ORTHODOX BRAINSTORMING

> "The general that hearkens to wise
> counsel and acts upon it will conquer."
>
> SUN TZU

When you look into a kaleidoscope, you see a pattern formed by colored crystals. If you then add a new piece of crystal and manipulate the drum, you have a multitude of new patterns. Likewise, when a group brainstorms for ideas, they produce a number of ideas. These ideas produce a number of random combinations linking variations together; it's like adding crystals to a kaleidoscope. You create a multitude of new possibilities.

Following are some of my favorite orthodox brainstorming techniques that can help lead you to a multitude of new ideas.

SILENT TECHNIQUES

Brainwriting. Horst Geschka and his associates at the Batelle Institute in Frankfurt, Germany, developed a variety of group creative-thinking techniques called "brainwriting." In traditional brainstorming groups, people suggest ideas one at a time. This is *serial* processing of information, in that only one idea is offered at a time, in series. Brainwriting, in contrast, allows multiple ideas to be suggested at the same time. This is *parallel* processing of information, in that many ideas can be produced at once, in parallel. Thus, brainwriting increases idea production dramatically. If a brainwriting group has ten members, up to ten ideas will be generated for every one generated in a typical brainstorming session of ten members.

The basic guidelines are:

1. First, discuss the problem to clarify it. Write the problem in a location visible to all group members.

2. Distribute three-by-five-inch index cards to each participant and instruct them to write their ideas on the cards, one idea per card. Where group brainstorming involves participants shouting ideas out loud, brainwriting has people generate ideas by silently writing them down. As participants complete a card, they pass it silently to the person on the right.

3. Tell the group members to read the cards they are passed and to regard them as "stimulation cards." Tell them to write down any new ideas inspired by the stimulation cards on blank cards and then pass them to the person on their right. Within a few minutes, several idea cards will be rotating around the table.

4. After twenty to thirty minutes, collect all cards and have the group members tape them to a wall. The cards should be arranged into columns according to different categories of ideas, with a title card above each column. Eliminate the duplicates.

5. Evaluate the ideas by giving each participant a packet of adhesive dots and have them place the dots on the ideas they like. They can allocate the dots in any manner desired, placing them all on one idea, one each on five different ideas, or any other combination.

Brainwriting ensures that the loudest voices don't prevail, participants feel less pressure from managers and bosses, and ideas can't be shot down as soon as they are offered.

You can design your own brainwriting format based on the two principles: (1) idea generation is silent, and (2) ideas are created spontaneously in parallel. Some examples are:

- *Idea pool.* Ask participants to silently generate ideas on three-by-five-inch cards and place their cards in the center of the table instead of passing them to the person on their right. Whenever a participant wants or needs a stimulation card, they simply exchange their cards for cards from the pool.

- *Gallery.* This technique reverses the process. Instead of moving ideas around for people to examine, the gallery moves people around. Post sheets of flip-chart paper around the room, one per participant.

Participants stand silently and write their ideas on the sheets (one sheet per person) for ten to fifteen minutes. Then the participants are allowed fifteen minutes to walk around the "gallery," look at the other ideas, and take notes. Now, using the other ideas to stimulate further thought, participants return to their sheets and add to or refine their ideas. After about ten minutes of additional writing, the participants examine all the ideas and select the best ones.

- *Drawing ideas.* Another option for the gallery technique is to ask participants to draw or diagram their ideas instead of listing them. Drawing and diagramming is useful in creative thinking to recover information from memory that might otherwise be unavailable. For example, how many windows are there in your house? Diagramming your house allows you to inspect and count the windows. Creative insights sometimes occur as a result of drawing or diagramming a problem, because they help us notice certain features that may be overlooked. Post sheets of flip-chart paper and then ask the participants to draw a sketch or diagram of how the problem might be solved. Then the participants are again allowed to walk around the "gallery" and take notes. Using the notes, they return and refine their own sketches. The group then examines all the sketches and constructs a final solution from parts of different sketches.

- *Three plus.* Each participant silently writes three ideas on the tops of sheets of paper, one idea per sheet. The sheets are passed to the person on their right. That person writes down an idea that improves on the one listed at the top of the sheet. If participants have difficulty improving on the idea, ask them to list new ones. Do this for all three ideas. After five minutes or so, the idea sheets are again passed to the right. Continue the process until all members receive their original papers.

