Managing Personal Creativity

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Walk into any preschool, and you'll find some of the best creative thinking anywhere: finger paintings with purple people and polka-dot skies, fanciful tales of magical, far-away places. There are lessons for the corporate world in the day care center downstairs.

Young children are naturally creative. They must create ways to learn and construct a world view from a collection of initially disconnected events and colors and movement and sound. So what happens between the open, effortless experimentation of our childhood and the blocks in creative thinking experienced by many adults? Sociological, psychological, physical, and behavioral factors conspire to stifle our natural ability for original thought. And overcoming those barriers is one key to recapturing our creativity.

This is not news to corporations. Many organizations have responded to competitive and economic pressures with the conviction that creativity and innovation are the keys to success. In fact, a June 1995 study commissioned by the U.S. Department of Labor and conducted by Ernst & Young with the Harvard and Wharton business schools, found that 85% of U.S. companies are currently involved in workplace innovation programs. Such programs usually include training managers in effective group processes as well as coaching teams on how to generate ideas and then implement the most promising ones.

The success of such group-oriented programs varies widely. Many companies have been extraordinarily successful at bringing innovative products and services to market through the effective use of teamwork. Others founder because of such factors as inadequate training or a lack of organizational commitment to the programs. But there is one approach that can help both successful and unsuccessful companies better

achieve their goals for innovation: developing the personal creativity skills of individual members of an organization.

Personal creativity, as defined here, means the ability of an individual to create new, relevant ideas and perspectives. Today very little attention is given to developing the creative thinking skills of individuals within organizations. But in our work with clients in a wide array of industries--nearly half of the Fortune 500 companies and thousands of individuals--my colleagues and I at Synecticsworld have observed and tested techniques that can help people strengthen their innate creative abilities and problem-solving capacities. The techniques and exercises presented in this article were identified and tested at Synecticsworld on a wide variety of clients over the course of many years. Many have been used by creative people long before Synecticsworld noticed them. Synecticsworld's role was to isolate and experiment with the techniques, altering them as needed to produce reliable, quick results.

Developing personal creativity involves the following four elements:
understanding the process of creative thinking,
identifying blocks to creative thinking and the skills individuals can use to increase creative response,
using methods to get fresher ideas and solutions more often, and
identifying a personal creative drive and life-long creative vision that will help individuals achieve their personal and professional goals.

We have assembled these elements in a flow that makes sense to most of our clients. Start with a model of the creative thinking process (as a mental guide for what and how we learn). Address the things that block creative thinking (because we will need to identify and deal with those blocks in later exercises). Understand and exercise the underused mental functions that can encourage creative thought (because they will become invaluable in later techniques). Show ways to get new thoughts on demand (using our newly exercised creative capacities). And discuss the role of evaluation (because we all link evaluation to ideas, but often do a poor job of evaluating those ideas).
Each step in the process of developing personal creativity can be focused on independently; and every exercise has been found to have some positive effect on a person's level of creative response. Used collectively, however, the steps and exercises produce better results.

A Model of the Creative Thinking Process

Synecticsworld developed a model of the creative thinking process for the purposes of training clients. (See Figure 1.) It depicts the dynamics most critical to generating new thought: Where do thoughts come from? How does a person get new thoughts? What interferes with the process of getting new thoughts? What sort of thoughts should you be looking for? and How do you work with these thoughts--in particular, how do you negotiate between interesting, new, but seemingly impossible ideas and less original, but safe ones that can be implemented easily?

Where Ideas Come From. Moving from left to right along the where ideas come from spectrum, shown in the top row of the model, we progress from the sources of the most conventional types of thinking to the sources of the most original thought. The left half of the spectrum--thinking governed by conditioning and by rationale--represents the types of thinking practiced by most people most of the time. We are dependent on these kinds of thought patterns, and for good reason. They have given us cars that go, and planes that stay in the air. But we can be so dependent on them that we don't question them when they no longer work for us--when we are confronted by a problem and just can't seem to find a new solution.
Creative people have conscious and unconscious strategies and ways of thinking that help them access fresh ideas. The right half of the spectrum--strategic creativity and ungoverned thinking--represents those ways in which people can more readily access original thought. In the strategically creative mode of thought, people let their minds wander. They walk away from the problem, sleep on it, turn it upside down, think in metaphors--all patterns of thought that do not come naturally to those accustomed to working in results-oriented business environments. The ungoverned end of the spectrum works well for some, but only the boldest feel comfortable exploring this domain where chance and accident reign. Whether one explores the farthest reaches of the spectrum or not, the more the mind can range across the entire spectrum of thinking, the more fresh ideas will spring forth.

