

“THINKERTOYS - A Handbook of Business Creativity”

Michael Michalko
(Ten Speed Press - 1991)

Summary by Bob Littell, Chief NetWeaver

Do you exercise regularly? Do you try and eat most of the right foods? Most of us try to do both. But, with the incredible pace of change today – with seemingly constantly increasing layers of activities – business and personal - which seem to load up every corner of our waking hours, we sometimes skip doing one or both of those.

Well how about the question, “*How much of your time do you dedicate to becoming more ‘creative’?*” The more you exercise your creativity muscles, the stronger they will become and although I mentioned this in email invitations previously sent out, these points bear repeating:

A recent IBM study of 1500 CEO’s and other leaders identified ‘**creativity**’ as the single most important leadership competency for managing increasing levels of complexity. A McKinsey Global Survey of Business Executives listed ‘**ability to innovate**’ as the most important capability for business growth over the next five years.

A *Wall Street Journal* article– Aug. 21 – 22, 2011, “*The End of Management*” by Alan Murray, paints a dismal picture for those in middle or even senior management who haven’t recognized the shift in the way business will be transacted in the future and how projects will be handled: “*Traditional bureaucratic structures will have to be replaced with something more like ad-hoc teams of peers, who come together to tackle individual projects, and then disband.*” Who will be picked to be on these teams? You guessed it - those who are known for adding the most creativity to the process.

Creativity will be the most important **differentiator** for success in this new world in which we find ourselves, and for those believe or who don’t understand that it’s a mental EXERCISE which always gets better with practice, I just hope you’re close enough to retirement, and with enough retirement income that you won’t need to work at something other than as a ‘greeter’ in a Walmart. . .well maybe not that bad, but close.

This month’s book I’m featuring for our “**Don’t Need to the Read the Book**” book club is designed to change. . .or expand. . .the way you create new ideas and as the author suggests, “*change the way you perceive your own creativity, while stripping creativity itself of its mystique*”

The author, Michael Michalko will give you techniques for how to come up with new ideas and whether you prefer more traditional ‘**linear**’ techniques (i.e. manipulating existing information to come up with new ideas or different ways to do something) or

'intuitive' ones (i.e. using your intuition and imagination). He will explain both, and you can choose which suits you best, if not both.

Introduction

As the author points out in his introduction, it will not be enough for you to READ THE BOOK, in order for you to be able to create your own ideas, you will have to use and apply the techniques.

He gives a great example.

“Try to explain the joy of skiing to a bushman who has never left the desert. You can show him some skis and a picture of a snowy mountain, and perhaps get some of the idea across. However to fully realize the concept of skiing, the bushman must put on the skis and head down a mountain. If you merely read these techniques, you will have no more than a suggestion of how to get ideas. You’ll be like the bushman standing in the desert, staring at a pair of skis and a photo of the Matterhorn, with a small notion of what skiing might be.”

The author does a great job of breaking each chapter down into several components:

- 1) a specific technique for coming up with ideas to solve your particular challenge.
- 2) an explanation of just why it works
- 3) stories and examples of how and why it has been successful

Each chapter begins with an **inspirational quote**

from **“The Art of War”** by Sun Tzu more than 2,400 years ago and he believes his principles are as applicable to creativity in business as in warfare. Then the author gives a **‘blueprint’** that gives precise instructions for using the techniques and an explanation of why it works.

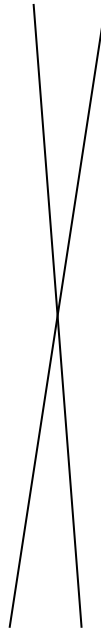
The author labels the first ‘section’ of the book – INITIATING – or getting started with a study of ‘creativity’

With the importance of creativity for determining success in this new age, I have wondered why some of the book club events we’ve had covering the topic of creativity, and how to become **more** creative, have not been as well-attended as some of the other topics which probably are not as valuable as required skill sets for the future.

The first chapter in this section, **“Original Spin”** helps answer that. I’m convinced that many (if not the majority of people) don’t consider themselves to be that creative. And after you meet this first question head on and discover ways to overcome it, the author then, in Chapter 2, **“Mind Pumping”** takes you through exercises *“to help you get started acting like an ‘idea person’.* “

He ends this preface to Chapters One and Two with an interesting exercise. You see below two straight lines. But when you tilt the paper to almost being flat (horizontal), a 3rd line literally ‘pops up’. If you have trouble seeing this, slightly cross your eyes.