- *Airplanes.* Have each participant construct a paper airplane. Each participant writes down an idea on the airplane and sends it flying to another participant. Upon reading what's been written on the airplane, he or she writes down a modification or improvement of that idea, or an entirely fresh possibility and sends it flying to someone else. Continue the exercise for twenty minutes, then collect and categorize the ideas.

- *Wall of ideas.* Each participant silently writes ideas on sticky notes. While the group writes ideas, collect and paste them on a wall. When everyone is done, organize the ideas as a group. Ask the group to

come to the wall and sort out the ideas in a meaningful way. Eventually, the ideas will be clustered into different themes and categories. Label each set of ideas with a topic card and paste it over the idea set. Do this for each set. Participants can elaborate or express concerns by writing their thoughts on additional sticky notes and pasting them next to the idea or set of ideas. Prioritize the ideas by giving each participant ten adhesive dots. The participants prioritize the ideas by placing a dot or dots on the ideas they like. They can place as many dots or as few as they wish on an idea. The group discusses the most highly rated ideas.

Reynolds is the leading provider of integrated solutions that help automotive retailers manage change and profitability. After brainstorming, a group of managers broke down the barriers between sales and customer service by creating Voice of the Customer, or VOC. VOC regularly surveys customers to measure satisfaction and uncover issues. Any negative response is immediately sent to the "issue owner" in sales for resolution. For example, a customer expressed dissatisfaction with the profitability of a particular Reynolds solution. VOC reported the problem to the issue owner in sales. A sales team created an action list in a face-to-face meeting with the customer and began tackling the issues one by one. They and the customer identified lack of training as the common denominator for the failed issues, which was quickly and easily corrected to the customer's satisfaction. VOC follows up to see if the customer is satisfied, and if they are not, VOC escalates the issue to the next level of management.

NOTEBOOKS

Brainstorming in notebooks is a technique widely used in the intelligence business. A group of analysts collaborates on a work by having each person working on it separately at different times. The result is usually a remarkable product that reflects several different points of view combined into something different over time. Collaboration over time creates different dimensions and different understandings of a subject. The guidelines for this technique are:

1. The coordinator gives each participant a notebook containing problem information and instructions. Each participant writes at least one idea per day in the notebook for one week.

2. The participants exchange the notebooks with each other every week. Participants can then use the ideas in the other notebooks to trigger new ideas through association.

3. The exchange of ideas should stop after four weeks, even if all notebooks haven't made the rounds. The coordinator collects the notebooks, categorizes the ideas, and prepares a summary. The participants gather in a group to discuss the ideas generated.

THE STRAVINSKY EFFECT

This technique combines generating ideas silently with the random clustering of people and ideas. It was inspired by the work of Igor Stravinsky, the genius of modernism in music, who never lost his eagerness to try something new. His *The Soldier's Tale* created a landmark departure from traditional performance styles by introducing the concept of clusters of performers (dancers, instrumentalists, and narrator) who saw themselves uniquely re-creating the composer's work, each performance being a new experiment.

The guidelines for using this technique in brainstorming are:

1. The facilitator posts a problem or challenge for discussion. For example, "In what ways might we create a more innovative corporation?"

2. Each participant writes eight responses or ideas on three-by-five-inch index cards, one idea per card.

3. The facilitator collects all the cards and shuffles them.

4. The facilitator randomly distributes three cards to each participant. Make sure that no participant receives his or her original cards. Ask everyone to study the cards and arrange them in order of personal preference. The facilitator spreads the leftover cards on a table face up.

5. The facilitator asks the participants to exchange the cards they don't like with those on the table. Participants go to the table and exchange any or all the cards with the leftover cards.

6. Next, the participants exchange cards with each other. Every participant must exchange at least one card and may exchange more if they choose to.

7. The facilitator asks the participants to form clusters. There is no limit to the number of participants who may join the same cluster, but no cluster may keep more than three cards.

8. The facilitator asks each cluster to prepare a creative way to present their three ideas to the group. They might create a graphic poster, bumper sticker, slogan, logo, T-shirt, television commercial, song, and so on.

