CHAPTER 08

# Creative Thinking

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Many studies have found that creativity is one of the attributes of a successful leader. And creativity can be taught, up to a certain level. The studies have also found that the most intelligent people are not necessarily the most creative. Some theories suggest that it is perhaps because very intelligent people do not usually fail and thus hardly need to consider creative solutions. Failure is a very important part of our learning cycle. Leaders need to allow for failure in a limited context to develop innovators in the organization. Instead of avoiding failure, accelerate it.

There are five levels of creativity:

1. **Mimetic** (Imitate): recognizing pattern, investigating ideas in unfamiliar places and bringing them to familiar places
2. **Bisociative** (Connect): brainstorming, combining several ideas
3. **Analogical** (Transfer): making analogies or metaphors, clustering ideas together
4. **Narratological** (Integrate): telling stories, building complicated strategy
5. **Intuitive** (Transcend): inspiration, connected to a larger concept or world

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Creativity happens in a **diamond** formation.

At the start of the creative-thinking process, the goal is to be highly **divergent**. This means putting as many ideas on the table as possible, with very little judgment. In this early stage, feel free to include what may seem like the wildest ideas. These will give you points of your departure in moving forward. Encourage the people brainstorming around you to talk a lot, draw pictures, act things out, build prototypes, etc. The hope is that you will create a great variety of ideas.

The second part of the creative-thinking process is **convergence**. This means taking a closer look at the variety of ideas you came up with in the first stage and choosing the best ones. Here, you will come up with the criteria to evaluate those initial ideas. Think about factors like feasibility, time, and cost. Never start the brainstorming process with convergence. Doing this would limit the potential range of creative ideas. It's about starting with as much out-of-the-box thinking as possible and then narrowing the field based on the opportunities and constraints your team faces.

| Diverging | Converging |
|---|---|
| • Find the flow<br>• Defer judgment<br>• Look for lots of ideas<br>• Accept all ideas<br>• Make yourself "stretch"<br>• Take time to "simmer"<br>• Seek combination - be a "hitchhiker"<br>• Everyone writes | • Be deliberate<br>• Be explicit<br>• Avoid premature closure<br>• Take the risk to look at difficult issues or "sneaky spots"<br>• Develop a sense of "affirmative judgment"<br>• Keep your eyes on your objectives |

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**Defamiliarization** is a strategy that can help us think more creatively. This entails taking an idea we already know and applying it to another idea in a different context that we normally wouldn't associate with it. There are two ways of doing this: a **random** association or a more **formal** kind of association.

- **Random Words:** Pick up a dictionary—or any book for that matter—and open it up and point to a random word. Connect your challenge to that word. For example, let's say you are trying to find funding for a new restaurant and you finger lands on the word "bicycle." You might get the idea to put your restaurant on wheels or provide delivery service only. Both ideas would lower the amount of money needed to start the business. Several companies sell idea checklists and phone apps to make this process a little more structured.
- **Formal Word Lists:** Come up with a list of keywords that are both directly and indirectly related to the concerns of your team. By bouncing keywords off your best ideas, you will generate a whole series of new ideas.

- Rabbit
- Concrete
- Gravestone
- Tooth
- Snowball
- Robin
- Yoga
- Fireplace
- Smoke
- Suitcase
- Nail polish
- Trombone
- Parakeet
- Calculator
- Cat food
- Crystals
- Syringe
- Ladder
- Scissors
- Broccoli
- Opera
- Basketball
- Swing
- Fencing
- Feathers
- Rain
- Seatbelt
- Drainpipes
- Goat
- Top hat
- Cave
- Nun
- Flare gun
- Seagull
- Cliffs
- Gold
- Oxygen
- Hammer
- Purse
- Cherry tree
- Astronaut
- Camera
- Chocolate
- Vikings
- Bacon
- Quiz show
- Rodeo
- Umbrella
- Violin
- Whispers
- Bow tie
- Pajamas
- Shampoo
- X-ray
- Maple leaf
- Iceberg
- Apple
- Barbed wire
- Kennel
- Aquarium
- Coffee
- Helicopter
- Taxicab
- Shell
- Clouds

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**SCAMPER:**

Advertising executive extraordinaire Alex Osborne is largely credited with coining the term "brainstorming" in his 1942 book *How to Think Up*. Osborn posed six questions that were later turned into the acronym SCAMPER: What can we… Substitute? Combine? Adapt? Magnify? Put to other uses? Eliminate? Reverse? By asking these simple questions, you connect ideas and actions in new ways to easily produce useful variations.

