



## **CONCEPT DEVELOPMENT** MANY ROADS TO A CREATIVE SOLUTION

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When you have a creative problem to solve, how do you begin? What direction to you head? If a creative solution can be thought of as the destination, then the journey must start from somewhere and follow a pathway to the destination. Following are some examples of routes you can take to find creative solutions.

### **THE CONSCIOUS EFFORT VS. THE UNCONSCIOUS EFFORT**

“I find going to bed and pulling my imagination over my head often means waking up with a solution to a design problem. That state of limbo, the time between sleeping and waking, seems to allow ideas to somehow outflank the sentinels of common sense. That’s when they can float to the surface. I find ideas often show up in the shower, or while I’m contemplating marmalade and toast at breakfast.”

— ALAN FLETCHER

You will be much less likely to think creatively if you don’t continually try new and different ways of thinking. After all, different ways of looking at, or thinking about, a thing is what creativity itself is all about! It is nearly always necessary to invest considerable effort at intentionally coming to a solution. However, sometimes it is very good to also to let your subconscious work on a creative solution.

Many of us get great ideas as we are dozing off into sleep (the mind thinks differently at rest). “Thinking differently” has a greater potential to be thinking creatively, as the definition of creativity is often compared to “thinking outside the box.”

Sometimes, by letting ideas “digest” in the back of your mind a solution will come to light when you least expect it. People generally are more aware of certain things when they are put within a certain context. For example, if your bed breaks, you are suddenly more aware of furniture store commercials and billboards touting products for restful sleep.

Seemingly disassociated ideas or inspirations you encounter in your day-to-day life may become relevant once your conscious and/or subconscious mind is working within the context of the problem(s) to be solved. By getting in the habit of keeping creative problems in the back of your mind at all times you will open yourself to the opportunity of being inspired by literally millions of bits of inspiration as you go about your day, or as you dream at night. Considerable evidence suggests that humans use the process of dreaming to make sense out of problems in their lives, or of otherwise confusing or nonsensical real-world experiences. Why not take advantage of this process to make sense of creative problems too?

Keep in mind that the subconscious approach should be executed in addition to several other creative problem solving techniques as a supplemental form of developing solutions. After all, you cannot bank solely on the hopes that some “random” bit of information that you encounter (or a wacky dream) will become relevant to a problem to be solved. Also, it is unlikely your unconscious mind will be open to such bits of inspiration if you haven’t been actively (consciously) thinking about the problem to reiterate the problem in your mind to begin with. And to be realistic, it’s not very often that you can truly justify taking a nap over of actively working on the solution for a project.

What seems to be important is that you care enough to expend the mental energy to concentrate on the problem both consciously and unconsciously. You must be willing to be patient enough to keep working at it until a truly good idea

develops. For many people, it is work. Very hard work! But think of the subconscious methods of thinking as having the potential to provide a supplemental bonus to your other problem solving efforts rather than the primary way to solve creative problems.

You will definitely want to work hard at problem solving in order to find a truly creative solution. If you are not careful, it can certainly be all too easy to talk yourself into procrastination or into taking too many breaks. But let's face it, after several hours of hard work your brain needs a rest. Oftentimes good solutions come from bouncing back and forth between periods of serious, active (conscious) work and taking a break while your subconscious works on a solution.

Try using several of the following techniques, both on a conscious, initial level, and on a passive, subconscious level. Keep working at it, keep trying new ways of problem solving. Creative skills can be developed just as any other skill. The development of creative problem solving skills, and the creative solutions themselves, take time and effort.

### **RECORD THE PROCESS**

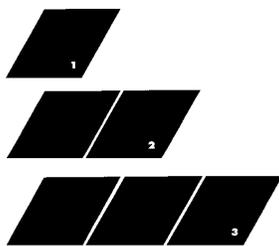
Even though it may seem like a hassle, keep lists of your ideas. Brainstorm, make cluster charts, checklists, etc. By documenting your thought processes you can accomplish at least two important objectives:

1. As it is likely you'll be thinking for a number of hours before a really great idea comes to you, you can't possibly remember all of the thoughts and ideas that came to you. By recording the main ideas, you can revisit them fresh after a good night's sleep or after your subconscious has had a chance to work on it.
2. You have a something tangible to show for your efforts. Lists are a visible gauge you may use (to some degree) to track how effective you are being in your efforts. (If your paper is nearly blank, you are probably not focussing enough.)