A group of waste management experts met to come up with ideas on how to dispose of cell phones in environmentally friendly or socially responsible ways. They used the Stravinsky effect as their technique and came up with the idea to make the cellular phone casing of a biodegradable polymer, which comes embedded with sunflower seeds. The casing degrades in the compost and releases the seed from its viewable capsule.

They also came up with an idea to raise funds for local food banks through the process of recycling used cell phones and printer cartridges.

SIL

Three artists who have nothing in common with each other paint a picture of the same dog. The paintings are all done with different perspectives in different styles, yet each captures certain things about the essence of the dog. Each painting adds one perspective that adds to our understanding and perspective about the dog. The next technique is designed to do just that with ideas.

SIL is a German acronym that means "successive integration of problem elements." It first involves people silently and individually generating ideas about a previously stated problem. It differs from most other methods in that ideas are generated by progressively integrating previous ideas. The guidelines are:

1. The group silently writes ideas individually.

2. Two of the group members read one of their ideas out loud.

3. The remaining group members try to integrate the ideas into one idea.

4. A third member reads an idea, and the group attempts to integrate it with the one formed in the previous step.

This process of reading and integrating ideas continues until all the ideas have been read and integrated into one final solution. While it may not be possible to integrate all ideas, at least the process ensures that all ideas get a fair hearing.

OPEN MEETINGS

Don't get trapped into mediocrity by always having the same style of brainstorming meeting. A fun and lively format for a change of pace is the open meeting.

Open brainstorming meetings give all employees—from janitors to CEOs—the opportunity and the motivation to suggest ideas. The purpose behind the formlessness of an open meeting is to let ideas take their own shape, undistorted by status or personal politics. Open meetings are governed by a few simple guidelines, a general theme, and very loose time limits.

There is no agenda for the meeting. Someone reads the meeting's general theme aloud and invites everyone to identify a related issue for which they assume responsibility. When someone suggests an issue, that person writes it on a large sheet of paper, reads it aloud, and posts it on one of the walls. This process continues until all the issues have been posted.

The next phase is known as the "idea marketplace." Everyone is invited to sign up on one of the large "issue sheets" to discuss the issue. Participants can sign up for as many groups as they wish. Sponsors of each issue convene their groups to side rooms, discuss the issue, and record any ideas or other information suggested. Ideally, several smaller rooms near the larger meeting room should be available where the small groups can convene and pursue their issue. Each small group should honor the "law of two feet," which means that if any participant becomes bored or has nothing to contribute to the group, that person should honor the group and walk away.

A group of selected government employees held an open meeting with the theme of "conservation of energy." Some of the issues posted were: "automobile design," "civic promotions," "electricity," "alternative energy sources," and "public education."

One group convened to discuss the conservation of electricity. The discussion concentrated on public education and awareness. One of the engineers suggested some kind of home display of the cost of electricity as it is being used. A prototype for an electricity home monitor was made and perfected. The monitor displays the cost of electricity being used on a portable easy-to-read LCD monitor inside your home. People will soon learn how

much it costs to operate electrical appliances and begin to think of ways to save money and conserve energy.

STORYBOARDING

In 1928, Walt Disney and his artists were working on his first talking cartoon, "Steamboat Willie." Disney wanted full animation. To animate everything required thousands of drawings. They were piled in stacks all over the place. It was hard to know what had been finished and what still needed to be done. They had to have meetings all the time, just to find out what was going on.

Walt Disney came up with the idea of having his artists pin their drawings on the walls of the studio in sequence so he could see in a glance how far along the project was. Each scene was then used as a point around which a complete story could be told. The story was told on a wall covered with a special kind of board, hence the term "storyboard."

Storyboarding quickly became a routine part of Disney's planning procedure for both animated and live-action films. He could walk in at any time of the day or night and see progress on any given project at a glance. Storyboards kept branching out into many uses. Disneyland and Walt Disney World were both operationally planned using storyboards.

Storyboarding was refined into a brainstorming technique, and a variety of related procedures for generating ideas have evolved since then. Although there are some significant differences among the procedures, all of them share the common feature begun by Walt Disney: laying out key concepts that are linked together to form a complete whole.

Storyboarding can be likened to taking your thoughts and the thoughts of others and making them visible by spreading them on a wall as you work on your problem. Following are basic guidelines used by many storyboarding methods:

1. *Topic.* Tape or pin the topic card on the wall. In our example, the topic is to "create a new restaurant."