The point of this is that, *“If you believe you are creative and act as if you creative, you will begin to create ideas, like the 3rd line, out of anything”*.



Chapter One – Original Spin

“To secure ourselves against defeat lies in our own hands.” – Sun Tzu

I absolutely love the way this book starts with what I believe is one of great ‘TRUISMS’ in life. . .along with one of the best analogies with Creativity:

“When you are depressed, your thoughts are quite different than when you are happy. When you feel rich and successful, your thoughts are quite different than when you feel poor and unsuccessful. Similarly, when you feel you are creative, your ideas are quite different than when you feel you are not.

Scientists have established that physiological responses can be consciously altered. You can condition yourself to trigger a particular chemical pattern in your brain that will affect your attitudes and your thinking in positive ways.”

In my formative years in my 20’s, one of the first books I read which had a profound effect on me was Maxwell Maltz’s, *“Psycho Cybernetics”*.

Here is a section taken right from Wikipedia on *“Psycho Cybernetics”*. You might want to re-visit this classic sometime.

Psycho-Cybernetics is a classic self-help book, written by Maxwell Maltz in 1960 and published by the non-profit Psycho-Cybernetics Foundation. Motivational and self-help experts in personal development, including Zig Ziglar, Tony Robbins, Brian Tracy have based their techniques on Maxwell Maltz. Many of the psychological methods of training elite athletes are based on the concepts in *Psycho-Cybernetics* as well. The book combines the cognitive behavioral technique of teaching an individual how to regulate self-concept developed by Prescott Lecky with the cybernetics of Norbert Wiener and John von Neumann. The book defines the mind-body connection as the core in succeeding in attaining personal goals.

Maltz found that his plastic surgery patients often had expectations that were not satisfied by the surgery, so he pursued a means of helping them set the goal of a positive outcome through) of that positive outcome. Maltz became interested in why setting goals works. He learned that the power of self-affirmation and mental visualisation techniques used the connection between the mind and the body. He specified techniques to develop a positive inner goal as a means of developing a positive outer goal. This concentration on inner attitudes is essential to his approach, as a person's outer success can never rise above the one visualized internally. (Visit Psycho-Cybernetics on Wikipedia for references)

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One of the pioneers in this area referenced by Michael Michalko is Prescott Lecky, who developed a method that consisted of getting a person to challenge “some negative concept that was inconsistent with some other deeply held belief.”

“Lecky believed that humans have an inherent need for consistency. If a thought is inconsistent with other, stronger ideas and concepts, the mind will reject it.”

Michalko’s important observation – “You do not have to change your personality or your life, or somehow make yourself into a new and better person in order to understand and replace your negative thoughts.”

Based upon Lecky’s work, the author explains a powerful exercise designed to overcome your fears, doubts, and uncertainties, and since the book is all about ‘**creativity**’, let’s focus on that ‘**doubt and uncertainty**’ and assume that you are one of the many who do not believe that you are that creative, or as I’ve heard some people actually say, “*I don’t have a creative bone in my body*”. They are dead wrong!

For those who consider themselves pretty creative already, you can still apply this method for other fears or doubts.

His Blueprint is called “**Tick-Tock**” and it involves first, **writing out your fears**; then **confronting them head-on**, and finally **substituting positive factors** that will allow you to overshadow and overwhelm your negative thoughts.

Here’s the process:

- *First write down the negative thoughts that are preventing you from realizing your goal – in this case – being a creative person. You might write it out in several different versions. Write them under “Tick”.*
- *Secondly, sit quietly and examine the negatives. Learn how you are irrationally twisting things and blowing them out of proportion.*
- *Substitute an objective, positive thought for each subjective negative one. Write these under “Tock”.*

Here’s one example he cites in the book:

Tick

The idea is so nontraditional, I’ll be a laughingstock if I suggest it.

Tock

Even if the idea is rejected, people respect and admire those who are creative in their work and who are constantly trying to improve the current situation. No pain, no gain. The riskier the idea, the greater the potential for rewards.

Think of several other ways or situations in which you may have conditioned yourself to consider yourself ‘non-creative’ (Tick), and then write out a counter point (Tock) of why that is really not rational.

To further help in this exercise and if you’re still not convinced you can overcome it, the author shows us “**How to Spin the Original Spin**”.

