**Article**

# Yogic Perspective on Health, Six Sigma Assessment & Quantum Physics Approach

Pradeep B. Deshpande*[1] & James Kowall[2]

[1]Professor Emeritus of Chemical Engineering, University of Louisville, & Six Sigma & Advanced Controls, Inc., Louisville, KY 40222 USA
[2]James Kowall, MD, PhD, Independent Researcher, Eugene, Oregon, USA

## Abstract

Yogic perspective on health, quantum physics perspectives on why we get sick and how we could get better are presented. Experimental evidence corroborating the yogic perspective is offered. The need for six sigma in the assessment of the yogic perspective is outlined. The ideas supplement and complement traditional medical approaches to illnesses and should be useful in the light of the ever-increasing healthcare costs, now $2.7 trillion per year and rising.

**Keywords:** health, sickness, Yogic perspective, quantum physics, six sigma, assessment.

Source: Smithsonian Museum of Natural History, Beyond Bollywood: Indian Americans Shape the Nation, February 2014 - August 2015. "*The day science begins to study non-physical phenomena it will make more progress in one decade than in all the previous centuries of its existence". Nicola Tesla* (www.collective-evolution.com).

**Figure 1**. Swami Vivekananda with Nicola Tesla Seated to His Left

* Correspondence: Prof. Pradeep B. Deshpande, Six Sigma & advanced Controls, Inc., 1209 Holsworth Lane, Louisville, KY 40222, http://www.sixsigmaquality.com E-mail: pradeep@sixsigmaquality.com

## Introduction

A yogic perspective on diseases is presented first while a quantum mechanical perspective is covered at the end of the article. Our body is made up of several subsystems: Respiratory system, endocrine system, cardiovascular system, urogenital system, digestive system, excretory system, etc. Associated with each subsystem are specific organs. For example, associated with the respiratory system are heart, lungs, etc. Urogenital system organs are kidneys, sexual organs, bladder, etc. Each organ is made up of tissues. Tissues in turn are made up of cells. Medical science knows that the cells in all the organs disintegrate into atoms and flow out to be completely replaced by new cells every so often. For example, the cells in the heart are replaced by new cells in a few months. Thus, after this amount of time, not a single old cell is present. Our body is like a flowing river. If we dip a glass in the river and fill it with water at one instant and fill it again at another instant, the water in the two glasses will not be the same. The water in the first glass has travelled downstream and replaced by the water coming from upstream. Now, suppose there is a specific type of defect in some part the body, say in the heart or heart-valve. The interesting question is how do these new cells know that the new cells at that particular spot must have exactly the same defect as in the old cells? Take another example, suppose an individual has one normal kidney and one shrunken kidney. What technology do the cells know that enables them to produce exactly the defective cells required for the shrunken kidney and not healthy cells for a normal kidney?

Yogis say they deciphered this mystery in ancient times through meditation. They say that just like a building has an architectural drawing, an electrical drawing, plumbing drawing, etc., the mind too is like a supercomputer having the complete mapping of every organ and system. If there is a diseased cell, deceased cell is born, if there is a normal cell, normal cell is born. Now, what is that mapping? What is that information?

What are cells made of? Of course, cytoplasm; nucleic acids; DNA and RNA, carbohydrates, proteins, lipids, etc., but if we break down the cells further, they are made up of atoms. The question is, what characteristic of the atoms gives the specific character to the matter? The answer is, atomic configuration. Change the atomic configuration, and the specific character of the matter will change. The mind is such an amazing super computer that it creates exactly the required atomic configuration; where there was a diseased cell, exactly the same diseased cell is created. Now the next question is what is this super computer and where is it?

Science says that if all the atoms in the body are collected, they will only account for a tiny portion, say 0.1% for simplicity, of the space in the physical body. This means that in the 99.9% of the space in the human body there is nothing. It is empty space and this is applicable to all solid matter. Science does not know what is in the empty space but yogis suggest that the empty space houses vibrations that are directly responsible for our cellular structure. Quantum physics tells us that atoms are made up of subatomic particles. Atoms are not solid objects. They are made up of electrons, protons, and neutrons, i. e., energy, as are the subatomic particles. Going into a meditative state, Yogis saw that beyond the subatomic particles are micro atomic particles and beyond the micro atomic particles there is the holographic memory of the individual continuously playing what is analogous to a three-dimensional film of what has happened in his

life. Someone has given joy, someone has caused agony, etc. This film is such that it plays and replays continuously over and over creating more and more structures; two from one, four from two, and so on. This film, this energy, controls the micro atomic particles which control the subatomic particles which in turn control atomic particles, and finally the atomic configuration. From the atomic configuration is born the cellular structure. The link between the atomic configuration, cellular structure and illnesses may be seen to be emerging.

But what is creating these vibrations? In yogic thinking, the human system is composed of five sheaths: (1) Annamaya Kosha – Food body, (2) Pranamaya Kosha – Body of life-force or pranic energy, (3) Manomaya Kosha – Body of rational mind, (4) Dyanamaya Kosha – Body of Intellect, and (5) Anandamaya Kosha – Blissful Body. The first, Annamaya Kosha, is what we take as the physical body and although it may appear to be physical, we know that it too is composed of subatomic particles, i. e., energy. We know the Einstein's famous equation $E=mc^2$ or in Vedic terminology, I am a being of light.

What happens in a specific Kosha is governed by the next Kosha higher up. Annamaya Kosha is the physical body the way we understand it. Yogis assert that there is abundant energy in the cosmos. We only draw 10% of the energy, or life force, via the food we eat, another 20% from the air we breathe, and the rest by the seven energy centers called chakras, energy meridians, and supplied to the body via 7,200,000 energy channels called Nadis which are the home of Pranamaya Kosha or the body of Pranic Energy. Inefficient breathing and improperly functioning chakras means that we are deficient in the life-force energy.

