

Science Lesson #16

The Scientist-Artist

(Innovations in Technology)

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Introduction to Fables and Science

Today's Lesson

- Technology didn't make things better - what we did with the technology made life better.
- As Dick Teresi puts it in his wonderful book, *Lost Discoveries (2003)*
 - I. The use of FIRE civilized man – and started war.
 - II. The use of the COMPASS allowed for world-wide community – and world-wide dominance by colonization.

- III. The use of PAPER / PRINTING allowed for common people to learn – and for mass deception through propaganda.
- IV. The use of IRON made it possible to make plowshares – and swords.

These Fables & Science lessons are provocative conversation starters for children and adults encouraging critical thinking while building character with illustrations that stimulate the imagination. Today, the fable part is the artist and the science part is the technology.

The scientist-artist imitates nature. To be a scientist-artist is easy - it just depends on what you are looking at or *Observing*. Bill Bryson in his well-researched book, *A Short History of Nearly Everything* (2003) describes what I would call some of *nature's technologies*. After all, the definition of technology involves the *art of doing something*. So, looking at it that way, nature has technologies, too. And, just as we can see the use of a human-made technology for good or not - we can see nature's technologies as useful and harmonious or not. Bryson reminds us that ...

- Oxygen causes combustion and hydrogen is explosive.
Together as a gas they are even more explosive. But combine them as H₂O and you have water to put out the fires.
- Sodium is lethally explosive if it touches water, chlorine is used in bleach, pools and water reservoirs to kill bacteria.
Together they make sodium chloride - table salt.
- **Without the earth's core we would not be here ...**
 - the core's outgassing helped to build an atmosphere and provided us with the magnetic field that shields us from cosmic radiation

- the core also causes plate tectonics, which continually renews and ripples the surface. If Earth were perfectly smooth, it would be covered everywhere with water to a depth of about 2 ½ miles.
- **We are by the right star** - the right distance from the right sort of star, one that is big enough to radiate lots of energy, but not so big as to burn itself out swiftly
- **We are the right distance from the sun** - 5 percent nearer and 15 percent farther would not support the life we know of us and our plants.

Let's look at technology again ...

- **Possible birthplace of homo sapiens and first tools**, Sudan (**Kushites**) is one of the oldest continuous centers of civilized life: irrigation, antibiotics, razors, mirrors, tweezers
- **while Gutenberg invents the printing press in 1456 A.D.** and prints the Bible, entire Chinese libraries were stocked with books that were older than, than Gutenberg's Bible is now - they had been printing since **1041 by Bi Sheng**
- **Water Milling**: in Baghdad with population approaching 1 million even had floating mills to keep up with corn milling running 24x7 with millstones and wooden gears
- **while Goodyear found vulcanization of rubber in 1839 - recent MIT researchers found tribes in still doing what ~1600 B.C. Aztecs did** - they would take sap from Castilla Elastica tree (white, viscous, liquid sap which gets brittle when dry) and mix with juice from a Morning Glory vine (which wraps itself around latex)
- **OBSIDIAN BLADES Still sharpest of ancient or modern** - 4000 BC in prehistoric Anatolia, modern-day Turkey - better than our surgical blade - some surgeons are trying now to use obsidian once again

If we expect miracles - have an attitude of gratitude - imitating nature can open up true innovation in technology ***and what we do with the technology!***

- As Bruce Lipton (B. H. Lipton, 2005, 2006, 2014; B. H. Lipton, Bhaerman, S., 2009) describes on bickart.org, under Good Reading, our cells are wise and can adjust to problems - even genetic disorders. This is like the way the tree's trillions of cells work. They proliferate and make new, healthy leaves - new cells to replace old ones all of the time.
- **If we imitate nature**
 - we may make new ***buildings that breathe*** like the ones being built in in Brisbane, Australia
 - we may invent flying machines that can soar like the butterfly in the wind
 - we may learn to bend like the tree in the wind & hold up structures like she holds up branches.

[\[Play video here to see live demonstration.\]](#)

Here's a provocative thought...

“We must become artists in science, scientific artists: as art imitates nature, our technology must imitate nature.” If we look to change the human - as a technology - we can transcend our current external technological inventions. The true innovations might then be our ability to converse with nature and take a leap beyond our current state.

Here are some fables that deal with this whole idea:

[\[Fable #18\]](#) [\[Fable #21\]](#) [\[Fable #23\]](#) [\[Fable #28\]](#) [\[Fable #29\]](#)

[[Fable #30](#)] [[Fable #57](#)] [[Fable #134](#)] [[Fable #145](#)] [[Fable #146](#)] [[Fable #149](#)] (Bickart, 2020a, Volume 1; 2020b, Volume 2; 2020c, Volume 3).



#146 *The New Idea*



A grandfather took his grandson on a hike through the woods. The tall trees and the fresh air got the grandfather talking. He often regaled his grandson with stories of the wonders he had seen in his long life. Today, he told of the marvelous inventions and devices that he had witnessed. “You see,” grandfather said, “humankind is always working on new developments that give us new abilities!” He explained that these developments were called TECHNOLOGY. The little boy’s eyes grew wide as his grandfather described one after another of these miraculous creations that allowed us to see and hear new and wonderful things. Then the walk grew silent as grandfather posed the open-ended query, “Who knows what will be next?” The boy thought

hard as they walked on. Suddenly, he stirred visibly as he received something truly new! “Grandfather,” he almost shouted, “I just got the greatest idea! Maybe the next thing to develop will be US! Maybe OUR abilities will become better than technology!”

PERHAPS IT IS TIME TO TRANSCEND OUR TECHNOLOGY

The New Idea

Why Use Fables to Teach Science?

Conversation Starters

- Who are some of your favorite people to tell you a story?
- Do you hear stories often? What is a favorite story?
- Do you get your own ideas for stories?
- Do you get your own ideas for something new? Is it a new invention or story or food or toy or gadget?
- What do you think of as technology?
- What do you think the grandson in this story meant when he said, *“I just got the greatest idea! Maybe the next thing to develop will be US! Maybe OUR abilities will become better than technology!”*

References

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