He tells the story of a group of scientists who were studying a tribe in New Guinea that believed their world ended at a nearby river. When one of the scientists had to leave, after he had safely crossed the river, he turned around and waved goodbye. The tribesmen didn’t wave back because they said they ‘**didn’t see him**’. “*Their entrenched beliefs about the world had distorted their perception of reality.*”

In a second and more telling story, the author cited “*a major publishing house whose CEO was disappointed with the lack of creativity among his editorial and marketing staffs and so he hired a group of high-priced psychologists to find out what differentiated the creative employees from others.*”

As you may have already guessed, their finding was that there was only one difference. The ‘**creative**’ group BELIEVED that they were creative and the less creative ones believed they were not. Within a year after instituting a two-part program designed to change the belief systems of the lesser creative group, **the ‘uncreative’ ones became many times more creative than the original creative group.**

The two-part program involves first - '**Self-Affirmation**' – accentuating your successes and positive qualities, skills, and forgetting your failures. That involves writing down and maintaining a self-affirmation list – all the things you like about yourself. He points out that you should include *all the successes you have had in your life: work, home, school, and so on. And keep adding to the list.*

In some other place which I can't recall, I read the best example of the power of repetition in ingraining a new feeling of self-confidence. Remember when you were first learning to drive a car, how extremely nervous you were. You didn't yet have a feel for the sensitivity of the steering wheel, the brakes, or the activity of the other cars around you. But, as you gained more actual experience, over time all those fears disappeared, and driving became second nature, so much so that now we sometimes dangerously multi-task – texting, dialing and conversing on cell phones, eating, etc. while driving.

When we first moved into our home at Big Canoe - we're all the way in the back up high – 15 minutes from the gate - the tortuous turns commanded my absolute attention. Then after several months, each turn became so expected that I could almost drive home from the gate blindfolded (just kidding).

The author's second technique in this two-part process is "**Creative Affirmation**".

Psychologists have proven that by using "**written affirmations**", you can reinforce the belief that you are a creative person:

*“Human beings act, feel, and perform in accordance with what they imagine to be true about themselves and their environment. What you **imagine** to be true becomes, in fact, true. Hold a given picture of yourself long and steadily enough in your mind's eye and you will become that picture.”*

So in order to '**visualize**' yourself as being creative, you must affirm that you believe it to be true. An affirmation is a positive statement that something is already so. In other words, instead of saying "*I'm going to become creative*", you would write, "**I AM creative**" or something along those lines. Then according to the author, write 20 variations of that: "*I, Bob, am a creative person*". . . "*People who know me, say I am a very creative person*". . .etc. etc.

So two things: 1) take your time and ponder each word as you write and keep changing the wording of the affirmations; 2) when negative thoughts or doubts creep in – as they often will – Michael says to write them down elsewhere or on a separate piece of paper: "*Bob is too old to be creative.*" Then just return to writing positive ones down.

After you have finished, the author suggests you go one step farther. Look back at the negatives you have written down and "*Nullify the negatives by writing additional, specific affirmations to address the negatives.*" To nullify the one I listed about age, I might write, "*Age is no barrier to creativity and in fact with all my experience and knowledge, I am much more creative than I was when I was younger*".

I purposely spent an inordinate amount of time on this first chapter because if you don't believe that you can find ways to change and to become more creative, all the techniques which Michael Michalko provides will be of no use. **Hopefully now, you are prepared to really begin learning techniques to help reinforce BOTH your 'self-affirmations' as well as your 'creative affirmations'.**

Chapter Two – Mind Pumping

“Anciently the skillful warriors first made themselves invincible and awaited the enemy's moment of vulnerability.” – Sun Tzu

Want to create a lot of ideas and transform yourself from someone who doesn't consider themselves to be very creative to a **'fountain'** of creative ideas?

Then start by understanding what you hopefully learned in Chapter One – **'creative thinking'** is just like **'brushing your teeth. . .and even more importantly flossing'** – to be ok at creative thinking, you can **'brush your teeth'** every day. If you want to really be extraordinary and make quantum leaps, you need to **floss AND brush. . .**every day.

Never thought of it this way, but try this. Since you DO brush your teeth every day (maybe not floss as often as you should), combine the FIRST recommendation of Michalko – **Set An Idea Quota.**

So, each day of the working 5 day week, as you're brushing your teeth, DON'T STOP. . . brushing and/or flossing. . .until you have come up with ONE new idea for that day – work or personal. I'm going to start doing this TOMORROW!

