gates, brilliant though he may be, has limitations—be it time, attention span, motivation, or wisdom.

Creativity within the Organization

For companies that attempt to foster innovation from within the ranks, a number recognize the importance of dissent or of being a “maverick.” They often try to limit the fear of failure and promote risk taking. Anecdotal evidence abounds, such as when Robert Johnson (Johnson and Johnson) is reputed to have congratulated a manager who lost money on a failed new product by saying, “If you are making mistakes, that means you are making decisions and taking risks.” Coca-Cola actually celebrates the failure of its sweet “New Coke,” the venture in 1985 that proved to be ill-advised—except for the fact that Coca-Cola

learned something important: Coke's strength was its image, not necessarily its flavor.²⁹

Some companies even tout an ideology that permits employees to buck top management. Marriott says that "if managers can't explain why they're asking employees to do something, they don't have to do it."³⁰ DuPont grants employees money to pursue projects turned down by management. Hewlett-Packard instituted a "medal of defiance," presumably based on an employee (Chuck House) who defied David Packard in continuing to work on a computer graphics project, one that eventually turned out to be a big money maker.³¹

Even with such statements and medals, it is unlikely to reduce employees' concerns about defying management. While most of us would like to believe that we are tolerant of dissenting views, the initial inclination of anyone—whether they are management or workers—is to underestimate and resist viewpoints that differ from their own. The tendency is to consider them false, unworthy of reflection, and often indicative of poor intelligence or an undeveloped moral character.³² With such a reaction from management, no matter how subtle, most would not "defy." One has only to wonder whether Chuck House would have been given a medal had his project turned out to be a failure.

Perhaps more effective are concrete mechanisms instituted by some companies that actually limit the control of upper management or that actively remove some of the inhibitions to creativity. For example, GE has work-out groups where employees voice their gripes—though it appears that the number who actually do so are in a minority. Pfizer under Edward Steer sent its R&D center overseas. Presumably this frees the researchers since they are removed from authorities in New York; it also permits entry into overseas markets more readily. Other companies actively recruit heterogeneity in teams, hoping for diversity of viewpoints. Chrysler was one of the first to put together heterogeneous teams (manufacturing, marketing, and engineering) to work on the same automobile design.³³ Motorola and 3M regularly use "venture" teams of people from various disciplines,³⁴ a practice that research suggests will enhance the quality of decisions.³⁵

Other companies have attempted to institute classic brainstorming techniques, the elements of which include refraining from criticism of an idea and attempting to build on the ideas of others. Raychem, for example, promotes the stealing of ideas, all for a good cause. Recognizing that employees often suffer from a "not invented here" syndrome—that is, if we didn't invent it, it's not very valuable—they give an award for adopting others' ideas from within the organization. The trophy and certificate say, "I stole somebody else's idea and I'm using it." And the originator of the idea? He or she gets a certificate saying, "I had a great idea and 'so and so' is using it."³⁶ This is a clever concrete mechanism for inducing the basic brainstorming tenet of building on others' ideas.

Creativity Within: The Corporate Culture

Motorola is described as having an especially contentious corporate culture. Gary Tooker, CEO and Vice Chairman, is seen as "a master of the company's usually contentious, sometimes profane discussions that pit manager against manager and business unit against business unit, often in pursuit of conflicting technologies."³⁷ An example is the development by the Land Mobile sector of a combination cellular phone/pager/two way radio (MIRS), which utilizes specialized mobile radio frequencies (SMR). This competes directly with the alternative cellular duopolies and could undermine its other sector, General Systems. Do they worry about internal conflict? Motorola mainly believes in the free market and as Chris Galvin, President and COO explains, a "willingness to obsolete ourselves."³⁸

3M is almost everyone's choice for a prototype of innovation. Well known is their "15 percent rule" where employee devote up to 15% of their time pursuing ideas of interest to them that may have potential value for the company. And equally known are their demands for performance—25% of sales coming from products introduced in the last 5 years plus 10% growth in sales and earnings, 20% return on equity, and 27% return on capital employed. With these demands, however, are support systems ranging from seed money, mechanisms for linking employees (e.g., through e-mail) and, apparently, a deeply held conviction by management that one needs to respect ideas coming from below and that people may need to fail in order to learn.³⁹

One of 3M's classic stories is the development of Post-it notes—which, in fact, was aided by a failure. The glue eventually used for Post-it notes was a failed attempt by Spencer Silver to develop a super strong glue. Art Fry, singing in his church choir had trouble marking his hymnal with pieces of paper; they would slip out. Then came the idea: "What I need is a bookmark with Spence's adhesive along the edge."⁴⁰ And thus Post-it notes were conceived. It should also be mentioned that marketing was initially skeptical, but the case was made when they found that the notes were already being used extensively among 3M's internal staff.