Blocks to Creative Thinking. What prevents the mind from ranging across the spectrum? From the time we are young, parents, peers, supervisors, school, and society all teach us that experimentation can be harmful to ourselves and to others: "Don't play in the street." "That's gross." "Do you have permission to do that?" "Better clear the idea with your boss first." Statements like these emerge from both external and internal blocks to creative thinking, depicted in the second row of the model.

Reliance on Rational Thinking. Certain forms of thought have proved historically to describe the way things are and to predict the results of events reliably. These forms of

thought have been captured and classified by philosophers and teachers, and have been handed down through generations. They work well. Logic, originally conceived by Aristotle, has never been changed, only embellished. The scientific method of inquiry has led to cures for cancer and man's walk on the moon.

Teachers, scientists, and most bosses reward us for using these established thinking patterns; and they discourage us, sometimes in almost unnoticeable ways, from varying from those patterns. Eventually, this reward/punishment behavior becomes internalized, and we don't even notice that we are judging our own thinking by the reinforced patterns of thought. But when we are uncomfortable exploring outside approved patterns of thought, we tend not to think beyond the ideas those before us have thought – and we have little chance of thinking originally.

Self-Censoring. A complex assortment of mental mechanisms prevent us from coming up with new ideas. These mechanisms are often triggered by past experiences and eventually become unconscious. In fact, our experience in the world affects our ideas and how we come up with them. Our external environment tends to discourage behavior more than it encourages it: good behavior is expected and so goes unnoticed and unrewarded, whereas bad behavior is the exception and is punished. Conditioned by the feedback we receive, we soon come to be on the look out for possible dangers and try to avoid those behaviors that court harm. New ideas have a higher potential for danger, so we learn to be suspicious of them. Eventually, our self-censoring mechanisms become so internalized that many of our ideas and potential ideas become inaccessible to our conscious mind. Fears of ridicule or reprisal, past failures, lack of expertise, fitting into a hierarchy--by moving self-censoring mechanisms like these into our consciousness, we can begin to defuse their power.

Self-Punishment. Our internal environment, what we think about ourselves, has as great an influence on our creative response as the external environment. Internal blocks, however, can be far more insidious than external ones because seldom can we perceive their effects on our behavior. Have you ever said to yourself, That was a stupid idea, or, You dummy. Have you ever hit yourself when you made a mistake? Imagine how few risks you would take if your boss or your friend upbraided you in this way every time they thought you were mistaken. Self-punishment can extinguish the risk-taking behavior that is critical to creativity. It sets up the same fear-avoidance patterns discussed in the self-censoring section above; these internal mechanisms can also begin to act on ideas before we even have them.

Self-esteem plays a significant role here. We have observed that those participants in Synecticsworld's courses who have higher self-esteem tend to be freer with their thinking and are more prepared to try to act on risky ideas. Why? We hypothesize that people with relatively high self-esteem make conscious or unconscious calculations on the possible reward of an idea; they believe in their ability to execute an idea successfully despite uncertainty and risk, whereas people with low self-esteem expect a higher probability of failure.
Ideas that Form in the Mind. The third row of the model, labeled ideas that form in the mind, concerns thoughts that we still have not expressed but now recognize as ideas or possible solutions to the task at hand. Moving from left to right along the spectrum, we progress from predictable ideas to those that surprise us. Because each of us is unique, much of what we consider to be predictable in our own thinking can appear fresh to others. But predictable ideas are the result of thinking according to our habitual patterns of thought. They are usually very specific, very doable--and very safe. They are the path of least resistance, a form of bad habit, really, and by consciously opting for a different path, we are doing our creative selves a favor.

