What Neuroscience Reveals about the Nature of Business

Jeffrey L. Fannin, Ph.D.[a] and Robert M. Williams, M.A.[b]

[a] Center for Cognitive Enhancement, Glendale, AZ 85306
jfannin@enhanceyourbrain.com

[b] The Myrddin Corporation, Crestone, CO 81131-0548
corpshaman@per-k.com

Abstract

At first glance, neuroscience and business may seem an odd juxtaposition. However, the neuroscience of consciousness provides some understanding of the interrelatedness of subconscious belief patterns that drive behavior, and affect optimal decisions by business leaders, as well as overall performance in business. Our thoughts and beliefs, i.e. our mindsets, drive our actions and create the results we are getting. By changing our conscious thoughts, and even more importantly, our *subconscious beliefs*, we facilitate changes in our behavior and consequently in the results we experience. As we become more educated about the difference between the conscious and subconscious minds, with emphasis on the *subconscious*, we realize the importance of recent research which reveals that the generator of at least 95% of our thoughts and behavior originate at the subconscious level of the mind (Zaltman, 2003)[1].

The authors of this paper crossed paths in January of 2010, bringing together a mutual interest in human performance and a shared scientific curiosity about human consciousness. The opportunity to scientifically test the efficacy of the authors' hypothesis in a controlled environment, utilizing a subconscious belief change process already available worldwide, presented itself when the neuroscientific technology was available to do so. Both authors were surprised, as well as pleased and encouraged with the results, and what those results may mean for the collaboration of neuroscience and business, now and in the future. As a society we are facing many difficult challenges in the world today, e.g. political, ecological, social, and economic. The authors believe that, used properly, this collaboration between business and neuroscience can help individuals develop *creatively different* solutions to many of these challenges.

Research will be presented relating to the process of changing subconscious beliefs. Once the possibility of change in our subconscious beliefs is established, it becomes clear that we are no longer trapped by the automatic mindsets of our past experiences, which often drive self-limiting and self-defeating behavior. Instead, we are free to change our perceptions and beliefs in order to create new mindsets and behavior that will generate new results in our business and personal lives. Freed from the limitations of past "programming," we are able to move to a higher order of consideration of what is worth changing, in order to create sustainable success, both personally and professionally. The authors of this paper suggest that one of the most important issues to

address is that of the misalignment of the principles of business with the Principles of Nature to achieve *sustainable success*. Our very existence, as well as the existence of this planet, is made possible and sustained by the intelligent design of Nature's Principles. Nature has millions of years of experience in creating *sustainable success*. Humanity's presence here is testimony to the wisdom and practical application of those Principles. Some of the most salient Principles of Nature include; adaptability, resiliency, harmony, balance, collaboration, growth management, diversity, and more. These Principles are applicable in business *and* in our personal lives, although sadly they are frequently lacking in both.

The current nature of business on a global scale, demonstrates unprecedented challenges and undesirable consequences that many companies face, bringing into question the very survival of current *business principles and practices,* as well as the belief systems that drive them. Regrettably, fear and avarice are too often primary driving forces in business, and if unaddressed, will virtually ensure the destruction of our *global economy*. Ignorance of the complexity and interdependency of our environment virtually ensures the destruction of our *global ecology*. Both are *potentially lethal* to our entire civilization. The basic solution to this problem was succinctly stated by business leader, Peter Senge (2011)[2] when he said, "*It's not about doing what we are doing more efficiently. It's about doing something different.*"

It seems that for decades, business practices from around the world have brought us to this critical point in history. We stand on the brink of an unsustainable future, desperately hoping that things will get better. If we are to avoid this unstable and destructive future, we must heed the words of business visionaries such as Peter Senge when he says, …*we must do something different*. This paper and the research associated with this writing offers the argument that, in the main, business principles and practices are misaligned with those needed to create *sustainable success*, and *only a significantly visionary realignment will create something different*.