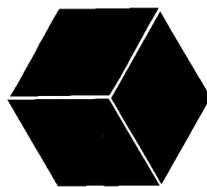
There are many ways to arrive at a creative solution. No single approach works for every person, or for every problem. Following are ten techniques you may wish to try:

### **LATERAL THINKING**

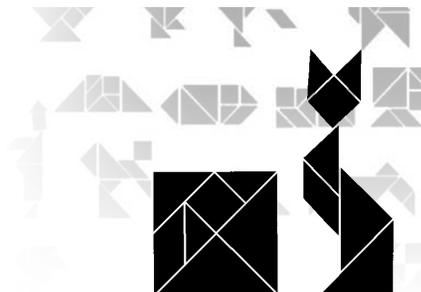
Many of the ideas which follow are based on the concept of "lateral thinking". Lateral thinking generally means that you look at a problem, and consequently at a solution in a different (or lateral) way. Oftentimes it is when we look at something from a different viewpoint or perspective that we conceptualize or perceive things in new and different ways. Having a greater perspective on something means we have a greater understanding of it. More ways of looking at something and having a greater understanding of something is often what both a creative problem, and a solution is all about!



*Figure 1: A cliché results from a logical progression.*



*Figure 2: Lateral thinking produces a less obvious solution.*



*Figure 3: Lateral thinking can produce many solutions to a single problem.*

## **OTHER WAYS OF THINKING**

### **ASSOCIATIVE THINKING**

Associative thinking has to do with recognizing commonalities and common attributes and drawing correlations or conclusions through such associations.

### **METAPHORICAL THINKING (SEE TECHNIQUE #12)**

Metaphorical thinking generally relates to identifying or creating meaning from seemingly unrelated objects or ideas through some sort of shared human experiences, such as stories, figures of speech, historical precedence, literature, etc.

### **ELABORATION AND MODIFICATION**

By looking at the original problem (or key idea or object associated with the problem) oftentimes a solution can be found by elaborating on the original, altering it, adding to it, or removing from it in order to find a solution.

### **IMAGINATIVE THINKING**

By forming images in one's mind or thinking imaginatively, oftentimes a solution can be found. You might also consider this as "thinking outside the box."

Consider the creative problem solving methods below and what type(s) of thinking categories they might fall under.

## **CREATIVE THINKING PROCESSES**

Good creative thinking utilizes a number of skills and processes, including:

Analysis	Association	Classification	Comparison	Comprehension	Deduction
Evaluation	Flexibility	Fluency	Forecasting	Generalization	Hypothesization
Interpretation	Observation	Planning	Prediction	Questioning	Sequencing
Synthesizing	Theorizing				

Following are some techniques you might utilize in conjunction with the skills listed above:

### **CREATIVE TECHNIQUE #1: TRADITIONAL BRAINSTORMING**

The term "brainstorming" has become a commonly used word in the English language as a generic term for creative thinking. Brainstorming is probably the most widely used tool to stimulate creative thinking. The basis of brainstorming is a generating ideas in a group situation (but individuals can brainstorm on their own). Brainstorming is based on the principle of suspending judgment—a principle which scientific research has proved to be highly productive in individual effort as well as group effort. The generation phase is separate from the judgment phase of thinking.

Brainstorming is often used in groups, but can work well for individuals. Consider the ideas in your head as individuals in a room. Listen to your alter ego. Listen to the "stupid" ideas in your head. Listen to the "voices" you wouldn't normally listen to. Think outside the box. Think creatively.

Consider the following guidelines as you brainstorm, either on your own, or in a group:

1. Have a well-defined and clearly stated problem.
2. Write down all the ideas as they occur. Keep a record. You won't be able to remember all of the ideas, and new ideas may come from reviewing previous ideas, or even from combining two or more ideas together.
3. Enforce the following guidelines:
  - Suspend judgment
  - Every idea is accepted and recorded
  - Encourage the building of one idea upon another
  - Encourage way-out, unconventional and odd ideas

After the brainstorming session, edit the brainstorming notes, arrange the ideas in related groups and send a copy to each participant (if applicable) as soon as possible. Evaluate each idea, and objectively consider why each idea is stronger or weaker than another. Don't just choose the ideas that you "like," choose ideas that seem relevant and appropriate for specific, objective reasons. Choose ideas that are appropriate for the specific problem to be solved.

Lateral thinking (briefly explained above) and brainstorming are two general approaches to creative thinking, and many of their methods can be applied to, or integrated with, several of the following other ways to develop creative solutions.

### **CREATIVE TECHNIQUE #2: FREE WRITING**

In an effort to exhaustively explore every idea you can think of, consider free writing techniques. In a sense, this is somewhat like brainstorming, just in a slightly different format (sentence, phrase, and paragraph forms of thoughts and ideas more so than lists of items or ideas). Trying different techniques and formats of creative problem exploration is the best way to find the method that works best for you for a particular design problem to be solved.

With the problem to be solved in mind, begin writing your thoughts down as quickly as you can as sentences or phrases. Don't worry so much about how good the idea is, simply "ramble on paper." Think of ideas, related ideas and write as quickly and freely as you can without inhibitions or limitations. Have a little conversation within your own mind about your ideas and record them on paper. Write down words, word associations, thoughts, ideas or feelings as they come to you. One idea will naturally lead the thoughts of the next thing you write down.