Manomaya Kosha is where thoughts and emotions are processed. Yogis suggest that the mind body is what creates the vibrations, energy, in the empty space. What happens in the Manomaya Kosha is governed by what is in the Dyanamaya Kosha. Dyanamaya Kosha has imprinted in it the psychic impressions created by our Karmas, our past actions. In Yogic thinking, there are three types of Karmas: Sancheet Karma, the infinite amount of Karmas accumulated from past lives, Prarabaddha Karma, the Karmas that we are born with, and Agama Karma, the Karmas which we accumulate in this life by our own actions from early childhood to the present age. Our actions directly correlate with our emotions; positive emotions generate good actions or good karma while negative emotions, bad actions or bad karma. Now, the importance of positive emotions for good health may be seen to be emerging.

## Why We Get Sick?

So, why do we get sick? The yogic explanation should now be clear. One source of problems is the food we eat, the second is the inefficient capture of life-force energy, and the third and the most important is the psychic impressions imprinted in the Dyanamaya Kosha due to our negative emotions in this life and negative karmas from past lives. All three factors influence the energy in the empty space and consequently the cellular structure. It is with these ideas in mind that Patanjali (~ 500 bce) must have come up with the eight-fold Yoga system: Yama and Niyama for ethical living; Asanas for external subsystems – spine, muscles, joints, etc., Pranayama for maximizing the intake of life-force energy for internal organs and subsystems,

and Pratyahara for the withdrawal of sense organs from sense objects. The last three are increasingly deeper levels of meditation. Swami Vivekananda introduced Yoga to America over a hundred years ago but the bone-bending exercises that have come to be known as Yoga (Asanas) is a suboptimal use of Yoga.

## How We Could Get Better?

For good health, all three systems; external subsystem, internal organs and subsystem, and the mind need to be functioning well. Out-of-shape external subsystem, inefficient capture of bioenergy from the cosmos, and the psychic impressions created by negative emotions are responsible for disease. So the path forward to restore the three subsystems to their optimal state is as follows:

1. **The Food We Eat.** The food we consume is the first source of variability in health and wellness. Of course, we have the traditional dietary guidelines but for progress in the present context, yogis suggest we limit our food intake primary to Positive Pranic Foods; vegetarian food with limited spices, lentils, wheat, rice, etc. (A taste of Isha: Recipe for the Pranic Life Style, A Publication of the Isha Yoga Foundation, undated).

2. **External Subsystem.** Asanas or other forms of physical exercises that target the various elements of the external subsystem including joints, spine, and muscles is a way forward to restoring the wellbeing of the external subsystem.

3. **Internal Organs and Subsystem.** The Pranayam breathing exercises maximize the capture of bioenergy from the cosmos and restore the internal organs and subsystems to their normal state. The second author has been doing these exercises since 2004 and can experientially state their beneficial effects on health. Although Patanjali developed these ingenious exercises over twenty-five hundred years ago, they had remained dormant due to a perceived need for secrecy on the part of the yogi community and also their description in the original works is rather terse requiring decoding and experimentation. Swami Ramdev, a yogi in India has done so and by now, millions of people in India have learned and benefitted from them (www.divyayoga.com).

4. **Empowering the Rational and Discerning Mind.** The real purpose of yoga is materialization of intentions, and to the yogi the sole intention worthy of materialization is to be ever in the Anandmaya Kosha, always blissful unaffected by the most unfavorable conditions that are part and parcel of life. The principal method for the realization of this goal is meditation and the beneficial effects include improvement in health and wellness. Our higher self is ever in the Anandmaya Kosha, always blissful, and if it were in control of our lower self, then there is no question of negative emotions, diseases, etc. Unfortunately, our mind, intellect, and ego, interfere giving rise to physiological and psycho-emotional problems. This interference is negated with meditation.

The explanation of how meditation reaches the Anandmaya Kosha is facilitated by an understanding of the three components of the mindset, S, R, T (The definitions are at the end of the article). These definitions clarify that the quest to reach Anandmaya Kosha is equivalent to achieving higher levels of consciousness, higher levels of internal excellence. Here there are two approaches: One is a conscious approach to empower the rational mind wherein we track our S, R, T components literally on a daily basis to ensure that our S component stays high and nudges higher, our R component remains under control at a reasonable value and our T component stays low and nudges lower. The second is a process to empower the discerning mind whose side effect is a rise in the level of consciousness. Mediation is a principal method of achieving this goal.

By now a large number of papers have appeared in scientific and medical journals such as Nature, Science, The Proceedings of the National Academy of Sciences, Archives of Internal Medicine, NeurologyNow, and media publications such as Forbes, The New York Times on the many benefits of meditation (see Table I). However, missing from this list are scientific investigations of materialization of intentions. The first author recently reported on a successful investigation of this topic (Deshpande, et al., 12014). Successful pursuit of meditation results in raising the level of consciousness taking the aspirant towards Anandmaya Kosha delivering the health and wellness benefits along the way.

## The Need for Six Sigma Scrutiny

In the absence of validated measurements, a scientific theory is but a conjecture but before applying this concept to human beings in the present context, it is necessary to distinguish between science and six sigma (Harry and Lawson, 1994; Deshpande, 2014). Science demands that the results of experiments be repeatable and reproducible regardless of who conducts the experiments, how many times, when, and where and that is the way it should be. This is not possible in the case of human beings in pursuit of Anandmaya Kosha and the blissful state.

This is because the 6 ½ billion of us are all multivariable, nonlinear, self-regulating, and evolving with varying levels of consciousness. Six sigma posits that there will always be a certain amount of inherent variability in every outcome due to uncontrollable and unknown causes; these are the Karmas that we have already discussed. Thus zero defects at infinitum is theoretically not possible. That is, in a sufficiently large sample of aspirants pursuing a program to reach the blissful state, not all will succeed. The goal of six sigma is uncover the discoverable causes of variation in the outcome and fix them so that the least amount of variation consistent with the common cause variability is achieved meaning that the maximum number of aspirants will achieve their goal. . The five-phase eleven-step six sigma methodology is designed to achieve the least possible variation in the outcomes. The efficacy of the specific meditation practice together with the starting level of consciousness of the seeker determines how much of what is in the Dyanamaya Kosha can be wiped clean and this translates into how many of the diseases can be eliminated.