2. *Purpose.* Normally most people start with a "purpose" header, which helps the group brainstorm the purposes for pursuing a particular topic. Each brainstormed purpose is written on a card and posted beneath the "purpose" card. For example, among the possible purposes for starting a new restaurant are making money, fulfilling a need, and serving the customer.

3. *Headers.* Identify and list headers, which are primarily the major issues, attributes, or solution categories of the process. Each one is written on a card and posted. Our example has the headers: purpose, location, name, theme, environment, menu, entertainment, marketing, and miscellaneous. Arrange and rearrange the headers until you come up with the sequence that best tells the story.

4. *Miscellaneous.* It's a good idea to include a miscellaneous header to contain all those items that don't fit within the other categories. Place thoughts in this column as the rest of the columns are brainstormed. Some of these may become separate headers themselves if enough similar items appear in the miscellaneous column. In our example, suppose participants listed several advertising and marketing suggestions and ideas. These ideas would create additional headers or, if significant enough, might merit separate storyboards.

5. *Brainstorming.* Group members use each category as a stimulus for problem solutions and write these ideas, solutions, and thoughts on cards. Each card is posted beneath the appropriate header card. For example, all the brainstormed names for the new restaurant would be posted underneath the "name" header, and all the suggested menu items would be listed under the "menu" header and so on.

6. *Hitchhiking.* During a storyboard session, consider all ideas relevant, no matter how impractical they appear. Encourage the group to think positively and defer judgment until a later time. Once the ideas start flowing, those working with the storyboard will become immersed in the problem and will hitchhike onto other ideas to create more new ideas. Encourage participants to examine the solutions and try to generate additional ideas from them or combine solutions across categories and use them as stimuli for new ideas.

7. *Flexibility.* Keep the storyboard flexible and dynamic. As ideas and suggestions accumulate, you may find it necessary to add more headers. For example, in our restaurant example, "environment" could be split into "physical environment" and "atmosphere." Think of the storyboard as a living, dynamic thing that is constantly evolving toward the ideal solution.

8. *Incubating.* The process continues until the group generates a sufficient number of ideas or time is called. It's usually a good idea to brainstorm for ideas using a storyboard over a time period of a few days or weeks to allow the ideas to incubate and cross-fertilize.

| NEW RESTAURANT |

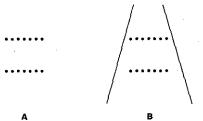| Purpose	Location	Name	Theme	Environment	Menu	Entertainment	Marketing	Misc.
IDEA	IDEA	IDEA	IDEA	IDEA	IDEA	IDEA	IDEA	IDEA
IDEA	IDEA	IDEA	IDEA	IDEA	IDEA	IDEA	IDEA	IDEA
IDEA	IDEA	IDEA	IDEA	IDEA	IDEA		IDEA	
	IDEA	IDEA	IDEA		IDEA			
		IDEA						
		IDEA						
		IDEA						

You can use a wide variety of materials to create your storyboard. Corkboards, white boards, chalkboards or walls, anything that provides a surface where you can add, delete, or move things around. You can use different colors to distinguish headers and columns. Depending on which system you use, you may need pushpins, scissors, wide marking pens, chalk, a supply of cards, sticky notes, or other types of paper. Take a photograph of the completed board so it can be reconstructed and reworked in the future, if necessary.

The beauty of storyboarding is in its flexibility and adaptability to your needs. You can modify the guidelines to meet your requirements. It's a good idea to keep the process simple at first. After you've become comfortable with it, you can expand it at will.

COMBINING THINGS

In the illustration on the following page, the lines of dots above the A are equal in length. When I combine the lines of dots with two diagonal straight lines below B, the lines now appear to be unequal in length. The bottom line is now smaller, yet they are still equal in length. Combining the lines of dots with diagonal lines creates a different perception of the pattern with new properties. The lines of dots have not changed. Combining the dots with the lines changes the way you look at them, and when that happens, what you're looking at also changes.

Think for a moment about hydrogen and oxygen. Blend them together and you create water, a product with properties quite different from either of the component gases that make it up. Who could have predicted the

	A		B	
	A		**B**	

emergence of water from two simple gases? Alone, they have known and obvious properties. Put them together, and seemingly magical transformations occur. But it is not magic; it is the very essence of creativity.