Periodically pause and refocus to be certain you aren't getting too wildly off on a tangent, but certainly allow yourself freedom to roam into new creative territories. This free form of creative thinking without limits can sometimes be a good way to explore possible solutions by exhaustively attacking all sorts of ideas and possible solutions in terms of sheer quantity.

After you have written several pages of ideas over the course of an hour or two, read over your notes, highlight some possibilities, look at how one concept might correlate with another, and start making creative connections that could evolve into a solution. Sometimes a good solution can come from a very "wild" idea that is slightly "tamed" or from two seemingly disparate things that are correlated together.

### **CREATIVE TECHNIQUE #3: CLUSTER CHARTS**

A great way to think creatively is to define what it is you are dealing with, and then to correlate other things to it. Then, you can list ideas relating to those correlations. The more ideas and things you can list, the more you have to work with to come up with an idea.



## CREATIVE TECHNIQUE #5: RESTATE THE PROBLEM

There is no such thing as  
a boring project. There are only  
boring executions.  
—IRENE ETZKORN

A well-defined problem  
is half solved.  
— MICHAEL OSBORNE

When the only tool you own  
is a hammer, every problem  
begins to resemble a nail.  
— ABRAHAM MASLOW

If you can change a boring problem into an interesting problem, you may have automatically found a creative solution. Sometimes it is the definition of the problem that is the problem. Before you can redefine the problem, you must first understand it; the true problem is to get the actual problem right. After stating the problem, think of better ways to more fully understand the true essence of the problem, and better (more accurate or creative) ways of restating the problem.

### EXAMPLES:

**Original problem:** Design a logo for Television Automation, a television production company.

**Redefined problem:** How can the initials “TA” also say “TV”? (Figure 1)

**Original problem:** Editorial photograph about the deterioration of teenage academic standards.

**Redefined problem:** Show a teenage student who is less than he should be. (Figure 2)

**Original problem:** Illustration about people who can't dance.

**Redefined problem:** Draw a frustrated person who has two left feet. (Figure 3)

**Original problem:** Create a point-of-purchase display for slippers

**Redefined problem:** What is the nicest way to have slippers held? (Figure 4)



Figure 1



Figure 2



Figure 3



Figure 4

### ANOTHER EXAMPLE:

**Original problem:** Design a logo for a TV show about a stupid secretary called “Private Secretary”.

**Redefined problem:** What type of logo would a stupid secretary make? How might she make it?

private  
secretary

An appropriate way of saying  
secretary is to type it.

private  
secretary

Typos make you look stupid.

private  
secretary  
....  
CBS television

The final logo looks like a stupid  
secretary's design solution.

### **CREATIVE TECHNIQUE #6: RANDOM INPUT**

The random-word method is a powerful lateral-thinking technique that is very easy to use and is widely used by people who need to create new ideas.

Chance events allow us to enter the existing patterns of our thinking at a different point. The associations of a word applied to the new “out of context” situation generates new connections in our mind, sometimes producing a ‘Eureka’ effect, insight or intuition.

Legend has it that Newton got the idea of gravity when he was hit on the head with an apple while sitting under an apple tree. It is not necessary to sit under trees and wait for an apple to fall—we can get up and shake the tree. We can produce our own chance events, we can set out to have answers “hit us”.

Random inputs can be words or images. Some techniques for getting random words (and the words should be nouns) are:

- Have a bag full of thousands of words written on small pieces of paper, cardboard, poker chips, etc. Close your eyes, put in your hand and pull out a word.
- Open the dictionary (or newspaper) at a random page and choose a word.
- Use a computer program to give you a random word.
- Make up your own list of 60 words. Look at your watch and take note of the seconds. Use this number to get the word.

Once you have chosen the word, list its attributions or associations with the word. Then apply each of the items on your list and see how it applies to the problem at hand. Remember to list and apply true associations. Not just random thoughts that have nothing to do with each other.

Because the brain is a self-organizing system, and very good at making connections, almost any random word will stimulate ideas on the subject.

### **CREATIVE TECHNIQUE #7: KEEP AN IDEA SCRAPBOOK**

This approach takes time, but can be very rewarding. Each time you work on a project, maintain and organize your notes. Sometimes you may even come across a great idea that does not relate to the current problem, but it can be saved for use on another project.

## **GATHER THE INFORMATION**

In your day-to-day activities, collect and record anything that strikes an emotional chord, sparks an idea, or inspires you in one way or another. Pull out magazine articles or advertising, make photocopies from art books, take snapshots and/or make sketches of people, places and things.