As the author says, *“Having a quota will force you to actively generate ideas and alternatives rather than waiting for them to occur to you.” . . . “Having a quota does not stop you from generating more ideas than the quota, but it does ensure that you generate your minimum.”*

Getting Tone – You've seen numerous examples of this which accentuate the necessity of pure concentration. The author includes an example of a paragraph where you have to count the 'f's in a paragraph and because of the 'visual' tendency to MISS the 'f's' in the 'of' words (I was POSITIVE I caught all 35, but there were 36), he says **“we LOOK, but we don't SEE”**. *“Paying attention to the world around you will help you develop the extraordinary capacity to look at mundane things and see the miraculous.”*

Tiny Truths – The author suggests a way to pay more attention to the subtleties of the world around you. Taken from Minor White, who taught photography at MIT, you pick a photograph or a picture – the more detailed the better – and set a timer and stare at the picture for a full 10 minutes – Don't move a muscle and don't let your mind wander. . . just stay focused on the details of the picture. When the timer goes off, look away and **'recall the experience'** visually. As you go to work, periodically recall the experience.

Dukes of Habit – Here Michalko recommends you consciously and totally shake up your ordinary routine. If you go to bed early, go to bed late. On page 15, he provides a whole list of ways you can do this. I can see that forcing yourself out of your usual, habits just causes those brain synapses to get out their comfortable routine. He suggests you pick out one at a time and do it for a day, a week, or whatever.

Feed Your Head – Michalko provides several ways to do this: 1) Select books to read carefully asking if it will stretch your creativity; 2) Take notes as you read – in margins – on a separate notepad or by your billiard table as Mark Twain did; 3) Outline a book before you read it; 4) Read biographies – “*treasure-houses of ideas*”; 5) Read ‘how-to’ books on any subject – inside are tools you can use elsewhere; 6) Read magazines on varied subjects – Walt Disney called the “**Reader’s Digest**” a *gymnasium for imagination training*; 7) Read non-fiction and as JFK used to do, think up solutions to problems addressed before they solve it; 8) Think as you read – new solutions to old problems – the Allies in WWII realized strategic value in reading small town German newspapers for tips on food, fuel, etc. and reading the society column for visiting German officers. He calls this ‘**content analysis**’ – which he also says is very useful in spotting trends.

- **One of the exercises we will do at our book club meeting is to spend some time brainstorming trends which we see or hear about and what could be done to take advantage of those trends?**

Brainbanks – How about using a shoe box or a big coffee can to store ideas, interesting advertisements, cartoons, pictures, doodles, etc. and occasionally shake it up and draw two of them out and watch how they trigger a thought or idea. (Littell- That might be fun to do in an office and have everyone contribute items and have a weekly ‘idea-a-thon’)

Travel Junkie – Michalko says when you’re feeling stale or bored, go some place – a flea market, a craft show, old folks home, toy store, etc. Pick up an object and try to come up with some relationship with the problem you’re working on. In the early 1900’s, candy on a stick was a big thing and competition was fierce. He describes how George Smith went to the horse track, bet on a horse that won, and then named his candy “**Lollipop**” after the horse. Wonder if the horse got any of the royalties?

Capturing Idea Birds – Write it down – short and sweet. Ideas, like birds, will flit in and out of your conscious mind unless you capture them. Michalko points out that psychologists have demonstrated that we can only keep 5-9 pieces of information in our mind at a time. (Read this phone number 707-863-5396. . .look at your watch to see what time it is. Just in those few seconds, you probably now won’t be able to remember the phone number you just saw). Michalko says that we can only hold items in our short-term memory for about 12 seconds.

Think Right – Michalko explains the difference between ‘**fluency**’ (i.e. number of ideas you come up with) and ‘**flexibility**’ relating to the ‘**creativity**’ of the ideas. He suggests

an exercise. Think first of all the different ways you might use WD-40. Then do a second list pushing your ideas to wild and even ridiculous uses. Give yourself a time limit which will help.

Another exercise he suggests which Psychologist, J.P. Guilford used in training creativity was to start with a 4-letter word such as “**IDEA**”. Then you give yourself a limited period of time and see how many 4-WORD sentences you can come up with using each letter as the first-letter of each word: **I** **D**on’t **E**njoy **A**pricots.

