The Power of Metaphors
by Michael Michalko

Metaphors and metaphorical questions to spark your imagination.

When Pablo Picasso, the Spanish artist, was a schoolboy, he was terrible at math because whenever the teacher had him write a number on the chalkboard, he saw something different. The number four looked like a nose to him and he kept doodling until he filled in the rest of the face. The number 1 looked like a tree, 9 looked like a person walking against the wind, and 8 resembled an angel. Everyone else in the classroom saw numbers on the chalkboard; Picasso perceived a variety of different images.

The connection between perspective and creative thinking has to do with habituation and over-familiarization. Over-familiarization with something (an idea, a procedure, a system) is a trap. Where creative thinking is concerned, that is the irony of the skill: the more adept you are at something, the less likely you are to look at it in a different way; the greater your skill of a particular discipline, the less you will be tempted to experiment with different approaches. Einstein put it best when he once said, "An expert is a person who has few new ideas; a beginner is a person with many."

Creativity, no matter which of its many definitions you favor, requires looking at the world in a different way and trying fresh approaches to problems. An easy way to shake up your thinking is to think metaphorically. A metaphor is a figure of speech in which a word or phrase that means one thing is used to describe an object or idea to which it is not literally applicable (a ship to plow the sea, for example, or a lover's lane described as a ribbon of moonlight).

The ability to think metaphorically increases the likelihood that one can appreciate it in a new light, which, in turn, may lead to solutions that might not otherwise be anticipated. Darwin's most fertile metaphor in his efforts to understand evolution, for example, was the branching tree.

Friedrich Kekule described his understanding of the benzene molecule as a snake biting its own tail. Einstein, in articulating his theory of relativity, relied on an image of himself riding on a beam of light holding a mirror in front of him. The American research team struggling to understand the theories of superconductivity worked in conjunction with a dance troupe to see if they could grasp the choreography of how sub-atomic particles paired and interacted. Physicist Edward Witten - to explain string theory-- the most revolutionary idea in physics in more than half a century - likened the tiny loops or closed strings to doughnuts.

Aristotle considered metaphor a sign of genius, believing that the individual who had the capacity to perceive resemblances between two separate areas of existence and link

them together was a person of special gifts. If unlike things are really alike in some ways, perhaps, they are so in others.

With metaphorical thinking, you shift your frame of reference and make a connection between the problem and something else. Take a moment and suppose you want to increase your personal productivity at work. Your problem could be stated as, "In what ways might I become more productive at work?" What ideas do the following metaphorical questions spark in your imagination about the problem?

THOUGHT EXPERIMENT

* What animal is like your problem? Why?

* A cheeseburger is like the solution to the problem because.....

* How is your problem like a flash light? How are the components similar? How can the similarities and differences provide ideas?

* How is an iceberg like an idea that might help you solve the problem?

* If your problem were a lawn, what would the weeds be? How would you remove them?

* Why is a road map like your problem? What ideas can you get from a road map to help solve your problem? How about a GPS?

* How can a dog's bark help you solve your problem?In what ways can you hear the problem? What does it sound like? What else sounds like that? How can those things inspire ideas?

* What are the similarities between a half-eaten, cold pizza and your problem?

* If your problem were a NFL football team, what team would it be? Why? How would the team overcome its problems? Different personnel? Strategies? Game plans? Morale?

* What famous historical figure comes closest to resembling the essence of the problem? Why? How would the figure approach the problem? What ideas would the figure suggest?

When we compare problems to something unusual, we tend to have a need to understand it. Consequently, we break it down and analyze the different parts to see if this will allow us to understand it or make it somehow familiar. When this happens, we form new links and relationships that may lead to breakthrough ideas. For example, years back, a group of designers were looking for new light fixture ideas. They worked with various metaphoric questions, including, "A monkey is like the solution for a new design for a light fixture because...." They imagined a monkey running around the house with a light wherever it was needed. This thought led them to conceive track lighting.

Architects dwelled on the question: What creature best represents change? This inspired them to think of the chameleon and how it can camouflage itself by changing color to match his environment. This got them thinking of multiple colors and how to change from one color to another at will. They investigated the various new light weight flexible building materials and also the newest display technology. They discovered a flat circuitry called OLEDS (organic light-emitting diodes). They experimented with oleds and plastic and created a technique to tattoo oleds onto the plastic using an ink-jet printer. Now the

plastic building material can be used as a light source or computer display. When this material is used on an exterior wall, oleds can transform the look of your house in seconds. You could have a pink house one day and a blue house the next. You could even have a camouflage pattern.

HOW METAPHORS INFLUENCE US EVERY DAY

Though we seldom realize it, metaphors influence our thinking every day in what we read and hear from a multitude of sources. In a 2011 study, Researchers from Stanford University demonstrated how influential metaphors can be through a series of five experiments designed to tease apart the "why" and "when" of a metaphor's power. First, the researchers asked a large body of students to read one of two reports about crime in the City of Addison. Later, they had to suggest solutions for the problem. In the first report, crime was described as a "wild beast preying on the city" and "lurking in neighborhoods."

After reading these words, 75% of the students put forward solutions that involved enforcement or punishment, such as building more jails or even calling in the military for help. Only 25% suggested social reforms such as fixing the economy, improving education or providing better health care. The second report was exactly the same, except it described crime as a "virus infecting the city" and "plaguing" communities. After reading this version, only 56% opted for great law enforcement, while 44% suggested social reforms.

Interestingly, very few of the participants realized how affected they were by the differing crime metaphors. When researchers asked the participants to identify which parts of the text had most influenced their decisions, the vast majority pointed to the crime statistics, not the language. Only 3% identified the metaphors as the chief influencers.

Thinking metaphorically opens your eyes to see the similarities between dissimilar things which is a trait of creative thinking. Additionally, it's important to understand how metaphors influence us every day in what we read and hear.