**Table I. Articles on Meditation**

| No. | Authors | Journal | Outcome Investigated |
|---|---|---|---|
| 1 | Benson, H., et al., | Nature, 295, 234 – 236, 21 January 1982 | Body Temperature Changes |
| 2 | Bhasin, M. K. et al., | PLOS One, 8, 5, May 2013 | Metabolism, Insulin Secretion, Inflammatory pathways |
| 3 | Boyers, J. | Forbes, May 30, 2013 | Empathy |
| 4 | Condon, et al., | Psychological Science, August 21, 2013. | Compassionate Response to Suffering |
| 5 | Deshpande, P. B., et al., | Journal of Consciousness Exploration & Research, 5, 2, February 2014. | Materialization of Intentions |
| 6 | DeSteno, D. | New York Times, July 5, 2013 | Compassionate Response to Suffering |
| 7 | George B. | HBR Blog, 10 March 10, 2014 | Leadership |
| 8 | Fryer, B. | HBR Blog Network, September 18, 2013. | Compassionate Management |
| 9 | Lutz, et al., | PNAS, 101, 46, November 16, 2004. | Gamma Wave Synchrony |
| 10 | Paul-Labrador, M., et al. | *Archives of Internal Medicine*, 166, 1218, 2006. | Metabolic Syndrome and Heart Disease |
| 11 | Paturel | NeurologyNow, August/September 2012. | Meditation as Medicine |
| 12 | Speca, M., et al., | Journal of Biobehavioral Medicine,, Vol. 62 No. 5, 613-622, September 1, 2000. | Stress Reduction in Cancer Patients |
| 13 | Tang, Yi-Yuang, et al., | PNAS, 110, 34, August 28, 2013. | Smoking Reduction |
| 14 | Tang, Yi-Yuang, et al., | PNAS, 109, 26, 10570-10574, 2012 | White Matter Changes |
| 15 | Tang, Yi-Yuang, et al., | PNAS, 106, 22, 8865-8870, 2009. | Central & Autonomic Nervous System |
| 16 | Tang, Yi-Yuang, et al., | PNAS 104, 43, 17152-17156, 2007. | Attention and Self-Regulation |
| 17 | Wallace, R. K. | Science, Vol. 167, No. 3926, 1970. | Physiological effects |
| 18 | Walton, A. G. | Forbes, July 24, 2013. | Healthcare Costs, Student Performance |

## Evidence

**Evidence on Bioenergy of Human Beings.** Dr. Konstantin Korotkov, Professor of Biophysics at the St. Petersburg Federal University of Information technologies, Mechanics, and Optics in Russia developed a Gas Discharge Visualization Device that captures the human bioenergy field over fifteen years ago. This device has been in the market for many years and has been registered

by the Russian Ministry of Health for use as a routine medical diagnostic device in hospitals (Korotkov, 2011, 2010). Figure 2 depicts the bioenergy field of two individuals; one well and the other with physiological and psychoemotional problems. In the four-month six sigma investigation of materialization of intentions with yoga (Asanas, Pranayam, meditation), we saw that the bioenergy and chakra energy of all seven participants had substantially gone up. These results are shown in Table II (a) and (b).

**Evidence on Yogis, Scientists Reaching the Anandmaya Kosha**. Here, we present three powerful pieces of evidence in support of the yogic perspective on health and wellness:

**Dr. David R. Hawkins, MD.** The Late Dr. David R. Hawkins was a psychiatrist and an author several books among them one coauthored with Linus R. Pauling, Ph. D., The Nobel laureate in Chemistry and Peace titled Orthomolecular Psychiatry and another titled Power vs. Force: Hidden Determinants of Human Behavior (2004). He narrated the following in the latter:

*"The miraculous happened, beyond ordinary comprehension. Many chronic maladies from which I had suffered for years spontaneously normalized and I no longer needed my lifetime bifocals. Occasionally, I would feel an exquisitely blissful energy, an infinite love, suddenly began to radiate from my heart".*

**Sadhguru Jaggi Vasudev (www.ishayoga.com)**. Sadhguru Jaggi Vasudev is a self-realized yogi (one who is perceived to have reached the Anandmaya Kosha) who operates out of Coimbatore, Tamil Nadu, India. Once he narrated the following:

*"On a certain day, in a field hockey game, I fractured my left ankle and I went and sat down. I was in excruciating pain and had a very severe bout of asthma; this pain and this inability to breathe together, they were quite something. At that moment, it occurred to me that if the maker of this body is inside, why is it that I cannot mend it from inside? I sat down with a certain resolve; if this is true, I must be able to allow it to mend itself, otherwise, I must be completely on the wrong track. I sat down with my eyes closed for little more than an hour. When I came out, my asthma left me, never to come back again, and above all, my fractured leg was perfectly okay in a little more than an hour's time*".

**Avadhoot Baba Shivanand Ji (www.shivyog.com).** Avadhoot Baba Shivanand Ji is a self-realized yogi who operates out of Delhi, India. He narrates numerous examples of materialization of intentions. His programs attract thousands of people in India and are carried on a major television network.