To increase our creativity, we need to move to the right on the spectrum and come up with ideas that surprise us. Surprising ideas may tend to be more directional than specific in nature, and they can appear as fuzzy, vague, or semiformed thoughts--thoughts we are conditioned to devalue. But many innovations in the world have resulted from someone holding onto a vague notion, a direction in thinking, and working in that direction until the idea crystallized and then became an innovation. Edwin Land's daughter launched him in a new direction when she said, "I wish I could see the picture you just took now." That direction led to the research that eventually produced the Polaroid camera.

Surprising ideas are not easy to come by. Accessing them requires confronting and overcoming self-censoring blocks and venturing into the strategically creative and ungoverned end of the where ideas come from spectrum. It takes hard work; often it takes courage.

Ideas that Are Acted On. The final row of the model, ideas that are expressed or acted on, represents when we actually articulate a thought or act on it. It is here that the potential threat to our ideas escalates. We can become subject to ridicule; we can fail. Acting on ideas is a subject for another article, but it is important to point out in this context that anticipating potential threats can dissuade us from ever forming or recognizing those ideas in the first place.

Elevating Creative Response

As we grow and negotiate the world around us, we latch on to certain patterns of thinking. Soon those patterns become such automatic, unconscious habits that we are no longer able to question their efficacy. At Synecticsworld, we have observed that certain patterns of thought are in use more often in creative work than in everyday business-as-usual thinking. In our research with participants in our courses, we have created exercises to "strengthen" these creative patterns. When you go to a gym and exercise unused muscles, you find your entire body functions better over time. Similarly, we find that when people use these exercises, they reclaim parts of their ability to think creatively, and their entire mind begins to work more effectively over time.

Creativity Exercises.

The thinking skills involved in the following exercises underlie the idea-generation techniques we use with clients. These exercises tend to increase the creative acuity of our clients. They have also been shown to have a positive impact on individuals' creativity scores in research studies (Grossman, 1993; Sternberg 1996).

Imaging.

Flexing mental abilities in different ways allows the thinker to range more freely around a problem and access new perspectives, ideas, and potential solutions. This exercise entails drawing on and describing images and senses--sights, sounds, smells, taste, touch. For example, consider this passage from Kidnapped, by Robert Louis Stevenson: "Uncle Ebenezer trudged in the ditch, jogging from side to side like an old ploughman coming home from work. He never said a word the whole way." What images come to mind from this passage? What do you think Uncle Ebenezer looked like? What was he wearing? What sort of day is it? What is the quality of the silence? Can anything be heard? Can you describe the smells and sounds and sights in the scene?

The following exercise uses a complex of thinking patterns--excursion, improvisation, analogy, and metaphor--but it relies primarily on imagery. You can bring this technique to any personal or professional dilemma you are facing. Imagine the problem as a scene in a movie. Picture the entire scene in your mind. Who are the main actors? Who are the secondary ones? What are their relationships? What is the main plot? The subplots? Now play with the scene. Imagine new plot twists, different roles for the characters. Do you gain any new insights into or perspectives on your problem?

Wishing. Recall how extravagant your wishes were as a child. As we mature, we learn to wish increasingly within the limits of the possible. People become accustomed to judging ideas, not wishes. Reinstituting the act of wishing brings us back to our childhood patterns when more things seemed possible.
In this exercise, consider a problem you are confronting. Set aside ten minutes to wish for the seemingly impossible. Come up with at least 25 wishes; stretch for a few. Can you think of any new approaches to the problem based on those wishes?

Conrad Paulus, manager of new product development at AT&T, came up with innovative ideas using this technique: "I got a wish for a product conference in a box (invitations and stuff you pack together and send out to set up a conference call). The wish originally came from my problem of how to sell more conference calling. I took it to a colleague of mine, and we decided to try it as a joint venture. We've never been able to do it--the idea blows up in all our new product research--and I still wish I could do it. We need a retail outlet for it." The fact that Paulus could not make his wish a reality in this case is less relevant than the act of wishing and how that act creates new ideas.