Include anything that is truly inspiring, but be careful not to collect a bunch of “garbage”. Remember, in order to use this information in the future, you will have to be able to store it and organize it in a manner that you can look through it efficiently. Too much “stuff” will get in the way of effective research.

## **BUILD A SCRAPBOOK**

Develop a method to organize your material. A simple and flexible system may be to have a file cabinet with folders alphabetized by subject, or a three-ring binder with divider tabs. Organize your materials, and continue to collect and organize more material. Over time, you will create a valuable reference tool that can include your own ideas, as well as ideas created by others that may inspire ideas of your own.

If you work at it, you can get in the automatic habit of being on the lookout for materials for your scrapbook and you will end up with a wonderful (and personal) archive of great inspiration. What makes this technique great, is that you find the ideas that appeal to and inspire you.

## **CREATIVE TECHNIQUE #8: THE ORACLE APPROACH**

Nearly every culture has some sort of oracles. The ancient Greeks used the ambiguous predictions of the Delphic Oracle, the Chinese used the I Ching, the Egyptians consulted the Tarot, the Scandinavian people used Runes and the some North American Indians used Medicine Wheels. In truth, the purpose of these oracles may not be so much to foretell the future but to help the user delve deeper into their own minds—to recognize an idea or understanding which has always existed, but that was previously unrealized (...yet another lateral thinking method).

An example of this might be a fortune cookie. If your cookie tells you that something good has recently happened to you, you will think about recent events, choose the best thing that has happened to you recently, and will assume that this is the purpose or solution to the statement. When we are on the lookout for a solution within the context of a (perhaps even somewhat random) event, message or idea, or subconscious will “patch” an answer to the question. Another example of this might be when your car breaks down, you suddenly become more “in tune” to auto repair billboards or new car brochures or commercials.

The human mind has a tendency to automatically make associations of what is relevant within a given context. Sometimes, through the introduction of a random thought or idea, we can force ourselves (perhaps even subconsciously) to “manufacture” an answer or solution. These answers can seem spontaneous and factual, and can help us think outside the box if we are suffering from a creative block.

Note: an oracle approach has many things in common with the random input technique.

You might adapt an existing oracle for a process of “searching for creative answers” or you might even develop an oracle of your own. In general, follow these steps:

1. **Ask a question.** This focuses your thinking. Perhaps you should write your question to focus attention.
2. **Generate a random piece of information.** Random selection is important, as the unpredictably of this new input will force you to look at the problem in a new way.
3. **Interpret the resulting random piece of information** as the answer to your question.

## **CREATIVE TECHNIQUE #9: PROBLEM REVERSAL/SOLUTION REVERSAL**

“The reverse side has a reverse side.”

—JAPANESE PROVERB

Lao-tzu wrote *Tao-te Ching* which stresses the need for the successful leader to see opposites all around. The wise leader knows how to be creative. In order to lead, the leader learns to follow. In order to prosper, the leader learns to live simply. In both cases, it is the interaction that is creative. All behavior consists of opposites...learn to see things backwards, inside out, mirrored and upside down.

The world is full of opposites. Of course, any attribute, concept or idea is meaningless without its opposite.

### **THE METHOD**

1. Make the statement negative. For example, if you are dealing with Customer Service issues, list all the ways you could make customer service bad. Then you can come up with solutions to problems or ideas to prevent problems in the first place.
2. Try to define what something is not. Sometimes this helps you evaluate what something is, in a new light or from a different perspective.
2. Doing what everybody else doesn't. For example, Apple Computer did what IBM didn't, Japan initially made small, fuel-efficient cars at a time before they were fashionable or deemed necessary.
3. Use the “What-If Compass” and ask yourself “What if I...” and plug in each one of the opposites. A small sample:
  - Stretch it/Shrink It
  - Freeze it/Melt it
  - Personalize it/De-personalize it
4. Change the direction or location of your perspective. Try physically changing your perspective by walking around, or doing something different to it or through it. Also try metaphorically or hypothetically changing your perspective as well by thinking about looking at the problem in different ways, by making comparisons, or revisiting “what if” scenarios.
5. Flip-flop results. If you want to increase sales, think about decreasing them. What would you have to do?
6. Turn defeat into victory or victory into defeat If something turns out bad, think about the positive aspects of the situation (the “if life gives you lemons, make lemonade” scenario). What if I lost all of the files off my computer, what good would come out of it? Maybe I would spend more time with my family or implement a fail-safe file archiving system! Who knows?

### **A problem/solution-reversal example:**

Granny is knitting and three-year-old Susan is upsetting Granny by playing with the wool. One parent suggests putting Susan into the playpen (the normal, obvious, non-reversed problem/solution). Knowing that little Susan would only scream and cry if placed in the playpen (annoying everyone in the room) the other parent suggests that you might alternatively

put Granny in the playpen. This was perhaps, a non-obvious (out of the ordinary use of the playpen) but the reversal of the use of the playpen served to solve Granny's problem (while at the same time avoiding the creation of a new problem).