**S**ubstitute: Other materials, markets, processes
**C**ombine: Blend, integrate, assemble
**A**dapt: Copy, simulate, emulate
**M**odify: Magnify, miniaturize, color, strength
**P**ut to other uses: Locations, problems, disciplines
**E**liminate: Remove, subtract, lighter, shorter
**R**everse: Opposite, backwards, upside down

**Syndetic Thinking:**

Metaphors and analogies are crucial tools in the creative-thinking process. They connect things that we are familiar with to things that we are unfamiliar with. The Greeks called this **syndetic thinking**.

Steps for syndetic thinking:
1. Identify a challenge or an opportunity, and find the root cause
2. Create several analogies that are related to the root cause
3. Connect those analogies with the root cause (force-fitting)
4. Select the best analogies and integrate them

**Example**

Let's say we're starting a new and unique restaurant. Since a restaurant is a place where people gather, we can think of analogies or metaphors that have something to do with a collection of things or a place in nature where animals come together, like a beehive. A beehive has its own particular structure and function, and we need to think of how each element can apply to the concept of a restaurant. So for instance, the customers (bees) can be the ones who cook, instead of the chef, with a variety of ingredients they can choose from. The beeswax can be manifested as something that is malleable, such as moveable tables or ever changing cuisine. The last step is to combine these ideas into an integrated concept, like a restaurant called "The Beehive" with different types of cuisine.

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Great innovators from Archimedes in his bathtub to Einstein with his elevator experiment have used analogies to creatively solve complex problems. We use analogies to transfer information that we believe we understand in one domain, the source, to help resolve a challenge in an unfamiliar area, the target. For example, the design of vacuum cleaners was largely unchanged for nearly a century when inventor James Dyson used a different analogy, cyclones, to devise a new way to separate particles through the spinning force of a centrifuge. In essence, analogies are bridges that allow our cognitive processes to quickly transport clusters of information from the unknown to the known, and back again.

One of the challenges of analogical creativity is that the source of the analogy is often technically and culturally specific. Consider a group of computer hardware developers being asked, “How is creating a new microprocessor like a NASCAR race?” While presumably they all know how an integrated circuit operates, they may have never been to a stock car race or may have a negative impression of them. So it is imperative that you use analogies—like sunrise, birth, and harvest—that can be deeply understood across a wide range of expertise and cultures when working in a diverse group.

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How do you decide what to pursue first now that you have all these creative ideas? You want to start with ideas that have a **big pay-off** and are **easy to implement**. These are **big wins**, or low-hanging fruit.

Next, you want to look at ideas that are easy to implement but have a smaller pay-off. These are called **small wins**. These develop momentum and capability in your team.

Some ideas are hard to implement but have a big pay-off. These are **special cases**. You should never have more than a couple of these because a lot of things can go wrong and they require a lot of time and energy.

Avoid pursuing ideas that are hard to implement and have a small pay-off. These are **time wasters**. At least a quarter or a third of your ideas will be time wasters. Getting rid of these will allow you to devote all your energy to the big wins and small wins.

| | EASY TO IMPLEMENT | TOUGH TO IMPLEMENT |
|---|---|---|
| SMALL PAY-OFF | SMALL WINS | TIME-WASTERS |
| BIG PAY-OFF | BIG WINS | SPECIAL CASES |

*The GE Work-Out.* Ulrich, Kerr and Ashkenas

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# PRACTICE

## PRISMATIC THINKING

| | |
|---|---|
| • Contemplation<br>• Reflection<br>• Dialog | • Experimentation<br>• Visualization<br>• Synthesis |
| • Observation<br>• Analysis<br>• Planning | • Competition<br>• Focus<br>• Action |

1. When are you most creative? Where?

2. How do you create? What are your methods?

3. Which creative processes does your organization support? Reward?

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