Idea Log – He suggests you create your own ‘**idea log**’ broken down into categories such as marketing, corporate, personal, services, special projects, products, etc. As you periodically review these ideas, you will come up with new connections.

This book – very frankly is the hardest book I’ve tackled to try and summarize because it is so loaded with exercises which take you in an entirely new direction in your thought process. If you are committed to expanding your creativity skills, I would strongly recommend that you purchase this book and then just pick a chapter at a time – possibly for an entire week – or month – and just concentrate on that.

From this point on, I’m going to just skip around to some of my favorite topics and exercises in the book – explaining some of them, and ‘teasing’ you with others without telling you what Michalko says, but giving you page references to make it easy for you to find.

Chapter 3 – Challenges

Your Challenge Statement – “*A victorious army wins its victories before seeking battle.*” – Sun Tzu.

Michalko calls a problem “*An opportunity in work clothes*” but he also points out that deciding ‘which opportunities are worth pursuing’ is very important. Writing your problem down is critical and if you have a series of problems, writing them all down and then prioritizing the most important one allows you then to focus on that problem first. Pages 23 and 24 contain a list of possible problems and notice how he writes them all down as questions such as: “*What would you like to get others to do?*” or “*What misunderstandings do you have at work?*” These are more as ‘personal challenges’.

Then he lists those that are ‘business challenges’: “*How can I sell 20% more than I am at present?*” or “*Which of our products can we make into silver bullets?*”

So in crafting your own Challenge Statement, Michalko says, “*The more time you devote to perfecting the wording of your change, the closer you will be to a solution. Conversely, the less time you take to define and center the challenge, the greater the chances for a not-so-great idea.*” He cites ridiculous ideas from the patent office as

examples of this: “a golf ball that sends out smoke signals when it lands to help its owner find it” (I’d buy that one). Here’s his Blueprint for ‘centering a challenge’:

1. Write it as a definite question, beginning “*In what ways might I . . . ?*”
2. Vary the wording of the challenge by substituting synonyms for key words.
 - “*In what ways might I **develop** a **unique** food product?*”Changed to: “*In what ways might I **transform** a product into a **surprising** food?*”
Ever wonder where the ‘square egg cube idea’ came from?
3. Stretch the challenge to see broader perspective.
 - Keep asking more and deeper questions
4. Squeeze the challenge to see the narrow perspective
 - a. Divide it into subproblems
 - b. Solve the subproblems
 - c. Keep asking ‘*how else?*’ and “*why else?*”

Chapter 4 – Thinkertoys

“In order to get original ideas, you need to be able to look at the same information everyone else does, and organize it into a new and different pattern.” Michalko calls this “*active thinking*”.

It’s in this chapter that Michalko introduces the difference of Thinkertoys which involve “**linear**” thinking vs. “**intuitive**” thinking. “*The basic difference between the two is that the linear Thinkertoys structure existing information, while the intuitive toys generate new information using insight, imagination and intuition.*” . . . “*Linear Thinkertoys are for the left brain; intuitive Thinkertoys for the right brain.*”

Here are some hints he gives as you ‘play’ with the various Thinkertoys he describes:

- **play with them in your own unique style**
- **play with a variety of them rather than just deciding your one or two favorites – varying them often will give you a ‘better’ answer**
- **work only with one at time and use it over and over again until your thoroughly familiar with the technique**

His suggested steps:

1. **Inventory all the ideas in the sequence in which they occurred**
2. **Browse through the list – subconsciously you will prioritize them, but don’t do it quite yet.**
3. **Develop criteria for judging the ideas (standards, strengths/weaknesses, how to compare and analyze, criteria to best refine, etc.)**

4. Use judgment and intuition to choose the best ideas (Excellent. . . Likely – but needs refinement. . . Possible chance – needs improvement. . . 50/50 – could go either way. . . Long shot – remote.
5. Take your best ideas and get feedback.

The following is the outline of the rest of the book and I will just pick out two of my favorites which I am going to personally work on over the next month or so – one (1) linear and one (1) intuitive.