### **CREATIVE TECHNIQUE #10: ASK THE SIX IMPORTANT QUESTIONS**

I keep six honest serving men, they taught me all I knew; their names are What and Why and When and How and Where and Who.

—RUDYARD KIPLING

**THERE ARE ONLY SIX QUESTIONS THAT ONE HUMAN CAN ASK ANOTHER:**

**What? Where? When? How? Why? Who?**

For example,

1. Why is it necessary?
2. Where should it be done?
3. When should it be done?
4. Who should do it?
5. What should be done?
6. How should it be done?

Ask yourself a list of questions in relation to the problem at hand. Forcing yourself to ask and answer questions forces you to think about the problem. Thinking about the problem in light of different questions forces you to look at the problem from a different angle or perspective. This can lead to opening the mind to creative solutions.

### **Other questions you may ask of the problem, or other contexts in which you might want to put it in.**

What other uses could it be used for? What if you modified it a little?

- Longer, shorter, thicker, stronger, higher, shorter, concentrated, diluted.
- Put next to something, mixed with something, added to or subtracted from.  
Think of parallels and associations: Two people can make friendship; two metals can make an alloy.
- Placed in a different context, viewed in a new light, watched from a different vantage point, spoken in a different voice, painted a different color.
- If you couldn't use it, what would you substitute for it?
- How might you rearrange, reorder, restructure something to bring new or different meaning?  
Sequence, pattern, layout, arrangement, substitute, transpose, speed up or down.  
Flip, turn, rotate, put upside down, inside out.
- What other things is it like? How are they used? How are they the same, how are they different?
- Does the past offer parallel? Can you predict a parallel in the future?
- What, or whom, does this emulate?

### **Ask the "same question" more than once, in different ways (allowing one question to lead into another).**

1. Why has the machine stopped? (A fuse blew because of an overload.)
2. Why was there an overload (There wasn't enough lubrication for the bearings.)
3. Why wasn't there enough lubrication? (The pump wasn't pumping enough.)
4. Why wasn't lubricant being pumped? (The pump shaft was vibrating as a result of abrasion.)
5. Why was there abrasion? (There was no filter, allowing chips of material into the pump.)

The solution: Installation of a filter prevents this problem from happening in the future.

### **CREATIVE TECHNIQUE #11: ATTRIBUTE LISTING**

Attribute listing is a great technique for ensuring all possible aspects of a problem have been examined. Attribute listing is breaking the problem down into smaller and smaller bits and seeing what you discover when you do.

Let's say you are in the business of making flashlights. You are under pressure from your competition and need to improve the quality of your product. By breaking the product down into its component parts (casing, switch, battery, bulb) and the physical characteristics (shape, size, weight, ergonomics).

#### **EXAMPLE:**

Build a better flashlight: (list the flashlight parts, with attributes and improvements for each.)

Of the characteristics or attributes associated with the problem to be solved how can you?...

- Adapt it / modify it
- Magnify it / minify it
- Substitute it / replace it / eliminate it / consolidate it
- Rearrange it / reverse it / flip it, etc.

<b>ORIGINAL PART</b>	<b>MODIFIED ATTRIBUTES / IMPROVEMENTS</b>
Casing	Plastic or Metal Aluminum or magnesium alloy Lightweight and durable, attractive Break resistant, resilient Lightweight as possible Ergonomic handle Hand-grip shaped rubber-coating
Switch	On/Off Low beam Automatic off after period of motionlessness Built-in flasher
Battery	Power/Rechargeable Conveniently plugs directly into wall Include pull-out cord for AC operation
Bulb	Brighter, halogen, xenon, other? Lens to focus light Distance vs. wide area Liquid cooled Extends life of bulb
Bulb	Colored filters Not attract insects Special effects, for fun, etc.

Other nice features:

Safety

Built-in flasher

Weather radio

Emergency Radio transmitter

Utility

Waterproof, floats

Carry strap, utility clip

Built-in adjustable aiming stand

The example above is only partially developed. But it is probably clear that you can take each part of component of an overall problem and break it down into more specific parts. You can develop ideas for solutions or improvements for each part. You can continue to get more and more specific and continue to develop more solutions and improvements.

This process can be applied to creative problem solving. Thinking of words or visuals that represent a solution can be further broken down into other visuals and associations and derived meanings from these associations.

## **CREATIVE TECHNIQUE #12: METAPHORICAL THINKING**

Through recent history people have tended to think of the mind as analogous to current technology. For example, the mind has been likened to a steam engine, telephone exchange, and more recently, a computer. Of course we know that the mind is more than (and different than) a computer!

A metaphor is a soft-thinking technique connecting two different universes of meaning.