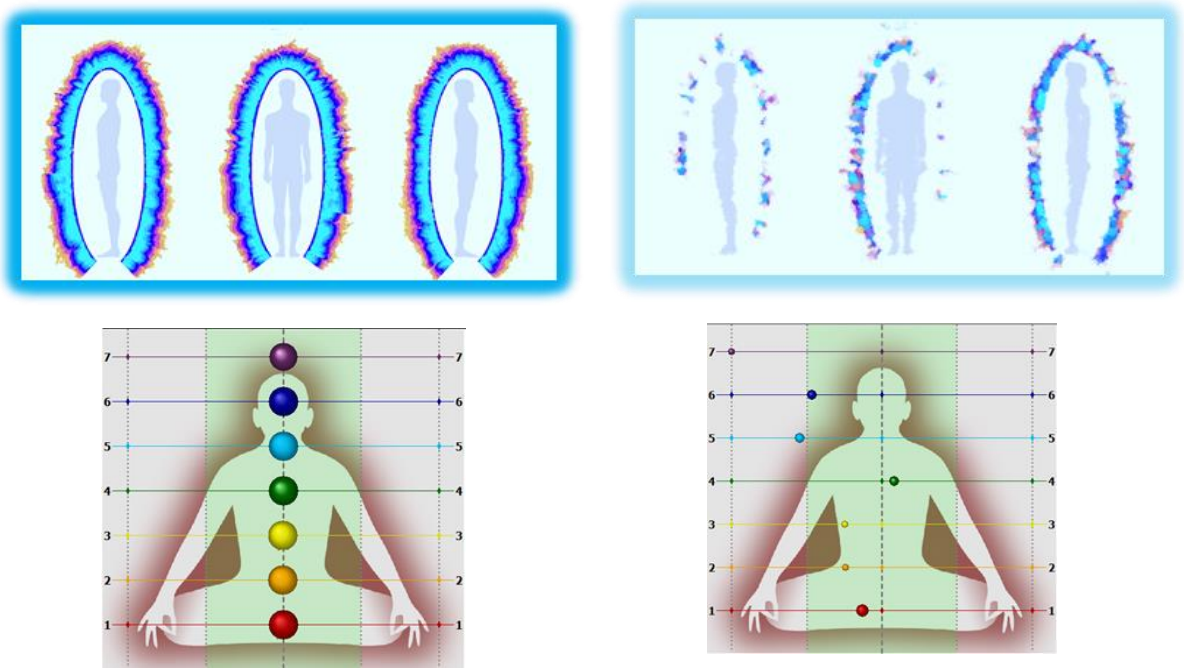

**Figure 2.** Human Bioenergy Field and Chakras of a Healthy (Left) and Physiologically/Emotionally Unbalanced Individual (Right) (Courtesy, www.korotkov.org)

**Table I. Bioenergy Data of Participants**

| Name | Stress | | Energy, Joules | | Balance, % | |
|---|---|---|---|---|---|---|
| | Starting | Ending | Starting | Ending | Starting | Ending |
| SK | 3.38 | 3.24 | 61.59 | 71.56 | 96.75 | 99.46 |
| SS | 3.34 | 3.34 | 63.40 | 70.50 | 95.52 | 97.55 |
| SA | 2.91 | 2.96 | 62.87 | 72.13 | 98.96 | 99.62 |
| SG | 2.26 | 2.81 | 55.62 | 72.07 | 98.29 | 98.99 |
| RK | 2.49 | 2.80 | 53.77 | 66.56 | 97.92 | 96.74 |
| RS | 2.75 | 2.32 | 62.19 | 71.12 | 96.16 | 95.16 |
| AK | 2.22 | 2.25 | 53.94 | 61.95 | 96.29 | 97.61 |

**Table II. Chakra Energy, Joules, Before and After**

| Chakra | SK-Start | SK-End | SS-Start | SS-End | SA-Start | SA-End | SG-Start | SG-End | RK-Start | RK-End | RS-Start | RS-End | AK-Start | AK-End |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| Muladhara | 6.18 | 6.99 | 6.44 | 7.71 | 5.96 | 7.29 | 4.62 | 6.16 | 5.36 | 6.58 | 4.41 | 5.98 | 4.52 | 4.65 |
| Swadhishthana | 5.67 | 6.62 | 5.69 | 6.43 | 5.2 | 6.71 | 4.29 | 6.08 | 4.37 | 5.68 | 3.62 | 5.61 | 4.05 | 4.8 |
| Manipura | 5.65 | 6.78 | 5.68 | 6.59 | 5.44 | 6.68 | 4.66 | 6.55 | 4.58 | 6.15 | 3.77 | 5.55 | 4.64 | 5.58 |
| Anahata | 6.48 | 7.2 | 5.74 | 7.03 | 5.19 | 6.76 | 4.79 | 7.14 | 4.37 | 5.88 | 4.7 | 6.20 | 4.19 | 5.03 |
| Vishuddha | 5.00 | 6.8 | 5.78 | 5.69 | 5.09 | 6.79 | 4.57 | 6.97 | 4.68 | 5.88 | 3.79 | 6.57 | 4.30 | 5.27 |
| Ajna | 4.15 | 5.7 | 4.56 | 5.78 | 4.52 | 5.26 | 4.6 | 5.59 | 3.82 | 5.03 | 4.76 | 5.82 | 4.54 | 5.42 |
| Sahasrara | 4.42 | 5.28 | 5.09 | 5.99 | 4.21 | 5.57 | 4.39 | 6.06 | 4.14 | 5.26 | 5.15 | 6.50 | 4.43 | 5.39 |
| | | | | | | | | | | | | | | |
| **Average** | **5.36** | **6.48** | **5.57** | **6.46** | **5.09** | **6.44** | **4.56** | **6.36** | **4.47** | **5.78** | **4.31** | **6.03** | **4.38** | **5.16** |

## Quantum Mechanical Perspective on Health

In order to understand the quantum mechanical perspective on health, we have to address the basic problem of how consciousness, specifically the focus of attention of consciousness, is connected to physical phenomena, like the physical health or illness of a body. There are two key ideas that can help us understand this connection:

1. The normal flow of energy in the world.
2. The quantum state of potentiality as constructed from an action principle.

There is no other place to begin except with cosmology, so let's begin with the usual starting point, the big bang event. We now know from observational evidence that the "bang" in the big bang is an actual explosion that is driven by the accelerated or exponential expansion of space. The two pieces of evidence for this expansion are measurements of the cosmic background radiation supporting the idea of inflationary cosmology, and the current observed accelerated expansion of the universe as measured by the accelerated rate at which distant galaxies are moving away from us. The distant galaxies are moving away from us faster the farther out we look, as though they repel each other. This repulsive force is called the force of dark energy, and is like a kind of anti-gravity. Things appear to move away from us faster the farther out we look in space due to the exponential expansion of space, which accelerates away from the central point of view of the observer. In relativity theory, dark energy is understood as a cosmological constant $\Lambda$.