PART ONE – Linear THINKERTOYS

Group A

- Chapter 5 - False Faces
- Chapter 6 – Slice and Dice
- Chapter 7 – Cherry Split
- Chapter 8 – Think Bubbles
- Chapter 9 – Scamper

Group B

- Chapter 10 – Tug-of-War
- Chapter 11 – Idea Box
- Chapter 12 – Idea Grid
- Chapter 13 – Toothache Tree
- Chapter 14 – Phoenix
- Chapter 15 – The Great Transpacific Airline and Storm Door Company
- Chapter 16 - Future Fruit

Group C

- Chapter 17 – Brutethink
- Chapter 18 – Hall of Fame
- Chapter 19 – Circle of Opportunity
- Chapter 20 – Ideatoons
- Chapter 21 – Clever Trevor

PART TWO– Intuitive THINKERTOYS

- Chapter 22 – Chilling Out
- Chapter 23 – Blue Roses
- Chapter 24 – The Three B’s
- Chapter 25 – Rattlesnakes and Roses
- Chapter 26 – Stone Soup
- Chapter 27 – Color Bath
- Chapter 28 – Dreamscape
- Chapter 29 – Da Vinci’s Technique
- Chapter 30 – Dali’s Technique
- Chapter 31 – Not Kansas

- Chapter 32 – The Shadow
- Chapter 33 – The Book of the Dead

PART THREE – Group THINKERTOYS

- Chapter 34 – Brainstorming
- Chapter 35 – Rice Storm

PART FOUR – ENDTOYS

- Chapter 36 – Worrywillie’s Guide for Prioritizing

For my Part One, linear Thinkertoy, I’ve chosen “SCAMPER” (Chapter 9) and wouldn’t you know it, it’s the longest chapter in the entire book.

“He who can modify his tactics in relation to his opponent and thereby succeed in winning, may be called a heaven-borne captain.” Sun Tzu

Michalko notes that,

“Manipulation is the brother of creativity. When your imagination is as blank as a waiter’s stare, take an existing item and manipulate it into a new idea. Remember that everything new is just an addition or modification to something that already existed.”

It’s loaded with examples, but I will focus on the nine (9) techniques. Here’s an obvious but important point the author makes: *“The best way to get a good idea is to get as many ideas as you can. An particular way of looking at things is just one of many other possible ways.”*

I won’t list all the reasons why the author says it’s important to stretch the number of alternatives you are trying to come up with - as many as is possible for any given idea: *“One of the alternative ideas may solve your problem. . .An alternative idea may help you rearrange the components of your problem, thereby solving it indirectly.”*

Here’s an example he gives of what looks to be a simple answer to a problem, **“What is half of 13?”** You would readily answer 6 ½ or 6.5. But he gives 5 other alternatives:

1. Halving (i.e. separating) the **numeral** 13 (1 / 3) gives you a 1 and a 3 instead of thinking of the **word** halving, think **splitting** – the two numbers..
2. Halving the **word** ‘thirteen’ gives you four – half of 8 letters .
3. or (4) letters on each side – thir / teen
4. Converting 13 into Roman numerals and halving it one way gives you 11 and 2 (XI / II)
5. Halving it another way gives you 8 (~~XIII~~). It took me a while to ‘get’ this one but ‘divide’ it in half and VIII becomes obvious. VIII is its own mirror image.

Michalko offers his Blueprint for remembering a series of tools to help in exploring alternatives. They form the word “SCAMPER”

S = Substitute?

C = Combine?

A = Adapt?

M = Modify? = Magnify?

P = Put to other uses?

E = Eliminate or minify?

R = Reverse? = Rearrange?

Using Ray Kroc and the McDonald’s story, Michalko explains how each of these tools could have been utilized.

First you may know that,

“Ray Kroc was a middle-class high school dropout, a former piano player, real estate salesman who sold paper cups for seventeen years. In his fifties, Ray Kroc left the paper cup business and hit the road selling Multimixers, a little machine that could make six milkshakes at a time.

One day in 1954, a little hamburger stand ordered eight Multimixers. Curious, Kroc drove his dusty little car out to investigate. He was stunned by the volume of business that Dick and Maurice McDonald were doing. They had unwittingly hit on the concept of fast food – homogenized, predictable items that are quick and easy to prepare. The McDonalds had simplified, economized, and minimized the hamburger stand.

Kroc and the McDonalds formed a partnership that allowed Kroc to find new sites, and open and run them. What followed was not instant success, but obstacles and challenges. Ray Kroc became a billionaire because he identified the right challenges and manipulated existing information into new ideas to solve them.”

Here’s how the author explained how he unknowingly used SCAMPER to overcome them one-by-one.

S = Substitute?