Suppose you want to invent something new. Select twenty objects at random. You can select any objects—objects at home, objects at work, or objects you might find walking down the street. Or, you can imagine you are in a technologically oriented science museum, walking through the Smithsonian Institute or browsing in an electronic store, and make a list of twenty objects that you would likely see.

On a sheet of paper, make two lists of ten objects each, one column on the left side and one on the right. Pick one item from the left and combine it with one on the right. Play with the combinations until you find a promising new combination, then refine and elaborate it into a new invention.

Following is an example from a recent workshop. Two participants went to the front of the room. One listed the first ten objects that came to her mind for column A, while the other did the same for column B.

A	B
computer	slicer
coffeemaker	sculpture
bagel	hammock
sunglasses	beeper
doormat	windows
bathtub	vacuum cleaner
cell phone	automobile
suntan lotion	ticket
bedroom	soda can
television	insect repellent

In the example, the illustrated combinations yielded the following ideas:

- Combining "bagel" with "slicer" became a bagel slicer with plastic sides designed to hold the bagel and prevent rotation when slicing.

- "Bathtub" and "hammock" combined to make a baby tub. It's a simple hammock in the tub with a headrest to hold the baby's head securely, leaving the parent's hands free to do the washing.

- "Suntan lotion" and "insect repellent" combined to form a lotion that protects against both the sun and insects.

- "Coffeemaker" and "sculpture" combined to form a coffeemaker with a top that resembles a sculpture of the top of the volcano Mount Vesuvius. When the coffee is done, the top glows red.

- "Doormat" and "vacuum cleaner" combined to form a doormat with built-in suction. When you step on the doormat, the doormat sucks the dirt and debris from the bottom of your shoes.

- "Cell phone" and "soda can" inspired the idea of utilizing cell phones as devices that, with sensors, would enable users to dispense soda and other products from vending machines with the expense charged back to the vendor via the carrier.

Attributes. Take one object from column A and one from column B. Break each subject down by listing its attributes and then randomly combining the attributes. Make two lists of the object's attributes or characteristics and randomly combine them to trigger ideas. For example, we select "bedroom" and "automobile" from our columns above. Some of their attributes are as follows:

Bedroom	Automobile
bed	passengers
place to sleep	moves
window shades	wheels
located near bathroom	different colors
sense of security	automatic door locks

Combining "sense of security" and "automatic door locks" inspires the idea of a master lock near the bed that locks and unlocks all windows, doors, computer systems, and everything else in the house with one key.

Combining "window shades" and "moves" triggers the idea of incorporating light sensors that automatically raise or lower the shades according to the intensity of the outside light into window shades.

I know a physicist who makes systematic use of the idea that new associations may be formed by accidental combination. He cuts up indexes of physics textbooks and then throws the fragments into an empty fishbowl, then pulls out several scraps at a time to see whether any new useful combinations emerge. This simple technique has produced insights and ideas that he could not generate using his usual way of thinking. Cut up an index of a book in your field (e.g., a marketing book if you are in marketing) and try the same technique.

COMBINING IDEAS

No program can generate a number more complex than itself, any more than a one-hundred-pound pregnant woman can give birth to a two-hundred-pound child. An idea grows by annexing its neighbor. Two ideas can cross-catalyze each other, but both need to be present in order for a new concept, product, or idea to form, like two chemicals forming a new compound.

Scientists at the University Medical Center at Bern, Switzerland, combined the technology of computed topography (CT) with the technology of magnetic resonance imaging (MRI) to create three-dimensional computer images of a corpse's internal organs. This virtual autopsy provides a head-to-toe cyber-corpse that a pathologist can view—wounds and all—from any depth and angle, including inside out. This, in effect, is a bloodless approach to an otherwise messy job with the added benefit of digital permanency.

Combining ideas to create more—and better—ideas will help your mind work to the peak of its creative efficiency. Try this strategy for combining ideas:

First, collect all your ideas and put them into two columns, column A and column B. Either list them on paper or write them on cards and put the cards into two piles or tape them onto the wall in two columns. Randomly connect one idea from column A and one idea from column B. Then try to combine the two into one idea. See how many viable combinations you can make.