Inflationary cosmology hypothesizes that $\Lambda$ was about equal to 1 at the time of the big bang event, while the current measured value of $\Lambda$ is about $10^{-123}$. Inflationary cosmology also hypothesizes that $\Lambda$ changes in value through some kind of a phase transition, which is like a process of burning as a state of high potential energy transitions into a state of lower potential energy. There is some kind of a potential barrier separating the state of higher potential energy (often called a false vacuum) from the state of lower potential energy, and this potential barrier gives rise to a meta-stable state. The transition to the lower energy state occurs through a quantum tunneling event through the barrier, and is like a process of burning that burns away

dark energy. As the system burns and settles into the lower energy state, heat is radiated away. As the dark energy burns away, the value of $\Lambda$ decreases.

This process of burning away the dark energy drives the normal flow of energy in the world. The mystery of this process is in the initial high value of $\Lambda$ that occurred at the time of the big bang event giving rise to the accelerated or exponential expansion of space from the big bang. The reason this expansion ties in with consciousness is the nature of a cosmic horizon that arises from the accelerated expansion of space. To understand the cosmic horizon it is necessary to discuss the principle of equivalence, which is about the accelerated frame of reference of an observer that follows an accelerated worldline through space-time.

The cosmic horizon is a bounding surface of space surrounding the observer at the central point of view. The horizon is as far out in space as the observer at the central point of view can see things in space due to the limitation of the speed of light. At the cosmic horizon things appear to move away from the observer at the speed of light, and so nothing is observable beyond the horizon. This limitation in observations is due to the accelerated expansion of space away from the central point of view of the observer. This may seem weird, but the point of singularity of the big bang event is the central point of view of the observer.

The existence of a cosmic horizon leads to the one-world-per-observer paradigm of modern cosmology. Amanda Gefter (2012) has written about this paradigm in her essay on Cosmic Solipsism. Her conclusions are based on recent developments in physics, including the nature of Hawking radiation, the holographic principle, horizon complementarity, and the effects of a cosmological constant. The one-world-per-observer paradigm tells us that each observer has its own world, which is ultimately limited by its own cosmic horizon. The best way to understand this is in terms of the holographic principle. All the fundamental quantized bits of information that ultimately define everything observable in the observer's world are ultimately encoded on its cosmic horizon, which is only a bounding surface of space that surrounds the observer at the central point of view. The encoding of bits of information on a two dimensional surface for whatever is perceived in the three dimensional space bounded by that surface is the nature of a hologram.

The reason many different observers are able to share a consensual reality with one another is due to the fact that different cosmic horizons can overlap in the sense of a Venn diagram. The bits of information encoded on each surface become entangled together in the sense of quantum entanglement, and there is a sharing of information. By this mechanism, the world of each observer can share information with the worlds of many other observers, and so many different observers can share a consensual reality together. This entanglement of the worlds of many different observers has a nice metaphor in the net of Indra.

Different observers, each at the central point of view of its own cosmic horizon, not only share information, but they also share in the normal flow of energy. This is easiest to see with thermodynamic concepts. The radius of the cosmic horizon is determined in relativity theory from the value of the cosmological constant as $(R/\ell)^2=3/\Lambda$, where $\ell$ is the Planck length. At the

time of the big bang event, $\Lambda$ is about 1, and R is about a Planck length. As $\Lambda$ decreases in value, R inflates in size to its current value of about $10^{62}$ Planck lengths, or 15 billion light years.

The reason $\Lambda$ decreases in value is because dark energy burns away. This burning away of dark energy drives the normal flow of energy in the world of each observer. To see this we use the Hawking calculation for the temperature of the horizon $kT=\hbar c/2\pi R$. At the time of the big bang, the horizon temperature was about $10^{32}$ degrees Kelvin, and as the horizon inflates in size, its temperature decreases. This temperature gradient drives the normal flow of energy.

As the dark energy burns away, heat is radiated away and tends to flow from the very hot big bang event to all colder states of the world as defined by an inflated cosmic horizon. This not only drives the normal flow of energy in the observer's world, but also in the consensual reality shared by many different observers. This normal flow of energy is driven by the accelerated expansion of space itself from the big bang event, which decelerates as dark energy burns away. Space is expanding away from the central point of view of the observer at an accelerated rate, but that acceleration slows down as the dark energy burns away.

This explains the normal flow of energy in the observer's world in the sense of the second law of thermodynamics. The mystery of this normal flow of energy is in the mystery of the high value of the cosmological constant at the time of the big bang event. The normal evolution of the world, and the normal flow of energy that drives that evolution, can be understood in terms of the burning away of dark energy and the flow of heat from the very hot big bang event to all colder states of the world arising with inflation of the cosmic horizon. The analogy of the flow of a river for the flow of energy isn't quite right, since this flow isn't driven by the force of gravity, but the force of anti-gravity, which becomes weaker over the course of time as $\Lambda$ decreases in value.

These ideas allow us to understand the normal flow of energy, but how does this flow of energy connect to how consciousness affects physical reality? We have to understand the holographic principle in terms of the action principle and a quantum state of potentiality. A quantum state of potentiality is only a sum over all possible configuration states of information that describe everything that can possibly appear to happen in the observer's world. The holographic principle tells us that those configuration states of information are defined on bounding surface of space surrounding the observer at the central point of view, like a cosmic horizon. The bounding surface acts as a holographic screen. Each fundamental quantized bit of information is encoded on the screen, with one bit of information encoded per pixel on the screen. A bit of information is encoded in a binary code of 1's and 0's, which in quantum theory is understood in the sense of a spin ½ variable that can only point up or down, like a switch. The size of a pixel is about a Planck area. For a bounding surface with a radius R and a surface area $A=4\pi R^2$, the total number of bits of information encoded is $n=A/4\ell^2$. A quantum state of potentiality is only a sum over all possible ways in which these bits of information can become encoded on the screen, which is a sum over all possible configuration states of information.