Problem: *The McDonalds proved to be lethargic business partners. Kroc was worried that they might sell out to someone who didn’t want him around.*

Answer: **Substitute** a different partner. He did this by raising \$2.7MM from a venture capitalist who managed college endowment funds and they ended up with a \$14MM return on their investment.

C = Combine?

Problem: Kroc couldn't afford to finance the construction of the first hamburger stand planned for Des Plaines, Illinois.

Answer: He **combined** purposes with a construction company who built the stand in exchange for half-ownership.

A = Adapt?

Problem: Kroc wasn't necessarily the greatest idea person

Answer: He **adapted** what the McDonalds had already proven to be successful – selling a hamburger in a paper bag with some French fries thrown in.

M = Modify?

Problem: Kroc wasn't able to get his French fries to taste like the McDonalds' original ones. It was the difference in where the potatoes were stored which made the difference.

Answer: To replicate the outside storage area McDonalds had used where the potatoes were cured by exposure to desert winds, he **modified** his basement storage area and installed large electric fans which accomplished the same thing.

M = Magnify

Problem: Some franchise owners wanted to expand the basic menu.

Answer: By **magnifying** (i.e. exaggerating) the original burger, he came up with the Big Mac using a 'Build a Big Mac' promotion.

P = Put to Other Uses?

Problem: Kroc needed to develop other sources of income.

Answer: Get McDonalds into the real estate business. They'd lease and develop a site and then re-lease it back to the franchisee, who paid rent as well as franchisee fees.

E = Eliminate or Minify?

Problem: His hamburger patty suppliers packed their burgers in stacks which made employees have to unstuck them to keep the bottom ones from getting crushed.

Answer: Refuse to work with suppliers who didn't ship them in smaller (**minified**) stacks. Eventually he **eliminated** middle men by buying entire crops of Idaho Russet Burbank potatoes direct from the producers.

R = Rearrange?

Problem: Kroc wanted to differentiate his establishments from the competition.

Answer: He began **rearranging** everything from the red and white box prototype stands to ones with more seats in the '60's, and then added drive-through in the 70's.

The rest of the chapter provides hints and examples of how to use each tool which makes up SCAMPER. Try and think of an example of a product or service in any industry where the answer to one or more of these questions helped uncover the secret.

Substitute?

- What can be substituted?
- Who else can be substituted?
- What other procedure might work better?
- What other ingredient might work better?
- What other material might work better?
- What other color might work better?
- What other approach might work better?
- What about changing the format?

Combine?

- What ideas can be combined?
- Can we combine purposes?
- How about an assortment?
- How about a blend, an alloy, an ensemble?
- Combine units?
- What other article could be merged with this?
- How could we package a combination?
- What can be combined to multiply possible uses?
- What materials could we combine?
- Combine appeals?

Adapt?

- What else is like this?
- What other idea does this suggest?
- Does the past offer a parallel?
- What could I copy?
- Whom could I emulate?
- What idea could I incorporate?
- What other process could be adapted?
- What else could be adapted?
- What different contexts can I put my concept in?
- What ideas outside my field can I incorporate?

Magnify?

- What can be magnified, made larger, or extended?
- What can be exaggerated? Overstated?
- What can be added? More time? Stronger? Higher? Longer?
- How about greater frequency? Extra features?
- What can add extra value?
- What can be duplicated?
- How could I carry it to a dramatic extreme?

Modify?

- How can this be altered for the better?
- What can be modified?
- Is there a new twist?
- Change meaning, color, motion, sound, odor, form, shape?
- Change name?
- Other changes?
- What changes can be made in the plans? In the process? In Marketing?
- What other form could this take? What other package?
- Can the package be combined with the form?

Put to other uses?

- What else can this be used for?
- Are there new ways to use as is?
- Other uses if modified?
- What else could be made from this?
- Other extensions? Other markets?

Eliminate or Minify?

- What if this were smaller?
- What should I omit?
- Should I divide it? Split it up? Separate it into different parts?
- Understate?
- Streamline? Make miniature? Condense? Compact?
- Subtract? Delete?
- Can rules be eliminated?
- What's not necessary?

Rearrange?

- What other arrangement might be better?
- Interchange components?
- Other pattern? Other layout?
- Other sequence? Change the order?
- Transpose cause and effect?
- Change pace?
- Change schedule?

Reverse?

- Can I transpose positive and negative?
- What are the opposites?
- What are the negatives?
- Should I turn it around? Up instead of down? Down instead of up?
- Consider it backwards?
- Reverse roles?
- Do the unexpected?