To use this technique in a group brainstorming session, ask each participant to silently write five or six ideas on index cards. Then have each participant prioritize their ideas and select one. Collect and place the leftover cards face up on a table. Next, ask the participants to come to the table, review the leftover ideas, select one, and then return to their seat. This is also

done silently and should take about five to ten minutes. Finally, ask each participant to combine his or her idea with the one they selected from the leftover pile into a new idea.

COMBINING SUBJECTS FROM UNRELATED FIELDS

Jacque Hadamard, the brilliant French mathematician who proved the prime number theorem, argued that invention, including mathematical invention, requires the discovery of unusual but fruitful combinations of ideas. To find such novelties, it is necessary to construct numerous random combinations. It is the random combinations of variables from different domains that allow new and exciting ideas to form.

Among combinations, the most fertile ideas will often be those formed of elements drawn from fields that are far apart. Suppose you wanted a new advertising campaign. Select two advertising campaigns from different fields that you like (e.g., an advertising program for a political campaign and an advertising program for the Red Cross). List the attributes of each in two columns and then make random connections until you create ideas for a new campaign.

Or, suppose you want to improve office morale. Identify two organizations from different fields that have terrific morale (e.g., the Super Bowl and a church), list the attributes of each, and then make random connections to come up with new and different ideas to improve morale in your office.

One entrepreneurial software engineer for a company that specializes in LCD products sat down one day and listed household objects (broom, refrigerator, telephone, lamp, etc.). The salesperson then combined each with various LCD products and, when he combined refrigerators with LCD, he got his "aha!" inspiration: poetry-generating fridge magnets. Each magnet has an LCD that displays a word selected at random from a three-hundred-word vocabulary. The magnets communicate with each other to make allegedly poetic phrases such as "the wet crows ruffled coherently" and "yellow flowers are shy smiles."

COMBINING PROBLEMS

Thomas Edison's lab was a big barn with many worktables holding separate projects in progress. He would work on one project and then another. His workshop was designed to allow one project to infect a neighboring one, so

that moves made in one could also be tried in an adjacent project. This method of working allowed him to consistently rethink the way he saw his projects.

In the same way, you can tackle multiple problems using a notebook. Work on two or more unrelated problems in parallel. When you're stonewalled on one problem, move to the next. When you come up with ideas or moves that work for one problem, try the ideas or related ideas with the other problem as well. Masura Ibuka at Sony worked on two problems simultaneously. One problem was miniaturizing the stereo; another was working on entertainment systems that used headphones. Working with engineers on one and then with different engineers on the other, he combined the two projects into the Walkman radio.

COMBINE ELEMENTS OF EXTREME IDEAS

Leonardo da Vinci believed that to really know how things work, you should examine them under critical conditions. He believed in pushing concepts to the extreme in his imagination. Create two opposite extreme ideas. For instance, what idea would you create if you had all the resources (people, money, time, etc.) in the world? Then ask what idea would you create if you had no resources? And then try to combine the two into something practical. Also, think of the elements and attributes of each extreme and then make random connections between the two lists of extremes.

Suppose, for example, you want to reward employees for ideas that increase productivity. One extreme would be to award each employee one million dollars for each idea. The other extreme would be to award each employee a penny. The combination of the two extremes inspires a "Penny for Your Ideas" campaign. Buy a gum-ball machine and place it in your office filled with colored gum balls. For every idea (or every five or ten ideas) award the contributor a penny for use in the machine. Award a cash prize according to the color of the gum ball that comes out ($2 for green, $5 for yellow, $100 for red, etc.)

COMBINE DOMAINS

Many breakthrough ideas are based on combining information from different domains that are usually not thought of as related. Engineers at a pilot plant in Britain have combined the domains of housing and waste disposal into an innovative idea that could solve two problems at once by increasing housing and reducing waste. The plant uses household waste, dredge

sludge, treated sewage, and incinerator bottom ash to produce coated pellets that can be used in a variety of construction applications. "The beauty of this process is that it takes waste that would otherwise go to a landfill and, using energy in the waste, turns it into useful building materials that would otherwise have to be quarried," says Darryl Newport of the University of East London, which is developing the pilot project. "It is a win-win-win situation."
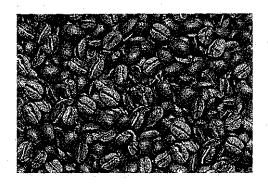
Suppose you want to create a new product or service that would increase company efficiency. First create two lists of activities, one that's pertinent to the organization and one that's pertinent to the non-business world.