The principle of equivalence tells us that the bounding surface is only an event horizon that arises because the observer is in an accelerated frame of reference. That observer follows an accelerated worldline through space and time. The holographic principle tells us this perceived space and time is holographically projected from the observer's holographic screen to the central point of view of the observer in terms of the spatial relationships between the objects perceived in space by the observer over a sequence of events, just like images projected to an observer from a computer screen over a sequence of screen outputs.

The holographic principle is a duality that relates the nature of the objects we perceive in three dimensional space to the bits of information encoded on the two dimensional bounding surface of that space. All the fundamental quantized bits of information are encoded on the bounding surface, and the objects perceived in three dimensional space are like a holographic projection of images to the central point of view of the observer. The holographic principle is weird since those perceivable objects in space even include the nature of elementary particles. Every object perceived in space, from an elementary particle to a macroscopic body, is like a projection of images from a holographic screen to the central point of view of an observer.

To make sense of this situation, we have to understand that each observational event is like a screen output from the observer's holographic screen to the central point of view of the observer. With each screen output, a particular configuration state of information is displayed on the observer's screen. The quantum state of potentiality characterizing the observer's screen is only a sum over all possible configuration states of information, but in any given screen output, a particular configuration state is actually displayed on the screen. Quantum theory has a name for this phenomena, which is called a quantum state reduction.

The other way to understand the quantum state of potentiality is as a sum over all possible paths, but what exactly do we mean by a path? A path is a worldline followed by an observer through space and time. Every observational event on the observer's worldline is like a screen output from the observer's holographic screen to the central point of view of the observer. The space-time geometry that characterizes the observer's frame of reference is holographically projected from the screen. That space-time geometry only has one invariant measure of length, called the proper time, which is the geometrical length of the observer's worldline.

In relativity theory we write the geometrical length of the worldline, $\tau=\int ds$, in terms of the metric as $ds^2=g_{\mu\nu}dx^{\mu}dx^{\nu}$. The holographic principle unifies gravity with the other fundamental forces through the Kaluza-Klein mechanism. The metric for the usual 3+1 extended dimensions of space-time includes the effects of gravity and a cosmological constant, but with six extra compactified dimensions of space also includes the effects of the electromagnetic, strong and weak forces. The action principle follows directly from the geometrical length of the worldline, since the action S is directly proportional to the proper time $\tau$. We understand that the path of least action is like the shortest distance between two points in a curved space-time geometry.

This is where quantum theory enters into the equation. A quantum state of potentiality is a sum over all possible configuration states of information that can become encoded on the observer's

holographic screen as the observer follows an accelerated worldline, but the quantum state can also be written as a sum over all possible paths of the observer, and each possible path is a possible worldline. The quantum state of potentiality is a sum over all possible worldlines. Quantum theory tells us to weight each possible path with a probability factor that we call the wave function $\psi=e^{i\theta}$, where the phase angle $\theta$ is given in terms of the action as $\theta=S/\hbar$, and the action is given in terms of the geometrical length of the worldline. This formulation tells us the wave function is only a probability factor that arises on the observer's worldline.

The wave-interference nature of this construction insures that the path of least action, which is like the shortest distance between two points in the space-time geometry, will give the maximum quantum probability. In the sense of quantum probability, the configuration states that are most likely perceived by the observer over a sequence of screen outputs are equivalent to the observer following the path of least action, which is like the shortest possible worldline that connects two points in the space-time geometry holographically projected from the screen to the observer. The path of least action is the most likely path in the sense of quantum probability.

There is one big problem with this construction. Quantum theory assumes that the process of quantum state reduction occurs randomly. The quantum state is a sum over all possible configuration states, which describes how information can become encoded on the observer's holographic screen in all possible ways. Each quantum state reduction is like a screen output that reduces the quantum state of potentiality of the screen to a particular configuration state of information with each screen output. In the sense of a sum over all possible paths, every screen output is an observational event on the observer's worldline, and every event is a decision point about which path to follow. As long as those decisions are made randomly, in an unbiased way, the path most likely followed in the sense of quantum probability is the path of least action.

What if there is bias in the way the decisions are made? There is nothing in the laws of physics that tells us that the decision making process has to be random or unbiased in nature. The laws of physics, as they determine an action principle, only determine a quantum state of potentiality. To state the action S is exactly the same as to state the laws of physics. The quantum state of potentiality is constructed by summing over all possible paths or worldlines of an observer, and weighting each path with the probability factor we call the wave function $\psi=e^{i\theta}$, where the phase angle $\theta$ is given in terms of the action as $\theta=S/\hbar$. Every observational event on the observer's worldline is a decision point about which path to follow. If these decisions are made randomly, in an unbiased way, then there is predictability in the sense the path of least action is the most likely path. If the decisions are made in a biased way, then all bets are off, and there is no longer any predictability. With biased choice, the laws of physics lose their predictability.

This is a humongous problem in quantum theory that physicists have not been able to solve. First, the decision making process is inherently outside the laws of physics, since those laws can only determine a quantum state of potentiality. An unbiased process of random choice with each quantum state reduction or screen output is hypothesized, but there is nothing in the laws of physics that rules out a biased process of choice. A biased decision making process no more

violates the laws of physics than a random decision making process. Second, if there is bias in the decision making process, then the laws of physics lose their predictability.

Physicists don't like the possibility of unpredictability, and so they have arbitrarily ruled out the possibility of biased choice, but there is no good reason in the laws of physics or in quantum theory to do so. Physics really has nothing to say about either the decision making process that reduces the quantum state of potentiality to an actual state or the possibility of biased choice.

It is only this possibility of biased choice, or a biased decision making process, that connects consciousness to physical reality and allows for an understanding of how consciousness can influence the course of physical diseases. More exactly, it is only the focus of attention of consciousness, and the biased choices that arise with the focus of attention that allows us to understand this connection between an observer and the health or illness of an observer's body.

