

Following quotes or concepts have been extracted from the book “A Beginner’s Guide to Constructing the Universe. The Mathematical Archetypes of Nature, Art and Science” by Michael Schneider. HarperCollins Publisher, NY, 1995. Read, and see how you resonate with them. I am very much inspired by them. I found them so apt for my Quantum Agriculture advocacy and Exhibit held at UPLB last July 2011.

Pam Fernandez

The earth is rude, silent, incomprehensible at first, nature is incomprehensible at first, Be not discouraged, keep on, there are divine things well envelop’d, I swear to you there are divine beings more beautiful than words can tell.

-Walt Whitman (1819-1892, American poet)

Education is the instruction of the intellect in the laws of Nature, under which name I include not merely things and their forces, but men and their ways; and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws.

-Thomas Henry Huxley (1825-1895, English biologist)

The most incomprehensible thing about the universe is that it is comprehensible.

-Albert Einstein (1879-1955)

Nothing in education is so astonishing as the amount of ignorance it accumulates in the form of inert facts.

-Henry Brooks Adams (1838-1918, American historian)

Bodily Exercise, when compulsory, does no harm to the body; but knowledge which is acquired under compulsion obtains no hold on the mind.

-Plato (c. 428-348 B.C., Greek mathematical philosopher)

Wisdom should be cherished as a means of traveling from youth to old age, for it is more lasting than any other possession.

-Bias of Priene (c. 570 B.C., one of the Seven Sages of ancient Greece)

Nature, that universal and public manuscript.

-Sir Thomas Browne (1605-1682, English physician and author)

Nature is written in symbols and signs.

-John Greenleaf Whittier (1807-1892, American poet)

All things are full of signs, and it is a wise man who can learn about one thing from another.

-Plotinus (205-270, Roman Neoplatonic philosopher)

I am not ambitious to appear a man of letters: I could be content the world should think I had scarce looked upon any other book than that of nature.

-Robert Boyle (1627-1691, British physicist and chemist)

In nature's infinite book of secrecy, a little I can read.

-William Shakespeare (1564-1616)

Living in the world without insight into the hidden laws of nature is not like knowing the language of the country in which one was born.

-Hazrat Inayat Khan (1882-1927, Sufi spiritual guide, musician, and writer)

"You amuse me," I said, "with your obvious fear that the public will disapprove if the subjects you describe don't seem useful. But it is in fact no easy matter, but very difficult for people to believe that there is a faculty in the mind of each of us which these studies purify and rekindle after it has been ruined and blinded by other pursuits, though it is more worth preserving than any eye since it is the only organ by which we perceive the truth. Those who agree with us about this will give your proposals unqualified approval, but those who are quite unaware of it will probably think you are talking nonsense, as they won't see what other benefit is to be expected from such studies."

-Plato

The real mystery of life is not a problem to be solved, it is a reality to be experienced.

-J.J. Van der Leeuw

The goal of life is living in agreement with nature.

-Zeno of Elea (490-430 B.C., Greek philosopher)

We are born for cooperation.

-Marcus Aurelius (121-180, philosopher at twelve, Roman emperor at forty)

Our biggest failure is our failure to see patterns.

-Marilyn Ferguson (American writer)

The world, harmoniously confused, Where order in variety we see, And where,
tho' all things differ, All agree.

-Alexander Pope (1688-1744, English poet)

To know all, it is necessary to know very little; but to know that very little, one
must first know pretty much.

-Georges I. Gurdjieff (1872-194)

Numbers are the highest degree of knowledge. It is knowledge itself.

-Plato

He therefore who wishes to rejoice without doubt in regard to the truths
underlying phenomena must know how to devote himself to experiment.

-Roger Bacon (1220-1292, English philosopher and scientist)

If you do not rest upon the good foundation of nature, you will labor with little honor and less profit. [T]hose who take for their standard any one but nature – the mistress of all matters – weary themselves in vain.

-Leonardo da Vinci (1452-1519)

The real voyage of discovery consists not in seeking new lands but seeing with new eyes.

-Marcel Proust (1871-1922, French novelist)

Come forth into the light of things, Let nature be you teacher.

-William Wordsworth (1770-1850, English poet)

Everything an Indian does is in a circle, and that is because the power of the world always works in circles, and everything tries to be round.

-Black Elk (1863-1950)

It is a fallacy of the old schools to divide man into parcels, elements, thoughts, emotions, intuitions, etc. All human faculties consist of an interconnected whole.

-Alfred Korzybski (1879-1950, American semanticist)

It is Unity that doth enchant me.