1. First, list business activities. The business list should be specific activities like "photocopying," "handling customer complaints," "coffee breaks," or "shipping." List ten to twenty activities you know about.

2. Next, focus on one activity. Based on what you know about it, try to develop a new product or service. For example, perhaps you can come up with a way for people to be educated or motivated while waiting in line to use the photocopier.

3. Now make a new list of activities, this time a list of ten to twenty activities that you know about outside the organization (e.g., bowling, singing, volunteering, mowing the lawn, etc.).

4. Finally, combine the two using your expertise in those areas—the business activity and the non-business activity. For example, combining the activities of singing and photocopying might inspire the idea to build a stereo or karaoke screen by the photocopier. Rather than song lyrics, this screen could have a running display of news and information about the company, such as awards, people, job openings, and so on.

A New Zealand company has combined the fields of passive lighting and construction materials. This combination has created passive emergency lighting, a photo-luminescent strip of natural or artificial light that guides people safely up and down steps, corridors, handrails, aisle markers, and seat numbers in stadiums. The patented Ecoglo technology bakes a photo-luminescent material into an aluminum extrusion. The product requires no energy to run, thus it can work in a complete power outage, and can be used to replace emergency lighting. Their product is nonradioactive and nontoxic, and responds to both indoor and outdoor (solar) lighting.

LEFT BRAINERS AND RIGHT BRAINERS

Here is a picture of coffee beans. A man's head is hidden somewhere in the beans. See how long it takes you to find it.

According to some recent cognitive research, if you can find the man's head within three seconds, your right brain is more developed than normal people. If you can find the man's head within one minute, your right brain is developing normally. If it takes you longer than two minutes, your left brain is more developed than normal. If you still can't find it, look in the lower left between the middle and side.

Here is a fun way to brainstorm by combining both the left and right brains of participants. Divide the group into left-brain (rational) thinkers and right-brain (intuitive) thinkers. Ask the left-brainers to come up with a practical, conventional, and logical idea; ask the right-brainers to come up with a far-out, unconventional, and illogical idea. Then bring the group back together and combine the left-brain idea with the right-brain idea to see what you get.

One group brainstormed for ways to encourage Americans to conserve fuel. The group was divided and eventually brought back together. The left-brainers suggested an advertising campaign to encourage people to buy and ride bicycles. The right-brainers suggested that environmentally-friendly electric cars automatically get the right of way on all roads, are exempt from traffic fines, and get free car washes, free coffee and newspapers at rest stops, and access to private, spacious bathrooms at all interstate toll roads.

They combined the two approaches into one idea: bicycle stations. Bicycle stations are facilities where people can park their bikes, stow their riding clothes, clean up, and emerge ready for work. The stations would also be social spaces, where people could take a coffee, pick up a newspaper, rest, or get a snack. The stations would be built along the existing commuter rail lines, and they would provide services from simple covered parking to full multimodal transit hubs that would eventually integrate a variety of clean transport options, giving commuters the opportunity to connect with electric vehicles, car shares, and rental bikes. By providing these types of benefits to cyclists, the city would have cleaner air and increased mobility.

SUMMARY

Years back, I participated in a session with a number of academics about educational reform. After the session, I discussed my disappointment with the results with Father Tom, a Franciscan monk who taught at St. Bonaventure University. I had discussed the issue with many in the group before the session, as I knew they had many unusual and unique ideas, yet they held back and offered only the same old conservative ideas. Father Tom laughed and said the professors were hoarding their ideas for their own publications. Academics are paranoid about original ideas and feel others want to steal them. They attend meetings of this type in order to find out what the others have done. He then told me a tale about a Franciscan missionary.

Many years ago in Japan, a missionary decided it would be nice for the village to celebrate the New Year with a big crock of hot sake wine. The monk asked the ten richest men to each bring one large jug of wine for the huge heating bowl, since none could provide for all. On the way to his wine cellar, each man thought, "My wine is too valuable to share! I'll just bring a jug of water instead, and since everyone else is bringing wine, no one will know the difference." And so, when the ten richest men gathered, each of them ceremoniously poured the contents of his jug into the big bowl. They looked sheepishly at one another as they heated and poured hot water for all.