Discontinuity. We need to be forced out of our habitual pattern of synthesizing, of trying to put a confusing world in order. Ambiguity makes us uncomfortable--our minds want to resolve things that don't fit. The ability to synthesize is critical as a learning and survival mechanism, but sometimes we jump to resolution too fast. Much creative thought springs from coming to resolution only after prolonged periods of ambiguity. The following exercises help people delay resolution and become more comfortable with confusion and ambiguity.

Artists in the 1940s used to play discontinuity games to loosen their ingrained habit of making sense of the world. In one visually oriented exercise called the exquisite corpse, a piece of paper was folded several times. The folded paper was given to an artist who would start a drawing on one side, leaving lines that were part of the drawing extending around the edges of the first fold. The paper would then be turned over with just the ends of the lines showing, and passed on to another artist. That artist would draw on the new side, beginning with the lines, and in turn would leave unconnected lines for the next artist. After a few rounds, the paper was unfolded, and the artists would interpret the drawing.
In our courses, we use a verbal form of that exercise. Individuals begin a story but are asked to insert a large and obvious discontinuity into the plot line. Each subsequent

participant is charged with increasing the incidence of discontinuity.

Elizabeth Deane, executive producer of long-form documentaries at WGBH-TV, provides an example of this behavior: “Over the course of several projects, Vietnam and The Nuclear Age especially, I kept running into Richard Nixon. First in making Vietnam, I encountered him as a president who was elected to end the war and kept trying to get us out of it, or saying he was trying to get us out. But the war dragged on, and he was vilified for it. Then I ran into Nixon again when I was working on The Nuclear Age. I was impressed by his achievements in foreign policy--the opening to China, for example, and especially the SALT talks. I remember sitting in my office one afternoon, reading about the triumph of that first SALT treaty. And I discovered in the next paragraph that only a few days after that treaty was signed, the first Watergate break-in happened. I remember coming across that juxtaposition. I was in my office, looking outside, and just sort of hovering over this information when things in my mind got suddenly very quiet. I remember remarking, ‘My goodness.’ And I knew that those two events, so close together, really captured Nixon and crystallized what made him so interesting to me. With Nixon, I think you have to live with those conflicts and contrasts and ambiguities in order to understand him. That fascinated me. I knew I wanted to do a film about this man.”

Improvisation.
Although defying synthesis is a useful exercise, bringing together thoughts that are not known to cohabit easily can strengthen the creative faculties as well. This is the stuff of improvisation – an exercise in creating and resolving ambiguity simultaneously.

For example, use three random objects--say, a table, a stuffed bear, and a full moon--as the principal elements in a story. Write the opening paragraphs of the story. Now take two more elements--say, taking a swim and software--and write a few more paragraphs, weaving them into the story. Next write the table and the software out of the plot. By repeating this exercise from time to time, using different random objects or concepts, participants in our courses become more comfortable with surprise and gain more facility and flexibility in dealing with change.

Insight.
These exercises remove our habit of seeing in the usual way and force us to trust our insight. Examples include walking backwards, looking at paintings upside down or in mirrors, making first impressions important, and trying to “see” music or “feel” prose.

Insight exercises can be disorienting because they remove the signposts we use to order the world. But out of this confusion a more meaningful order comes. As Soren Kierkegaard wrote in 1854, “And this is the simple truth: that to live is to feel oneself lost. He who accepts it has already begun to find himself, to be on firm ground. Instinctively, as do the shipwrecked, he will look around for something to which to cling; and that tragic, ruthless glance, absolutely sincere because it is a question of his salvation, will cause him to bring order into the chaos of his life. These are the only genuine ideas, the ideas of the shipwrecked. All the rest is rhetoric, posturing, farce.”

Connection-Making Mechanisms.
The above exercises can help us strengthen our ability to think more creatively, but in order to generate new ideas, we have to uncover novel ways of forming connections in our minds. New ideas are forged by uniting two or more already existing thoughts. The history of invention is rife with examples of accidental connections that produced innovations. For instance, a Swiss inventor, George de Mestral, noticed burrs stuck to his dog’s coat and his own pant leg after a walk in the woods. He used this observation to invent Velcro.