This kind of research might well be important and useful in providing a greater understanding of how to implement processes oriented toward integrating thought and behavior patterns applied to leadership, management, as well as the fundamental structure of business principles and practices. The creation of the essential neuropathways, indicated by the authors, most certainly will help in processes oriented to affect three main components: (1) applied business principles, (2) education, and (3) research. The process is key to improving the performance of each of these three activities.

Our research gathering documented one hundred twenty-five (125) cases, with data gathered over 12 months in three different locations, utilizing different EEG technicians, using two different types of EEG equipment; the result of this investigation produced a p-value of <=0.010. This paper presents research that clearly links the mind/brain interface, presenting empirical evidence of what is identified by the authors as the whole-brain state (a bi-lateral, symmetrical brain wave pattern). It also provides insight into how subconscious belief patterns affect our behavior and control the outcome of such behavior in our life. Subconscious belief patterns circumscribe our perception and drive our behaviors. Knowing how changing perception at the subconscious level of the mind can transform a subconscious belief pattern can now be depicted in brainwave energy and the creation of the whole-brain state. Practical applications of changing subconscious belief patterns, using the processes presented in this paper, have existed for over two decades; today we can measure them and graphically demonstrate their efficacy, lending to further understanding and utilization of this important aspect of human existence, in virtually all walks of life.

Default Network of the Brain

In recent years, a series of papers presented insights derived from qEEG (quantitative electroencephalogram) investigations, into the operation of a more efficient *default network* in effective vs. less effective leaders.

The understanding and acceptance of the existence of the brain's *default network* has helped us better understand that there are regions of the brain characterized by decreased neural activity during goal-oriented tasks. We have come to know the relationship of these regions as a ''default mode'' of brain function. Studies suggested that the brain's default mode supports *self-referential* mental activity. To quote Marcus E. Raichle, whose research group in 2001 first identified the default mode network "When healthy people engage in a very focused activity, they in a sense, lose themselves. If you really are engaged in something, you kind of forget yourself, and that loss of self corresponds to the deactivation we observe in brain scans of the *default network,"* according to Dryden (2009) [3].

In a follow up fMRI study, Raichle and colleagues identified a group of individuals whose brain images indicated that they were unable to "lose themselves" in work, music, exercise or other activities that enable most healthy people to get "outside" of themselves, and interestingly, it turned out that these were highly stressed, depressed individuals, people whose emotions and thinking maladaptively colored their response to their environment, the task at hand, or the people around them as denoted by Sheline (2009) [4]. So, perhaps Raichle's results give us a hint regarding the significance of the more efficient default mode network in the qEEG leadership study. Simply put, the ability to maintain effective relationships with others begins with a healthy relationship with self; with a healthy relationship to thoughts, beliefs and emotions, which subconsciously influence our own behavior and judgment (see figure 1).

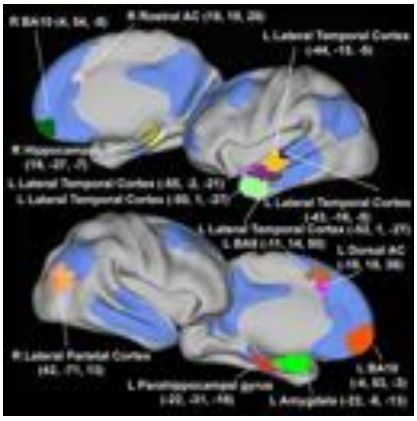

Figure 1: Default mode network illustrated in blue. Note high degree of overlap with additional colored regions reflecting maladaptive sustained activation during task in depressed individuals. Sheline, 2009 [4] Free via Open Access: **OA**.

The literature related to the default network indicates brain activity that offers an awareness of the *autobiographical self*, *stimulus independent thought*, *mentalizing*, and most recently *self-projection*. Damien Fair (2008) explains that these regions integrate into a cohesive, interconnected network [5].