DuPont actually tries to teach creativity skills. Using their own in-house training center, there is a recognition that creative ideas need to be implemented. Thus, a senior manager or department controls the funds and resources that will permit the translation of the idea into concrete action. Workshops not only include managers and employees who are knowledgeable about the technology under discussion, but they make sure that there are also individuals who, while competent, are not particularly knowledgeable about the issue. They are the hoped-for "wild cards" who will bring fresh perspectives. Finally, the individuals are taught to avoid the "inhibitors" of creativity. They are vigilant about indications of convergent thought; for example, they are "on guard" about tendencies to make an idea fit with a preconceived notion. Further, people are

encouraged to suspend their own knowledge, experience, and expertise and to play with each idea.⁴¹

The Fit with “Creativity” Research

Many of the devices utilized by Motorola, 3M, and DuPont are consistent with available knowledge about good problem solving and creativity. There are attempts to make groups heterogeneous in the hopes of gaining diverse views. There are cautions about convergent thought, about premature criticism of an idea. People are given time and resources to “play” with ideas and yet are encouraged by clear goals. Yet it is the recognition of a “contentious atmosphere,” the “bickering, tension, and dissent” described at Motorola that may provide better insight into creativity than most executives and researchers realize.⁴²

While the literature on creativity is somewhat mixed, the profile used to describe the “highly creative” individual includes personality traits such as confidence and independence, a preference for complexity over simplicity, for some disorder rather than for everything neat and tidy, a tendency for being “childlike though not childish,” and some indications of nonconformity and even rebellion in childhood. Creative people are characterized as high on personal dominance and forcefulness of opinion and, in addition, they tend to have a distant or detached attitude in interpersonal relations, though they are not without sensitivity or insight.⁴³ Play appears important, even random variations of thought.⁴⁴ Such profiles have also appeared in my own recent series of interviews with Nobel laureates. Most were aware of being “different” even as children. Most had to buck conventional wisdom and collegial skepticism in their continued pursuits. And they were childlike, even at the age of 70+, playing with metaphors from completely different disciplines.⁴⁵

Such a portrait of the “highly creative” would suggest that they would not be drawn to nor nurtured by a highly cohesive corporate culture, one that demanded strict adherence to company norms, attitudes, and values or one that demanded “belonging” and a high degree of in-house socializing. Creative people and the creative process need independence—at least independence in thought. They need to be able to break premises, to pose questions differently. The need to be an “outsider,” a person who can effectively interact with others but who remains a marginalized from the group. The research often notes such outsider status on the part of the highly creative and it is a persistent theme among the Nobel laureates that I interviewed.

Creativity in Groups: The Role of Dissent

While we often tend to think of creativity as an individual phenomenon, it is important to recognize the importance of groups. First of all, most discussion and decision making occurs in groups and, thus, the influence processes and

interactions that occur become important in their own right. Secondly, and more importantly, groups can strongly hinder *or* promote individual creativity and the quality of individual judgments and solutions to problems.

As noted, most of the research literature emphasizes the negative aspects of groups—the fact that groups can hinder creativity. In groups, individuals have an overriding fear of social embarrassment and ridicule and they are reluctant to voice differing views. Thus, most attempts to raise the quality of group decision making and creativity have concentrated on how one might diminish these fears and thus give “voice” to differing viewpoints. Encouraging risk, asking people to refrain from criticism, and promoting the idea that people should build on the ideas of other are all attempts at “freeing” the individual from the fears that silence him.

Recent research, however, shows that groups are not just inhibitors of good decision making and creativity. Rather, groups can actually stimulate creativity and better problem solving on the part of each of the individuals. The key is the presence of dissent, of exposure to minority viewpoints that are assumed to be incorrect, that are likely to be ridiculed, and that are likely to invoke rejection. Such minority views stimulate more complex thinking, better problem solving, and more creativity.⁴⁶

One aspect of good problem solving is a willingness to search the available information and, importantly, to search it in a relatively unbiased way. When we are faced with a majority dissent, we tend to look for information that corroborates the majority view. However, when the dissent comes from the minority, it stimulates us to reassess the entire issue and, in the process, search for information on all sides of the issue.⁴⁷

In addition to information search, minority views have also been found to stimulate what we call “divergent thought,” where people are more likely to consider the issue from various perspectives. For example, when faced with a minority view, people utilize all strategies in the service of problem solving. They come at the problem from all possible directions and, in the process, find more solutions. In fact, stimulated by minority views, they perform much better than they would alone.⁴⁸

Still other studies demonstrate that minority viewpoints stimulate original thought. Thoughts are more “unique”—that is, less conventional. People exposed to minority views are also more likely to come up with original solutions or judgments.⁴⁹

What is important about these findings is that the benefits of minority viewpoints do *not* depend on the “truth” of the minority position. The findings mentioned above hold whether or not the minority is correct. It is not because the minority holds a correct position that decision making and problem solving are enhanced. It is because dissenting views by a minority of individuals—right or wrong—*stimulates* the kinds of thought processes that, on balance, lead to better decisions, better problem solving, and more originality.