Or consider Larry Cox, a manager and scientist at Lincoln Laboratory: “One problem we were working on for a client was that of finding a new way for noninvasive glucose monitoring in the body. Currently, the way diabetics monitor their glucose levels is to prick their finger four or so times a day and test the blood. Working to find a new way with my client, we brainstormed for a day and got a lot of ideas. My antenna was now up. I saw more potential links, saw an increased number of potential ideas. Then I met a colleague at the lab, and he was talking to me about electroporation--where an electrical charge can widen pores in the body to allow medicine to get in. He was showing me a paper on the pressure dimension, on a finding that all the results suddenly became more predictable when the pressure reached a certain limit, ten times what is usually used. It was at this point that the idea came to me. Pressure. We don’t need to porate the skin completely. We just need to make the glucose more accessible to the surface of the body and our sensitive instrumentation.”

Like George de Mestral, Larry Cox made a connection between two seemingly unrelated things: the problem of glucose measurement and the electroporation data. This connection, once noticed, quickly developed into an idea for a new way to measure glucose.

Synecticsworld found, through experimentation, that this pattern can be used to create

a seemingly endless supply of new ideas on any particular problem or opportunity. Most people, when faced with a tough problem, tend to keep working on it using the synthesizing pattern that works so often--and so well--with the myriad problems they face daily. They comb through their memories for answers or data or similar situations; they then apply what is retrieved to their problem and fine tune the connection to fit the problem at hand. When nothing that is retrieved works, they tend to give up, at least for a while.

That is precisely the right thing to do. Giving up, although counterintuitive for most people, allows the unconscious mind to range farther afield. Later, an accidental new connection is sometimes made; it is then recognized as important to the problem and worked into an appropriate new solution.

By following this pattern, individuals can strengthen their connection-making mechanisms and force new ideas into being. The pattern is four-fold:

put the problem out of mind;

allow new, seemingly irrelevant information to occupy your attention;

find ways in which the new information connects to the problem; and

work on the connections to build a new idea for a solution to the problem.

The examples in the enclosed table show the idea-generating mechanism at work. (See Figure 2.) Using analogy, metaphor, and absurdity allows the mind to forge new connections. You can apply the same structure directly to issues you are considering in order to come up with new ideas.

Reframing Evaluation. Learning how to come up with new ideas is critical to developing personal creativity, but it is also important to examine how ideas, once gotten, are treated. Like our habitual patterns of thought, we have acquired a pattern for evaluation to help us negotiate life. We are taught to evaluate ideas for relevance and feasibility, and the more rapidly and sensitively we do that, the more efficient we become at making the hundreds of decisions we need to make daily. This pattern, like the other unconscious thinking patterns, has to be adjusted when creativity is our goal.

When it comes to evaluating ideas, we fall into a pattern of fault finding, which is rooted in the scientific method: build a hypothesis, attack it with vigor, and repeat until a hypothesis can stand all attacks. Any new idea can be considered a hypothesis. Imagine the effect on our self-censor and self-image when our ideas are under constant attack. No wonder we give up the fight to be original. If we wish to become more creative, we need to learn to treat our new ideas in a “friendlier” way.

One way we can do just that is by deferring decisions. In a study of art students, Getzels and Csikszentmihalyi (1972) identified a pattern of behavior, which they

termed problem-finding behavior, that correlated strongly with the students' tested levels of creativity and with professional success later in their careers. The people in the study of high creativity and high success were more likely to change directions, to go wherever a new idea took them. Final decisions were put off. A work was seldom, if ever, considered finished, just put aside for the moment.

Deferring closure on a final solution allows more time to be spent exploring a variety of approaches. It promotes creativity by leaving the issue open to increasing connections and a greater degree of richly unresolved ambiguity. Elizabeth Deane comments on the process: "Everything is deceptively clear when you start a project and you don't know very much. But then it becomes less and less clear as you learn more, as you do the research and the digging. Then you get to a stage where a newer, richer idea emerges. Still, the benefits of exploration and discovery have to be weighed against costs in terms of the budget and the production schedule. There is a tension." Deane brings up a salient point. Deferring closure contradicts common management practice: decisions are made and frozen in order to implement those decisions throughout the organization and coordinate multifunctional tasks.