Fair and his group of researchers consider the default network as a functionally interconnected *default system* that is required for internally directed mental activity. They explain that it stands to reason that the default system should demonstrate a mature, or near mature, pattern of functional connectivity at a time in development when internally directed mental activity is demonstrable [5]. We would contend that the research they present regarding the *autobiographical self*, *stimulus independent thought*, *mentalizing*, and *self-projection* is another way of describing subconscious beliefs, and their potential impact on a leader's way of relating to others

Emotional Engagement and Subconscious Thought

Dr. Fannin's involvement in the investigation of neuroscience and business began in 2001. Working for many years with a colleague at Arizona State University, including the leadership research done at the United States Military Academy at West Point, the connection between neuroscience and business received worldwide recognition. This work yielded evidence, that successful leaders, whether military or civilian, used their brains differently than less effective leaders, and was featured in a September 20, 2007 article (This Is Your Brain on the Job) that appeared in the Wall Street Journal. Many other articles followed, appearing in national and international publications. Previous work by the Arizona State University group also included insights into the crucial role which engagement of right hemisphere empathetic networks play in effective leadership. In a subsequent study involving 46 senior leaders, those who scored highest for their charismatic, visionary and socialized communication style demonstrated increased engagement of right frontal networks, suggesting a capacity to engage empathically in motivating their workgroup [6]. The authors of this paper offer new research and insights, along with an effective applied leadership process called PER-K, to change subconscious beliefs.

This most recent work assists us in understanding the internal mechanisms that enable some people to be effective leaders and lend further support to the idea that neuroscience will help us to know how some people can form effective leadership relationships, and why some people can sustain their effectiveness, and others cannot.

The basis for understanding why we feel a particular way is centered in the relationship between the *anterior cingulate cortex* (ACC) and the *amygdala*. The amygdala, usually thought of as fear detector, also detects all other emotions. It lights up to fear because it processes emotions in order of their significance. So when fear is the most significant emotion in the brain, the amygdala will light up [7]. When fear is the most dominant emotion in your thinking, it taxes the subconscious mind, which does most of the fast processing of information.

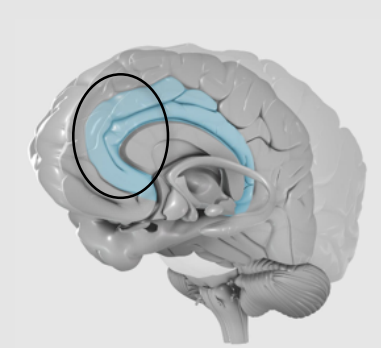

Figure 2: Anterior Cingulate Cortex (ACC) Front part of the Cingulate Gyrus

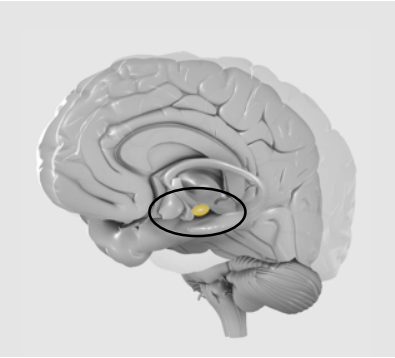

Figure 3: Amgdala – Thought of as the fear detector.

For example, if an entrepreneur who left a secure job to pursue her dreams started to read statistics about how unlikely it was to be a successful entrepreneur, the amygdala would have been activated, making her more anxious. As a result, her *subconscious fears* would be spinning even when she was thinking about other things. Scientific experiments found that when fearful facial expressions were shown so that people did not know they had seen them, the amygdala was still activated [8, 9, 10].