Examples: Food chain, flow of time, fiscal watchdog, bull's-eye, house of cards.

The food chain is not literally a chain, but is a metaphor for one thing connected to, and linked by another, just like links on a chain. Time does not literally flow like water, but it seems to. A watchdog can be a literal thing, or a metaphor for a guard, a gatekeeper, one who is on the lookout for inappropriate or unauthorized things or people. A house of cards does indeed exist literally (as a game or physical challenge) but we often use the term “house of cards” as a metaphor to describe an ever-increasingly precarious situation. The term “house of cards” is probably used more often as a non-literal metaphor (having nothing to do literally with a particular situation) than it is used to literally describe someone building a structure out of a deck of cards, but the use of the term is meaningful and is generally understood by everyone in the room.

Metaphor can manifest itself through figures of speech. “I can’t dance, I have two left feet” is hardly ever a literal comment, but rather a statement of comparative “feeling” of what one might feel like when they try to dance. Metaphors and figures of speech can be wonderful ways to describe or explain something, and also can be used to develop a creative solution (especially for a graphic design problem). Metaphors can be deeply meaningful in the way they communicate their messages.

Metaphors and figures of speech are imbedded in our culture, language, and society. Keep this in mind if your market speaks a different language and/or is part of a different culture.

The key to metaphorical thinking is *similarity*. The human mind tends to look for similarities. A road map is a model or metaphor of reality and is useful for explaining some things. Similarity is often expressed (in language) through the use of simile

Example: the Dolby Sound System is like a sonic laundry.

Again, “laundry” is not literal, but within the context of the Dolby sound system, sound is “cleaned” by having the “dirty noise” removed...or laundered just as stains are removed from clothing in the “laundry” sense.

Excessive logical thinking (overly literal) can stifle the creative process, so use metaphors as way of thinking differently about something. Create, and look for, metaphors in your thinking, and be aware of the metaphors you use. Consider myths, morals, figures of speech, symbolism and iconography, and similes as you think of ways to convey ideas in creative (non obvious/non literal) ways in order to develop a creative solution. Be careful to avoid cheesy clichés!

### **CREATIVE TECHNIQUE #13: PLAY WITH DUAL MEANINGS AND PLAYS ON WORDS**

Sometimes an idea can go “full circle” by having dual meanings or interpretations and both interpretations are relevant to the problem to be solved.

For example, a literal (or visual) play on words is formed when a baseball glove is shown reaching up to catch a ball. But instead of a ball, a round medicine tablet is shown in its place. Words accompany the image stating “Don’t Get Caught!” The idea of catching a ball within the context of baseball takes a creative twist (and getting “caught” within the context of the baseball game (and drugs) has new and different significance.

Another example (from a classic Volkswagen advertisement) may include a group of nuns getting onto a Volkswagen bus with a headline stating simply “Mass Transit.” Mass transit has its usual connotations of larger groups traveling together, but within the context of the nuns in transit to mass a creative concept with dual meanings goes full circle.

### **CREATIVE TECHNIQUE #14: THINK ABOUT/CHANGE THE CONTEXT**

In the previous examples we took a recognizable object or objects and placed them in an unexpected context (through the use of words or other visuals) in order to produce something meaningful and creative. Always consider how you might introduce creative twists by changing contexts from the normal and expected to something else.

### **CREATIVE TECHNIQUE #15: ASK “STUPID” QUESTIONS AND THINK BIG**

Question: *How many designers does it take to change a light bulb?* Answer: *Does it have to be a light bulb?*

Step back, look at your surroundings and try to view the world with a fresh eye. Try to avoid the metaphorical dilemma of “not seeing the forest for the trees.” Look at the obvious, look at the ideas beside the obvious, behind the obvious, and above and below the obvious to find new ideas that were actually there along. Look at the obvious and ask yourself, “is this really the most obvious?” Think of the problem to be solved and ask yourself, “is this really the problem?” Think of the obvious design obstacles, and ask yourself, “are these really obstacles, or are these actually creative advantages?” Ask the fundamental questions and then evaluate your questions. Are these fundamental questions really the proper questions to be asking? Step back, change your perceptions, think of the problem to be solved from the perspective of the competition, the consumer, the client, or from a designer with a different design philosophy.

Think big, think with no limits. Allow ludicrous thoughts to enter your mind and then ask yourself, “is it really so ludicrous?” Very often a seemingly ridiculous notion can be pared down (sometimes ever so slightly) into reality much more easily than you might think. Then a stupid question does not seem like such a stupid question.

### **CREATIVE TECHNIQUE #16: UTILIZE SYMBOLISM/SEMIOTICS**

How does one communicate any idea? Symbolism! We use sounds (symbolizing letters) that we join together (symbolizing words). Any use of meaningful signs or symbols falls under the category of semiotics. Sounds, codes, images and even colors can be meaningful.