Concluding Thoughts

Many people are wary of dissent because it poses conflict and can strain the cohesion and camaraderie of a well-functioning group. Further, it can impede organizational goals by questioning the established routes to success. This concern is given further credence by the examples of companies who have thrived on strong corporate cultures that emphasized uniformity, loyalty, and cohesion as efficient mechanisms for achieving its goals. The problem with such efficiency is that it results in a lack of reflection. If the path to success changes, there is no provision for flexibility, adaptation to new circumstances, or innovation.

It is tempting to conclude that innovation can be achieved simply by using these same cultural norms—uniformity, loyalty, and cohesion—along with a system of rewards or encouragement from the top. Yet, creativity in individuals and innovation at the organizational level are not so easily produced. Rather, the ability to think “outside the box,” to find truly original solutions to old problems, requires the freedom to break the rules and to consider different options without fear of reprisals or rejection. As the research findings show, dissent actually stimulates originality and better decision making procedures. When challenged by minority views, people reappraise the situation. Without such stimulation, people tend to be complacent, relying on the agreement of their group. With exposure to minority views, people come to recognize that their own views may be incorrect, or at least partially incorrect. As a result, they search anew, they think anew, and, in the process, they consider new options and achieve greater clarity.

There needs to be a “welcoming” and not just a tolerating of dissent. Dissent is a very economical mechanism for producing innovation. By harnessing the power of conflict, one can limit complacency and even substitute robust thought. Complacency is the real danger. Even with the best of intentions, people are loathe to consider alternatives when convinced of the truth of their own position. They tend to search for confirming information, augment their own views, and punish dissenters. Dissent breaks up that complacency and sets in motion thought processes that ultimately result in better and more original solutions. If an existing idea is correct, it is likely to remain with even greater clarity as a result of the challenge of dissent; if it is flawed, most likely it will be replaced by a better one. Either way, the group and the organization will profit.

Notes

1. B. O'Reilly, “The Secrets of America’s Most Admired Corporations: New Ideas, New Products,” *Fortune*, 135/4 (March 1997): 60-64.
2. J.C. Collins and J.I. Porras, *Built to Last: Successful Habits of Visionary Companies* (New York, NY: Harper Collins, 1994).
3. C.A. O'Reilly and J.A. Chatman, “Culture as Social Control: Corporations, cults and commitment,” *Research in Organizational Behavior*, 18 (1996): 157-200.