Comparing Part Two, intuitive Thinkertoys, to Part One – linear Thinkertoys is like comparing dynamite to an atom bomb. The goal of both of them is blow up something but that’s about where the comparison ends.

The intuitive Thinkertoys involve tapping into the brain in subtle ways which open up channels of creativity – some which we don’t even fully comprehend.

You really do need to only concentrate on one chapter at a time in order to do justice to Part Two. And each one of them requires ‘work’ to really appreciate and master the process Michalko describes. As he says, “*The theory behind intuitive techniques is that at some level, you already know the answer to your challenge. Once you make this assumption, you need only know how and where to look for it. This is a different perspective from, ‘Is there a solution?’*”

I’ve chosen “Da Vinci’s Technique” (Chapter Twenty-Nine) as my intuitive Thinkertoy to practice. You will quickly see the complete difference in the process between linear and intuitive Thinkertoys, and hopefully appreciate the fact that intuitive thinking is the PhD of innovation and creativity.

***“The Book of Military Administration says, As the voice cannot be heard in battle, drums and bells are used. As troops cannot see each other clearly in battle, flags and banners are used.”* Sun Tzu**

Michalko reminds us that in the beginning, *“humans communicated with pictures. The alphabet evolved from the various pictographic techniques, however, this does not mean that verbal thinking is more advanced.”*

To get his ideas, *“Leonardo Da Vinci would close his eyes, relax totally, and cover a sheet of paper with random lines and scribbles. He would then open his eyes and look for images and patterns, objects, faces, or events in the scribbling and many of his inventions came forth unbeckoned from this random scribbling.”*

Michalko observes that *“Scribbling allows you to put your abstract ideas into a tangible form.”* He also reminds us that Edison would make hundreds of sketches and doodles before beginning to formulate an idea and GE has a collection of these – most which wouldn’t make any sense to anyone except Edison.

Here is the Blueprint which Michalko has created for using this Thinktoy for ideas to attack challenges you are facing:

1. *Review a challenge you are working on.* As usual he suggests writing out a series of questions from many different perspectives.
2. *Relax.* “*When relaxed, you will find your intuitive consciousness uses images and symbols more freely.*”
3. *Allow your intuition to offer images, scenes, and symbols that represent your situation.* You’re really not drawing anything specific and therefore you don’t need to know what the end picture will look like.
4. *Provide a format for the challenge by drawing a boundary.* This could be like a standard picture frame or any size or shape you like. Michalko says, “*the boundary gives your drawing its own atmosphere or depth and helps establish a wholeness which in itself is meaningful and gives meaning to your drawing.*”
5. *Draw as your mind wants to draw.* Without any conscious thought for what you’re drawing, just start scribbling. He says that to make it totally random, some people use their opposite hand. He also cautions, “*Do not censor what you draw*”.
6. *If one drawing does not seem enough, take another piece of paper and do another one, and another – as many as you need.*”
7. *Examine your drawing.* “***The drawing is a message from your subconscious.***” Examine the picture both as a whole, as well as different parts of it. He says to “*search the symbols and scribbles for unexpected signs and new information.*”
8. *Write down the first word that comes to mind for each image, symbol, scribble, line, or structure.*”
9. *Combine all the words and write a paragraph.* Write any thoughts that come to mind but then compare the paragraph with the pictures, and revise it if you need to until you feel both of them are representative of each other – *just in two different languages – one graphic and one verbal.*
10. *Consider how what you wrote relates to your challenge. Has this given you new ideas or insights, or a different way to approach the challenge?*

After a month of working on this chapter, I’ll report my findings at our NEXT book club meeting, because I am determined to discover how to make it work for me.

I will have to admit that this whole process reminded me of the analogy I gave at the very beginning of the summary about remembering the very first time you began learning how to drive a car, and how strange and unknown everything seemed. But as you practiced and became proficient, you could actually let your mind wander (not that you should) and solve other problems while you were driving.

I see ‘**intuitive**’ Thinkertoys in much the same way. You’ll have to work at mastering them and they may not be for everyone. But, if you genuinely believe, as I do, that the future will be dominated by those who are willing to step outside their comfort zone and allow this amazing piece of machinery we are all blessed to possess – our brains – to function in ways which we might not fully comprehend, but whose potential is totally unlimited. Give it a shot. What have you got to lose.