We live in a consensual reality of many different observers. Each observer's world is ultimately limited by its own cosmic horizon, but as the horizons can overlap and become entangled, these different worlds can share information together. The horizon is a bounding surface of space that acts as a holographic screen and encodes information for whatever the observer happens to observe in its own world, but since these worlds are entangled, they share information. In some sense, this is just like an interactive computer network generated virtual reality world displayed on multiple computer screens and observed by multiple observers. Each observer is the consciousness present at the central point of view of its own holographic screen.

Each observer follows a worldline through the space and time holographically projected from its screen to the central point of view of the observer. Every event on that worldline is a decision point about which path to follow. Every event is like a screen output from the observer's screen, and with each event the observer faces a choice about which path to follow. The quantum state of potentiality that characterizes the observer's screen is only a sum over all possible paths of the observer, or a sum over all possible configuration states of information that can become encoded on the screen as the observer follows some possible path. At every decision point, the observer faces a choice about which path to follow and which configuration state to observe. If the choices are made in a random or an unbiased way, then the observer will most likely follow the path of least action. If there is bias in the way choices are made, then the observer's path can deviate from the path of least action in unpredictable ways.

The quantum state of potentiality includes information for everything the observer can observe in its world, including its own body. The observable things appear as three dimensional objects in space, but all the bits of information are encoded on the observer's holographic screen, including all the information for its own body. The observer's body is only like the central image projected from the screen, like the image of an avatar in a virtual reality world. The observer is looking through the eyes of its avatar, but the avatar is only the central image displayed on the screen, and the observer is the point of consciousness that perceives the screen.

The quantum state of potentiality includes configuration states of information for everything the observer can possibly observe in its world. There is a tendency for bits of information to align

together because of quantum entanglement. Entangled bits of information tend to align together over a sequence of events just like entangled spin variables tend to align together. This tendency for bits of information to align together is the very nature of holography, which arises from the coherent nature of the wave-interference pattern of the wave function that we see in all quantum phenomena. Alignment of spin variables (as in spin 1 photons) generates the coherent light of a laser, and that coherence leads to the encoding of information on a holographic film in the form of an interference pattern, from which the coherent images of a hologram can become projected. In the sense of the holographic principle, we understand that all bound states arise from the tendency of bits of information to align together, like entangled spin variables.

There is also a tendency for the flow of energy through things to come into alignment and for things to follow the path of least action, as long as choices are made in an unbiased way. The path of least action is always the most energy efficient path as it expends the least amount of energy, like following the shortest distance path between two points. The consequence of this tendency for bits of information to align together and the flow of energy to come into alignment is that bound states of information tend to form in the observer's world over the course of time.

These bound states of information have a property called coherent organization, which means they tend to self-replicate their forms over a sequence of events. A body is a coherently organized form of information that tends to self-replicate its form over a sequence of events. Such coherently organized forms are included in the quantum state of potentiality that characterizes the observer's world. The quantum state for the observer's world includes all possible ways in which bits of information can become organized into the form of the observer's body, which is only the central form of information in the observer's world.

When we speak of the health or disease of the observer's body, we only speak of these possibilities included in the quantum state of potentiality for the observer's world. In order to connect the observer's consciousness, specifically its focus of attention on its world, to the possibilities of physical health or disease, we have to address the inherent bias that arises with the focus of attention of the observer's consciousness. This bias of the observer's focus of attention on its world can only arise with the flow of energy through the observer's world.

If quantum theory turns out to be bogus, as Einstein believed when he stated "God does not play dice", and if physical reality is strictly determined by the laws of physics, then there is no real choice in anything an observer can observe in its world. Everything is strictly determined by the laws of physics. Even if quantum theory does apply, if all choices are made randomly, in an unbiased way, then there also is no real choice, just a roll of the dice. The only way an observer has a real choice about what to observe in its world is if choices are made in a biased way.

There is no denying that each of us has a bias about what we choose to observe in our own world. We express that bias with our focus of attention on things in our world. We are biased to focus our attention on things we like, and avoid things we don't like. There is no way to understand the nature of this bias unless there is a biased decision making process.

How does the observer's biased focus of attention on its world arise? What drives this bias in the focus of attention? This is the only entry point that allows us to connect the observer's consciousness to the physical heath or disease of the observer's body.

The only reason this entry point is possible is due to the nature of the quantum state of potentiality that characterizes the observer's world. Every event on the observer's worldline is a decision point where choices are made in terms of which configuration states of information to perceive (as projected from the observer's holographic screen in a screen output) and which path of the observer's worldline to follow. Every event is a decision point where the observer's path branches into all possible paths, and at every decision point the observer faces a choice about which path to follow. The observer can only make these choices as it focuses its attention on the path, and there is inherent bias in the way the choices are made.

What is the nature of this bias? There are two important ways in which the bias can be expressed, but both have to do with the flow of energy. If choices are made in an unbiased way, it is natural for the flow of energy in the observer's world to come into alignment for the reasons discussed above, which is the normal way for energy to flow through the observer's world.

When we speak of the flow of energy through the observer's world, we also speak of the flow of energy through the observer's body. The observer's body is a part of its world. The flow of energy through the observer's body animates the observer's body over a sequence of events. The observer's body is only a recognizable form due to the coherent organization of information that allows for the self-replication of form over a sequence of events, but self-replication of form also hinges on the coherent organization of the flow of energy through the observer's body. The observer recognizes this coherent flow of energy through its own body as emotional expressions. These emotional expressions animate the form of the observer's body.

As the flow of emotional energy through the form of the observer's body comes into alignment with the flow of energy through other things in the observer's world, feelings of connection are perceived. Feelings of connection feel "good", and so the observer is naturally biased to choose feelings of connection. The observer is biased to choose "good" feelings. As long as the observer chooses feelings of connection, the biased choices the observer makes with its focus of attention on those "good" feelings tend to remain in alignment with the unbiased nature of choice and the normal flow of energy in the observer's world.