4. T. Ehrenfeld, "Out of the Blue," *Inc.*, 117 (1995): 68-72.
5. V.L. Allen, Situational Factors in Conformity," in L. Berkowitz, ed., *Advances in Experimental Social Psychology* v, 2 (New York, NY: Academic Press, 1965), pp. 133-175; J.M. Levine, "Reaction to Opinion Deviance in Small Groups," in P. Paulus, ed., *Psychology of Group Influence: New Perspectives*, 2nd edition (Hillsdale, NJ: Erlbaum, 1989).
6. M. Deutsch and H.B. Gerard, "A Study of Normative and Informational Social Influence upon Individual Judgment," *Journal of Abnormal and Social Psychology*, 195/51 (1955): 629-636.
7. S.E. Asch, "Effects of Group Pressure upon the Modification and Distortion of Judgment," in H. Guetzkow, ed., *Groups, Leadership and Men* (Pittsburgh, PA: Carnegie Press, 1951).
8. C. Nemeth and C. Chiles, "Modeling Courage: The Role of Dissent in Fostering Independence," *European Journal of Social Psychology*, 18 (1988): 275-280.
9. S. Schachter, "Deviation, Rejection and Communication," *Journal of Abnormal and Social Psychology*, 46 (1951): 190-207.
10. C.J. Nemeth, "Dissent as Driving Cognition, Attitudes and Judgments," *Social Cognition* (1995), pp. 273-291; C. Nemeth and P. Owens, "Making Work Groups More Effective: The Value of Minority Dissent," in M.A. West, ed., *Handbook of Work Group Psychology* (London: John Wiley & Sons, 1996), pp. 125-141.
11. C. Nemeth and J. Wachtler, "Creative Problem Solving as a Result of Majority vs. Minority Influence," *European Journal of Social Psychology*, 13 (1983): 45-55.
12. Levine, op. cit.
13. D.G. Myers and H. Lamm, "The Group Polarization Phenomenon," *Psychological Bulletin*, 83 (1976): 602-27.
14. J. Pfeffer, "Management as Symbolic Action: The Creation and Maintenance of Organizational Paradigms," in L.L. Cummings and B.M. Staw, eds., *Research in Organizational Behavior*, Vol. 3 (Greenwich CT: JAI Press, 1981), pp. 1-52.
15. Collins and Porras, op. cit.
16. T. Peters, "Crazy Times Call for Crazy Organizations," *Working Woman*, 19 (1994): 1-8.
17. (Luchins, 1946) A.S. Luchins, "Classroom Experiments on Mental Set," *American Journal of Psychology*, 59 (1946): 295-298.
18. T.J. Watson, *A Business and Its Beliefs: The Ideas that Helped Build IBM* (New York, NY: McGraw-Hill, 1963).
19. B. O'Reilly, op. cit.
20. A.F. Osborne, *Applied Imagination* (New York, NY: Scribner, 1957)
21. J.E. McGrath, *Groups: Interaction and Performance* (Englewood Cliffs, NJ: Prentice-Hall Publ. Co., 1984), p. 131.
22. F. Summerfield, "Paying the Troops to Buck the System," *Business Month* (May 1990), pp. 77-79.
23. I.L. Janis, *Groupthink: Psychological Studies of Policy Decisions and Fiascoes* (Boston, MA: Houghton-Mifflin, 1972).
24. Ibid., p. 39.
25. Ibid.
26. See, generally, R.T. Pascale, "The Honda Effect," *California Management Review*, 38/4 (Summer 1996): 80-91.
27. "Who's the Best Boss?" *Financial Executive*, 12 (1996): 22-24.
28. M.A. Cusumano and R.W. Selby, "What? Microsoft Weak?" *Computerworld*, 29/40 (October 1995): 105-106.
29. G. Dutton, "Enhancing Creativity," *Management Review*, 85 (1996): 44-46.
30. Collins and Porras, op. cit.
31. Summerfield, op. cit.

32. Asch, op. cit.; Nemeth and Wachtler, op. cit.
33. B. O'Reilly, op. cit.
34. A.K. Gupta and A. Singhal, "Managing Human Resources for Innovation and Creativity," *Research-Technology Management*, 36 (1993): 41-48.
35. S.E. Jackson, K.E. May, and K. Whitney, "Dynamics of Diversity in Decision Making Teams," in R.A. Guzzo and E. Salas, eds., *Team Decision Making Effectiveness in Organizations* (San Francisco, CA: Jossey-Bass, 1995).
36. Gupta and Senghal, op. cit.
37. R. Henkoff, "Keeping Motorola on a Roll," *Fortune*, 12 (1994): 67-78
38. S. Cabana and J. Fiero, "Motorola, Strategic Planning and the Search Conference," *Journal for Quality and Participation*, 18 (1995): 22-31.
39. "Deeply Embedded Management Values at 3M," *Sloan Management Review*, 37 (1995): 20.
40. "Post-it: How a Maverick Got His Way," *Marketing*, October 28, 1993, p. 31.
41. L.K. Gundry, C.W. Prather, and J.R. Kickul, "Building the Creative Organization," *Organizational Dynamics*, 22 (1994): 22-37.
42. G.N. Smith, "Dissent in to the Future," *Financial World*, 162 (1993): 8.
43. F. Barron, *Creative Person and Creative Process* (New York, NY: Holt, Rinehart and Winston, 1969).
44. D.T. Campbell, "Variation and Selective Retention in Sociocultural," *General Systems: Yearbook of the Society for General Systems Research*, 16 (1969): 69-85
45. C.J. Nemeth, *Those Noble Laureates* (1997, in progress).
46. C.J. Nemeth, "Differential Contributions of Majority and Minority Influence," *Psychological Review*, 93 (1986): 23-32; C.J. Nemeth, "Dissent as Driving Cognition, Attitudes and Judgment," *Journal of Social Cognition*, 13 (1995): 273-291.
47. C.J. Nemeth and J. Rogers, "Dissent and the Search for Information," *British Journal of Social Psychology*, 35 (1996): 67-76.
48. C. Nemeth and J. Kwan, "Originality of Word Associations as a Function of Majority vs. Minority Influence Processes," *Social Psychology Quarterly*, 48 (1985): 277-282.
49. Ibid.; C.K.W. DeDreu and N.K. DeVries, "Differential Processing and Attitude Change Following Majority and Minority Arguments," *British Journal of Social Psychology*, 35 (1996): 77-90; R. Martin, "Minority Influence and Argument Generation," *British Journal of Social Psychology*, 35 (1996): 91-113.