Three exercises can help individuals think creatively about a problem while forcing them to defer deciding on a final solution. The first is the forced-plus exercise: Write down two potential solutions to a problem, each at the top of a sheet of paper. List four plusses, or benefits, for each idea. Think again about each solution. Do you see them in a more positive light? The second is the next step exercise: Write down two solutions for a problem, each at the top of a sheet of paper. List the next steps you would take to execute the solutions. Think again about the solutions. Do you see them in a more positive light? The third is the serial-building exercise: Choose an idea that is interesting to you. Think of a way to improve it, then put it away for a while. Come back to the idea and its improvements. Add another improvement, and put it away. Repeat this process several more times. Synthesize all your thinking and improvements into another solution to your problem.

The Drive and Vision to Create

Creating new things is inherently fun and, for some, necessary. But any new way of thinking requires continual practice, and some clients who complete our program in creativity lose their skills in a matter of months because they stop flexing their creative muscles. In much of the world--and the business world, too--there exists considerable hostility to creative ideas and efforts. A firm we worked with even has the terms career-limiting idea and career-terminating idea in its lexicon. One study shows

that groups of new employees, hired to be more creative than existing ones, eventually stop using their creative abilities and come to resemble their less creative counterparts. Why? Our hypothesis is that a complex set of expectations and norms were already in place in the organizations. As the new creative groups of employees brought fresh thinking into the establishment, they threatened established norms. In order to protect those norms, other employees brought increasing levels of judgment to bear on the new ideas until the creative group matched the existing organization. Much of the change wrought in the more creative group was found to occur through attrition, but not all of the change. First, new employees exhibited "coping behavior," then distress and job dissatisfaction; finally, many left the companies (Holland, 1991).

A few creative thinkers find ways to persevere in the face of such hostility, and it is from that small group that innovative ideas emerge. How can individuals nourish their drive to create? How do you make creativity stick?

Identify What's Important. Make a short list of the things you want most in life. (Money for most people is only a means to something else – what is that something?) This is no easy task and can take days or even weeks. Exercises can help. What would you like to do before you die? Collect metaphors or images about your ideal self, extract thoughts from those metaphors, and put them on your list. Who are your heroes? What qualities or accomplishments do you most admire in them? Put those on your list. Write your obituary. What would you want it to say? Robert Fritz, who has spend much of his life thinking and writing about the creative drive, suggests that you consider adding three things to your list if they are not already there: be true to yourself, choose freedom, and be the predominant creative force in your own life.

Larry Cox sees his lifetime dedication to creativity as follows: "Everything starts with who I am--connects back to me creating who I am and realizing who I am meant to be, what my purpose is and what are promising approaches and directions. And then I get interested in following up on those promising directions, and moving over to them and getting to see what else is beyond."

Identify What Keeps You from Reaching Those Goals. For many people, knowing what they want--and trusting in that--is enough. They believe that their own drive will bring them there eventually. Some of the techniques in this article may be helpful in accelerating their arrival. For others, there are roadblocks: physical, psychological, or structural restraints that get in the way of them ever moving toward their ideals: "I can't do that now; I have responsibilities" or "That would be great, but I can't do it

because of religion, children, phobias, money." Each of us has a calculation to make about the importance of the goal and the importance of the roadblock. Reality plays a part; again, courage may be called on.
Use creativity to find new ways of reaching your goal of a more creative self. Or identify the roadblocks, and, one at a time, use some of these techniques to find new ways to overcome them. Remember, too, that in some cases there is no arrival. Freedom means reaching for the goal. It lies in the direction, not the destination.

Creative Individuals, Innovative Organizations

Most individuals and most organizations have similar goals regarding creativity – both want more of it. And organizations know their ability to innovate lies in the creativity and abilities of their people. The individual needs to understand and adopt internal thinking processes that increase the potential for new thinking. Organizations have to do the same. The processes and patterns are different when applied organizationally because they have to account for a collective diversity. But the same underlying mechanisms can produce creative individuals and innovative organizations.

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