-Giordano Bruno (1548-1600, Italian philosopher)

As on the smooth expanse of crystal lakes, the sinking stone at first a circle makes;
The trembling surface by the motion stirr'd, Spread in a second circle, then a
third; Wide, and more wide, the floating rings advance, Fill all the wat'ry plain,
and to the margin dance.

-Alexander Pope

The wave is not the water. The water merely told us about the wave moving by.

-R. Buckminster Fuller (1895-1983, American inventor, engineer,
poet, mathematician, and futurist)

The opposite is beneficia; from things that differ comes the fairest attunement; all
things are born through strife.

-Heraclitus (c. 540 –c. 480 B.C., Greek philosopher)

There is no quality in this world that is not what it is merely by contrast. Nothing
exists in itself.

-Herman Melville

Everything that originated from the tree of knowledge carries in it duality.

-Zohar (mystical Jewish text)

A threefold cord is not quickly broken.

-Bible (Ecclesiastes 4:12)

This world is a vast unbroken totality, A deep solidarity joins its contrary powers.

-Sri Aurobindo Ghose

A thing may endure in nature if it is duly proportioned to its necessity.

-Fra Luca Pacioli (1445?-1514?, Italian mathematician,
writer, and math teacher of Leonardo da Vinci)

Nature uses as little as possible of anything.

-Johanned Kepler (1571-1630, German astronomer)

The aim of art is to represent not the outward appearance of things, but their inward significance.

-Aristotle

The beautiful is a manifestation of the secret laws of nature... When nature begins to reveal her open secret to a person, he feels an irresistible longing for her most worthy interpreter, art.

-Johann Wolfgang Goethe (1749-1832, German poet)

If you would understand the invisible, look carefully at the visible.

-Talmund

Numbers are the sources of form and energy in the world.

-Theon of Smyrna (Second century A.D., Platonist mathematician)

The distribution of energy follows definite paths which may be studied by means of geometric construction.

-Samuel Colman

Geometry existed before the creation.

-Plato

He is invited to great things who receives small things greatly.

-Flavius (490-583, Roman legal writer and politician)

Truth is so excellent, that if it praises but small things they become noble.

-Leonardo da Vinci

There is a geometry of art as there is a geometry of life, and, as the Greeks had guessed, they happen to be the same.

-Matila Ghyka

The feeling of awe and sense of wonder arises from the recognition of the deep mystery that surrounds us everywhere, and this feeling deepens as our knowledge grows.

-Anagarika Govinda

The most beautiful thing we can experience is the mysterious. It is the source of all true art and science.

-Albert Einstein

Intuition is the clear conception of the whole at once.

-Johann Lavater (1741-1801, Swiss poet, mystic, and philosopher)

Harmony makes small things grow. Lack of it makes great things decay.

-Sallust (c. 86-34 B.C., Roman historian and politician)

It is highly dishonorable for a Reasonable Soul to live in so Divinely built a Mansion as the Body she resides in, altogether unacquainted with the exquisite structure of it.

-Robert Boyle

As above, so below.

-Hermes Trismegistus (attributed to the Egyptian god Thoth,
Author of mystery teachings)

No investigation can strictly be called scientific unless it admits of mathematical demonstration.

-Leonardo da Vinci

The world is not a machine. Everything in it is force, life, thought.

-G.W. von Leibnitz (1646-1716, German philosopher and mathematician)

Art without knowledge is nothing!

-Jean Mignot (Gothic master builder from Paris,
addressing architects in Milan, 1398)

The good, of course, is always beautiful, and the beautiful never lacks proportion.

-Plato

Believe one who knows: you will find more in woods than in books. Trees and stones will teach you that which you can never learn from masters.

-St. Bernard of Clairvaux (1090?-1153)

The structures of growing plants often resemble patterns of water and air in motion. And why shouldn't they? Plants are mostly water, although they move much more slowly, so it is appropriate that they express the natural forms of flowing water. An important part of our own process of expanding vision is to see plants differently, not as static "things" but as dynamic *processes*, and to develop the ability to recognize plants, in whole and part, as living whirlpools, waves, mushroom rings and vortex streets. We can learn to read nature's "hyroglyphics."

-Schneider 1995

I believe a leaf of grass is no less than the journeywork of the stars ... and the running blackberry would adorn the parlors of heaven.

-Walt Whitman

A thing may endure in nature if it is duly proportioned to its necessity.

-Fra Luca Paciolo

For the world is not painted or adorned, but is from the beginning beautiful; and God has not made some beautiful things, but Beauty is the creator of the universe.