For example, the color red might mean “danger,” “love,” or “hot.” Non-literal figures of speech (idioms) are meaningful within a particular group, culture, or society. “I’m so hungry I could eat a horse.” “It’s raining cats and dogs!” “I’m so angry I could kill someone!”

Metaphors and similes (see the section on metaphorical thinking.) help us understand things by making comparisons. “I feel like crap!” “This dessert is smooth as silk!” “I feel like I’m paddling upstream!”

Metonymy is used to represent something through something else that is closely associated with it. For example, we often refer to the American cinema industry as “Hollywood” even though movies are often made elsewhere and many things besides filmmaking occur in the city of Hollywood. Westminster is often used to represent the Parliament of the United Kingdom, and the capital building in Washington DC suggests Congress. A bed might symbolize rest or sleep.

Synecdoche deals with how a portion of a thing, place, or experience might represent a greater whole. Seashells on sand might suggest an entire beach. A carved pumpkin might represent Halloween. Skis might represent thrilling and adventuresome winter activities.

Icons and pictograms are simplified graphic symbols representing how we perceive something to be in its most basic form. A red Valentine’s Day heart might represent love. A smiley face might represent happiness. A cross might represent Christianity (and may also correlate with metonymy and synecdoche.) International symbols tend to represent recognizable people, places, things, and/or actions in a simple, recognizable and literal way. A Rebus is a meaningful sequence of symbols.

As you think of ways to solve creative problems, you might think about the things that are related to the problem to be solved, and think of things that symbolize those things. How can you represent one of these symbols in a new, interesting, or creative way? How might you place one of these symbols within a new or different context to create a compelling message or to put a creative (and meaningful) twist on an old cliché? Words have meaning and words are combined together to form meaningful and communicative sentences, consider how visual symbols might be put together (or placed within context) to form complex, original, appropriate, and meaningful messages.

### **CREATIVE TECHNIQUE #17: ASK SOMEONE ELSE**

Of course you cannot rely on someone else to solve the problem for you. But it never hurts to get input or a second opinion from someone else! Inspiration, ideas, and research come from many places and take many forms. Research is vital for success!

Remember, if you don't know what the problem is in the first place, or you have not clearly defined the problem, then you will have difficulty solving it. Maybe getting input from others can help you define the problem, or can help you evaluate whether or not you can clearly communicate a specific, concise definition of the problem. If you can't quickly and clearly communicate ideas relating to the problem and the solution then you probably haven't clearly defined the problem yet.

Talking with someone else can:

- Get inspirations for original ideas through input
- Gain feedback on the ideas you are working on so far.
- Help you think outside the box by bringing in a fresh viewpoint or different perspective on the problem to be solved.

Consider the following steps:

1. Solicit help from a listener.
  - Generally get help from someone who knows something about the subject relating to problem to be solved.
  - If the person knows nothing about the subject, maybe the process of describing the problem to the listener can help define what the problem is. Consider covering both bases.
2. Give an overview of the design problem. Use adequate detail without providing “information overload.”
3. Ask the listener to mirror back the problem. Make certain what he or she said is the correct understanding of the problem to be solved. If they did not understand the problem to be solved, ask yourself:
  - Was the problem clear to begin with?
  - Was the problem clearly communicated?
  - What can be done to make certain the problem to be solved is clear and understandable?Sometimes being able to clearly state and communicate the problem (define it) is the most important step!
4. Solicit additional feedback. Ask questions like, “Do you really think this is the problem to be solved or are there more important issues?” “What types of ideas do you associate with the problem, and how might a solution be found?” Maybe you will be asked some questions that you had not considered previously, maybe you need to consider reevaluations the problem to be solved. Maybe some of the answers will also make you think of new ideas or other questions to ask.
5. Make the other person feel free to ask questions and to offer suggestions. You might consider a combination of both structured questions and free-form discussion to cover all of your bases. Feel free to take notes, not only for the obvious reasons, but also to give the other person the impression that their input is valuable. This can help motivate them to provide more thoughtful questions and answers.

## **CREATIVE TECHNIQUE #18: RESEARCH**

Nothing is original. Steal from anywhere that resonates with inspiration or fuels your imagination. Devour old films, new films, music, books, paintings, photographs, poems, dreams, random conversations, architecture, bridges, street signs, trees, clouds, bodies of water, light and shadows. Select only things to steal from that speak directly to your soul. If you do this, your work (and theft) will be authentic. Authenticity is invaluable; originality is nonexistent. And don't bother concealing your thievery – celebrate it if you feel like it.

— JIM JARMUSCH

Perhaps research (last but not least) is one of the most important components of creative problem solving. As you have seen in the previous examples, creative solutions often come from looking at the creative problem in different ways, and at looking at creative solutions in different way.