As the flow of emotional energy through the form of the observer's body goes out of alignment with the flow of energy through other things in the observer's world, feelings of disconnection are perceived. Feelings of disconnection feel "bad", and so the observer is naturally biased to avoid feelings of disconnection. This bias to avoid "bad" feelings tends to keep the observer's choices in alignment with the unbiased nature of choice and the normal flow of energy.

The observer's bias to choose "good" feelings and avoid "bad" feelings allows for the physical health of the observer's body. This bias tends to keep the observer's choices in alignment with the unbiased nature of choice and the normal flow of energy in the observer's world.

Why would the observer ever choose feelings of disconnection? Why would the observer's focus of attention ever become biased to choose "bad" feelings? The answer has to do with the nature of self-identification and self-defense. Once the observer identifies itself with the form of its body and attributes its existence to arise from its body, it becomes biased to defend the survival of its body as though its existence depends on it. The observer then feels compelled to defend body survival. This feeling is the essence of the fear of non-existence.

Out of this process of self-identification and fear of non-existence, self-defensive expressions arise to defend body survival. These self-defensive expressions are always an interference with the normal flow of energy in the observer's world and lead to feelings of disconnection as the flow of emotional energy through the observer's body goes out of alignment with the normal flow of energy through other things in the observer's world. The reason the observer chooses to feel "bad" is because the observer's biased focus of attention is focused on its self-defense, as the observer attempts to defend its body survival as though its existence depends on it.

Paradoxically, it is these "bad" feelings of disconnection that lead to the disease of the observer's body. Disease arises because the observer chooses to interfere with the normal flow of energy in its world and create a disturbance in the normal flow of energy, as the emotional flow of energy through its body goes out of alignment with the normal flow of energy in its world.

The only way physical health is possible is if the flow of energy through the observer's body comes back into alignment, but for that to happen, the observer has to detach itself from its world and stop trying to defend the survival of its body as though its existence depends on it. To bring itself back into alignment, the observer has to choose "good" feelings of connection and stop interfering with the normal flow of energy. This is really only possible if the observer stops identifying itself with the form of its body. This process of non-identification is only possible if the observer detaches itself from its world. Inherent in the detachment process is the observer's awareness of itself as the consciousness present at the center of its world. Only that presence of consciousness has its own sense of being present, which is its own sense of I-am-ness.

Once the observer attributes its own sense of being present to its body, then the vicious cycle of its self-identification with its body and the self-defense of its body begins. The observer then becomes biased to defend body survival as though its existence depends on it, which leads to "bad" feelings of disconnection and the disease of the body. The only way the observer can break this vicious cycle is if the observer detaches itself from its body, stops identifying itself with the form of its body, stops interfering with the normal flow of energy in its world, and stops creating a disturbance in its world with self-defensive expressions.

Once the observer "centers" itself and focuses on its own sense of being present as the consciousness present at the center of its world, the observer then naturally brings itself into alignment with the normal flow of energy in its world and chooses "good" feelings of connection. This is the only decision making process that can lead to the health of the body. This process is confirmed by the Yogic perspective and the Six Sigma methodology.

The one-world-per-observer paradigm and the holographic principle tell us that we truly are "beings of light". These paradigm shattering discoveries tell us that although our bodies are made of physical energy, the true nature of our being is the "light" of consciousness. Just as the images of a physical hologram are illuminated by the physical light of a laser, the images of the physical world we perceive, as projected from a holographic screen to the central point of view of the observer, are illuminated by the "light" of consciousness itself.

## Discussion and Conclusions

A yogic, quantum mechanical, and six sigma perspective on why we get sick and how we could get better is presented. Medical professionals know that many illnesses have a psychosomatic component. The yogic perspective presented here posits that 100% of diseases are the product of the mind. There is also serious concern expressed over the overuse of antibiotics creating a host of microbium-associated illnesses; some researchers have referred to the disturbances in the microbium as global warming equivalent. A stronger immune system may alleviate some of these problems and here yoga can be helpful.

Transformation of the S, R, T components of the mindset holds the key to personal and societal transformation and as a subset, improvements in health & wellness. Science is getting ever so close to solving the surrounding the mystery and hopefully this investigation will help towards this goal. The rising healthcare costs is another motivating factor supportive of the need for the methodology outlined. This article explains why the Forbes column, "Yoga could Save Billions and Save Lives" (Walton, 2013) is on mark.

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**Definitions and Notes:**

- Rising level of Internal Excellence equates to higher **S**, R, T Level of Consciousness (see Figure 5)
- **S**: Truthfulness, honesty, steadfastness, equanimity;
- **R**: Attachment, bravery, ego, ambition, greed, desire to live;
- **T**: Lying, cheating, causing injury in words or deeds, sleep.
- Minimum S, R, T required for life.
- **S** component strongly correlates with positive emotions (Unconditioned love, kindness, empathy, compassion, gratitude, forgiveness, etc.)
- Excessive **R, T** components strongly correlate with negative emotions (Anger, hostility, hatred, irritation, sorrow, fear). External
- Excellence of the external refers to the wherewithal of doing all that we do from wake up time to bedtime including all that we do at work in the best possible manner.

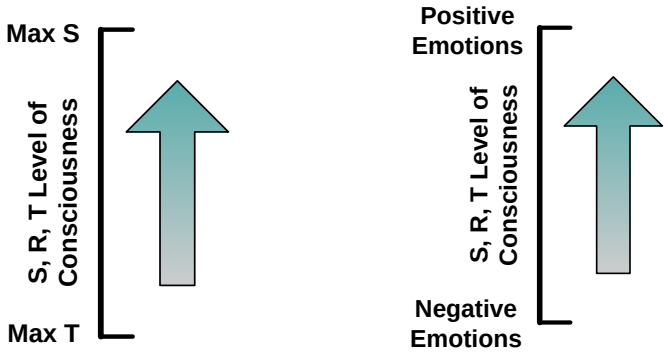


**Figure 3 Two Equivalent Representations of Rising Level of Internal Excellence S, R, T (Left) and Emotions (Right)**

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