-Ralph Waldo Emerson

The miracle is that the universe created a part of itself to study the rest of it, and that this part in studying itself finds the rest of the universe in its own inner realities.

-John C. Lilly

It is an ever-fixed mark that looks on tempests and is never shaken.

-William Shakespeare

Without looking out of the window, one may see the way of heaven.

-Lao-tzu (c. 604-531 B.C., Chinese Taoist philosopher)

There is nothing pleasurable except what is in harmony with the utmost depths of our divine nature.

-Heinrich Suso (1300?-1366, German mystic)

God has established nothing without geometric beauty which was not bound beforehand by some law of necessity.

-Johannes Kepler

All the pictures which science now draws of nature and which alone seem capable of according with observational fact are mathematical pictures... From the intrinsic evidence of his creation, the Great Architect of the Universe now begins to appear as a pure mathematician.

-Sir James H. Jeans (1877-1946, English physicist, astronomer, and writer)

Human ingenuity may make various inventions... but it will never devise any inventions more beautiful, nor more simple, nor more to the purpose than Nature does; because in her inventions nothing is wanting and nothing is superfluous.

-Leonardo da Vinci

The best carpenters make the fewest chips.

-German proverb

Doth not nature itself teach you?

-I Corinthians 11:14

[The existence of pentagons and hexagons] doth neatly declare how nature Geometrized and observeth order in all things.

-Sir Thomas Browne

For so work the honey-bees, Creatures that by a rule in nature teach The act of order to a peopled kingdom.

-William Shakespeare

There being, then, three figures which of themselves can fill up space around a point, viz... the triangle, square and the hexagon, the bees have wisely selected for their structure that which contains the most angles, suspecting indeed that it could hold more honey than the other two.

-Pappus (c. 300 A.D., Greek mathematician in Alexandria, Egypt, whose writings stimulated seventh-century geometric studies)

Geometry existed before the creation.

-Johannes Kepler

A tradition which has been credited by many learned men over the centuries is that the ancients encoded their knowledge of the world in the dimensions of their sacred monuments.

-John Michell

Do not seek to follow the footsteps of the men of old; seek what they sought.

-Matsuo Basho (1644-1694, Japanese poet)

Wouldst read the story of the self-born King? First learn the splendid language of the sun, The speech of the stars, the moon's coy whispering, The music of the planets, and of one, Our Mother Earth, crooning her cradle-song To her uncounted babes, who, when they gain The soul's full stature, to the heavens belong...

-James Morgan Pryse

Astrology is a science in itself and contains an illuminating body of knowledge. It taught me many things, and I am greatly indebted to it. Geophysical evidence reveals the power of the stars and the planets in relation to the terrestrial. In turn, astrology reinforces this power to some extent. This is why astrology is like a life-giving elixir for mankind.

-Albert Einstein

If you keep a thing seven years, you are sure to find a use for it.

-Sir Walter Scott (1771-1832, Scottish poet, novelist, historian, and biographer)

Measure seven times before you cut.

-Carpenters' saying

He found the vast Thought with seven heads that is born of the Truth.

-Maha Upanishad

All the world's a stage And all the men and women merely players; They have their exits and their entrances; And one man in his time plays many parts, His acts being seven ages.

-William Shakespeare

A 7-sided figure is impossible to draw With perfect mathematical precision; And if you try to do it you are absolutely sure To find your efforts treated with derision. And yet there are philosophers who readily declare That nothing in this world is really true, And so I've drawn a heptagon by triangle and square. For any human purpose it will do.

-John Michell

See deep enough, and you see musically; the heart of Nature being everywhere music, if you can only reach it.

-Thomas Carlyle

The modern names of the seven familiar notes in descending order, DO-SI-LA-SOL-FA-MI-RE-DO, are only the first letters of Latin words whose translation reveals a cosmological structure derived from an earlier age:

DO minus	"Lord"	Absolute
SI der	"Stars"	All Galaxies
LA ctea	"Milk"	Milky Way Galaxy
SOL	"Sun"	Sun
FA ta	"Fate"	Planets
MI crocosmos	"Small universe"	Earth
RE gina Coeli	"Queen of the Heavens	Moon
DO minus	"Lord"	Absolute

It was well known throughout ancient civilizations that music bypasses the intellect with the power to manipulate passions and emotions. In this way music was used to heal. As we find by being very quiet within and observing ourselves, sound has an effect on our inner substance. If we were aware of the effects sounds have upon us we would be more careful about the frequencies that we expose ourselves to.

-Schneider 1995

He who knows others is wise, but he who knows himself is enlightened.