You can't do this unless you absolutely understand everything about the ideas or things relating to the problem. You must understand what it is you are working with before you can develop a truly creative idea appropriately relating to it. For example, how could you solve a creative problem relating to automobiles if you did not know what an engine was, or a street, or had no notion of what transportation was in general? It might seem obvious to most of us that we know a good deal about automobiles, but additional research can open the door to new knowledge, which can then provide us with even more options (more directions to take) for creative solutions.

#### IT COULD BE SAID THAT RESEARCH COULD TAKE THREE MAJOR FORMS:

- 1 **Literal:** Literally researching the idea or the object, the process, the technology, the benefits, etc. relating to your problem can be very useful, particularly in familiarizing yourself with the specifics of the problem to be solved. Understanding the problem literally means that you can define (specifically) what the problem to be solved is.
- 2 **Meaning and context:** Researching the meaning behind an idea or an object is also valuable. You can understand the technical aspects of an automobile (which of course, is crucial) but perhaps, even more importantly, ask yourself "what does an automobile *mean* to a person?" To some, automobiles are status symbols, a project to tinker with, a beautiful thing to wash and polish. To many it represents a way to get to work, and perhaps is a key symbol for one's livelihood. Another individual might see an automobile in a different context such as a necessary evil, an environmental disasters, or a symbol of excess.

Meaning is rooted deeply in society and in one's (or a market's or market segment's) personal judgement, and the context within which your look at something.

Meaning can also be associated with language and words. Research conducted using a dictionary, thesaurus or other such tools can help you in areas of both "literal" and "meaning". The study of words, language, Latin meanings, root-words, suffixes and prefixes can also help understand forms of meaning often expressed using language.

- 3 **Inspiration:** Researching the creative solutions of others can lead to an idea that can be adapted in a new, original, and truly creative way. Bear in mind that literally copying or plagiarizing is not a good practice, but being able to draw inspiration from another idea and to successfully adapt it into an original solution can be a very valuable part of the research and problem-solving process.

#### RESEARCH CAN FULFILL A NUMBER OF IMPORTANT OBJECTIVES, INCLUDING:

- Discovering the meaning, context, and symbolism behind an idea, or perhaps to discover a form of symbolism (previously unknown or not considered) which could be used for a creative solution.
- Seeing outside of the box, realizing something you had not previously thought of, directly or indirectly through the simple process of inspiration. It's easy to get tunnel vision when you've been staring at a piece of paper for several hours brainstorming ideas. Sometimes you need to step back, open your eyes, and look at the world in general to get inspiration for new ideas to explore.

- Providing inspiration for color, style, emotional tone, combinations of imagery or ideas in general.
- Serving as a reference. For example if you are drawing a dog, you probably want to reference an image of a dog. What type of dog? What breed of dog? How is a dog's personality manifested through its expressions, movement, gesture, stance, etc.? You can't know this unless you observe it through research!
- Helping you realize things from a marketing standpoint which can serve many purposes. Who is your market? Who is your competition? What does the general marketplace look like and how do you want to "position" yourself within this market? How do you make yourself different from the competition, and how do you make yourself appeal to your market?

**Research can assist in the other above problem-solving methods:**

- Cluster charts and traditional brainstorming all utilize what you know about the problem to be solved, and discovering new ways of looking at a solution or finding related information or ideas about the problem. Of course researching about the problem and having more information available to you about the nature of the problem can only help in this process.
- Keeping an "idea scrapbook" is a process of research, both in terms of consciously researching ideas for the problem at hand, and in terms of unconsciously accumulating "profound ideas and inspiration" that can ripen in the back of your mind until you are ready to harvest the idea for a project when it comes up.
- The "problem reversal" process or "restating the problem" requires that you understand the problem implicitly, which will most definitely require research. The process of asking "six important questions" or attribute listing means you must thoroughly research the attributes of the creative problem to be solved.
- Metaphors and figures of speech are imbedded in our culture, language, and society. Research can provide inspiration for metaphorical inferences used as part of conceptual solutions.

**CREATIVE TECHNIQUE #19: PROBLEM SOLVING COMBINATIONS**

Consider the notion of combining more than one of the above techniques to find a creative solution. For example, research is a requirement for virtually every problem-solving technique, and research yields helpful information that can be molded into a creative solution using one or more of the other methods of creative problem solving. As an other example, can you use metaphors as a starting point for some ideas, and then use cluster charts as a way to branch off ideas from there? Can you restate the problem to find a creative solution by incorporating problem reversal into the problem-restating process? Can you use free writing techniques to record your process of thinking through the creative problem to be solved as you simultaneously use other techniques to explore ideas?

And to revisit an idea discussed at the beginning, don't forget the importance of combining the conscious effort and the subconscious effort to solve creative problems!