-Lao-tzu

Human music is the harmony which may be known by any person who turns to contemplation of himself... It is this that join together the parts of the soul, and keeps the rational part united with irrational.

-Giuseppe Zarlino (1517-1590, Italian composer and musical theorist)

All that is in tune with Thee, O Universe, is in tune with me!

-Marcus Aurelius

Men must be aware of the wisdom and the strength that is in them if their understanding is to be expanded.-Vauvenargues (1715-1747, French soldier, moralist)Oh, the difficulty of fixing the attention of men on the world within them!

-Samuel Taylor Coleridge (1772-1834, English poet and critic)

When you have been compelled by circumstances to be disturbed in any manner, quickly return to yourself, and do not continue out of tune longer than the compulsion lasts. You will have increasing control over your own harmony by continually returning to it.

-Marcus Aurelius

There are hundred and one arteries of the heart, one of them penetrates the crown of the head; moving upwards by it a man reaches the immortal.

-Khandogya Upanishad

Use the light that is in you to recover your natural clearness of sight.

-Lao-tzu

His aim should be to concentrate and simplify, and so to expand his being ...and so to float upwards towards the divine fountain of being whose stream flows within him.

-Plotinus

God created the universe through the Breath of the Compassionate.

-Mohammed (c. 570-632)

Have you ever been in a crowd of people and felt your mood swing drastically? We resonate with the prevailing subtle “music” if we have cultivated that “tone,” or quality within ourselves. The ancients knew that unless we purify, and tune our inner life and center ourselves at as high a level as we can, we will resonate with whatever passions are blowing in the wind. This is the root of much unconscious suffering, not knowing the sources that motivate and shape the pliable human psyche.

-M. Schneider 1995

Our outer experiences only resonate with inner rattle. If we don't like the connections we've formed we cannot break them, but we can transform ourselves so as not to resonate with them. It's useless to blame anyone or anything outside ourselves. We carry our inner state with us and will find the same types of friends and relationships wherever we go. To change what we encounter in the world we change the levels and qualities to which we attune.

-M. Schneider 1995

Leaving the old, both worlds at once they view, That stand upon the threshold of the new.

-Edmund Waller

In an instant, rise from time and space. Set the world aside and become a world within yourself.

-Shabestari (c. 1250-1320, Persian Sufi poet)

Nature will reveal itself if we will only look.

-Thomas Alva Edison (1847-1941, American inventor)

Nature's designs are best suited to their particular purpose. By recognizing and understanding them we can interpret nature's problem-solving strategies in that situation.

Nature's forms are the most practical and functional and most efficient in terms of space, materials, energy, and time. Nature's patterns teach us how to get the most from the least.

All nature's forms undergo continual transformation. Every process strives for balance, harmony, and wholeness. Geometry reveals the process through which harmony comes about.

All the natural events and patterns that manifest themselves, whether we understand them or not, had prior approval of natural laws. Nothing manifest or occurs without the universe's consent.

-Schneider 1995

No man finds it difficult to return to nature except the man who has deserted nature.

-Seneca the Younger (4 B.C.-65A.D., Roman statesman and philosopher)

We are star-stuff contemplating the stars.

-Carl Sagan

In this time of rapid change and transition of the roles of traditional institutions, we have the opportunity to restructure education and teach children differently, to expose them to harmony in all its forms, in nature, music, art, and mathematical beauty. Perhaps children steeped in harmony will become generations of adults who will strive to achieve harmony in the world. And perhaps they will transform our relationship with our environmental matrix to treat the soil, water, air, plants, and creatures differently, cooperatively, in ways born of understanding of the whole, respect for its parts, compassion, and common purpose. Comprehending nature's speech will let us listen to what she is telling us in her own native language, which is also our own. If we can see and understand nature as a harmony in which there is room for diversity and in which we participate, we'll want to transform ourselves and our relationships to align with that harmony.

-M. Schneider 1995

To learn to resee the world in terms of its patterns requires a shift within us. But once this shift occurs and we see the familiar world in terms of its shapes and principles, a light turns on and the world brightens, comes into sharper relief. Everything speaks its purpose through its patterns. Even without knowing it we use the same designs found in nature. Look at a microscopic diatom and see a cathedral rose window. Ultimately, the same energy that motivates and guides the natural world does the same for us. All universal designs are found in human body proportions, which we have seen can be repackaged to produce the proportions of a crystal, plant, animal, solar system, and galaxy. It is as if the universe is one single organism, motivated by a single power, developing in many ways to gradually become aware of itself through the awareness of the creatures and forces it produces.

-M. Schneider 1995