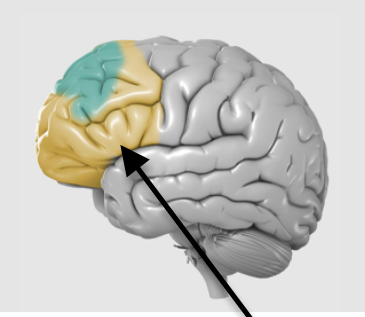

Figure 4: Prefrontal Cortex (PFC)

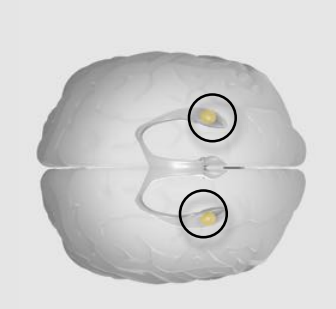

Figure 5: Amygdala

The amygdala is connected to multiple brain regions. One of those regions is the frontal lobe, where many important (business) decisions are processed. If the amygdala is activated, the activation affects various regions in the frontal lobe, particularly the *prefrontal cortex* (PFC), and thereafter affects decision-making, as well as emotional centers. We can recognize that we are vulnerable to fear and anxiety in such a way that it compromises our own abilities to attend to relevant content. The impact of this is that it consumes our *thinking resources.* We should also understand that the amygdala is the *emotional relevance detector* rather than just a fear detector. The amygdala-PFC connection is important because a part of it acts as short-term memory and another part as the "accountant" in the brain calculating risks and benefits of our thinking. Subconscious threats over activate the amygdala and lead to a decline in thinking and productivity when we focus on negative statements such as:

- "How am I ever going to sustain my profit margins? What if I lose everything?"
- "My business is going to fail under the current economic down turn."
- "The government is not supportive of small business and, so the odds for success are stacked against me.
- "What if I get laid off?"
- "I'm not smart enough to be successful."

These kinds of negative thought patterns can create what could be identified as an *amygdala hijacking*. The amygdala kicks into action in preparation for "fight or flight," creating unacceptable levels of anxiety and fear at a subconscious level that negatively impact our behavior and productivity. This subconscious patterning becomes part of the default network and will focus on looking out for danger. The authors of this paper contend that entering into what we call the *whole-brain state* will move the brain out of the negative default mode and allow access to more resourceful thinking processes.

Worry is another component related to normal brain function. It is the brain's response to fear, it is thought of as a response of the brain to block out negative emotions that reside in the subconscious [11]. Some neuroscientists have suggested that worry is a strategy of cognitive avoidance in which internal verbalization acts to suppress threatening emotional imagery. It is believed that worry leads to missing important negative information such as risk that may be relevant to making optimal decisions. This information is mostly subconscious. Worry disrupts the "brain-bridge" (corpus callosum) and slows the transfer time across from the left to the right hemisphere. Taking additional time for processing without creating a solution to the problem [12]. Leaders or managers who are constantly worried often see this worry as an attempt to find a solution, but may in fact be stuck in worry, which usually keeps productivity to a minimum. The whole-brain state increases communication between the left and right hemispheres of the brain, and speeds up the transfer of information across the corpus callosum, thereby diminishing the capacity to worry.

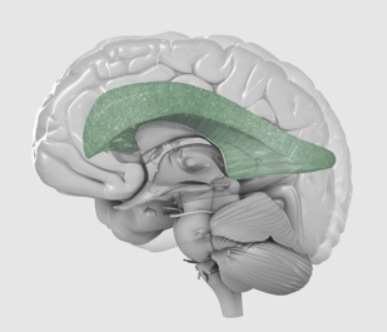

Figure 6: Corpus Callosum, "the brain-bridge.

The authors of this paper present the research herein, which suggests that the whole-brain state allows access to the inter-hemispheric activity connecting to more efficient brain function.

Further, we would have you understand that from our most recent research presented here identified as the *whole-brain state* (a bi-lateral, symmetrical brain wave pattern) allows access to positive mood and cognitive openness.

Boyatzis' (2011) research claims that negative emotions are stronger than positive emotions. He says that the contagion of negative emotion would ignite a stronger neural sequence than positive emotions. This may serve evolutionary functions but, paradoxically, it may limit learning. As a consequence, arousal of strong negative emotions stimulates the *Sympathetic Nervous System* (SNS), which inhibits access to existing neural circuits and invokes cognitive, emotional, and perceptual impairment [13, 14, 15].

The benefits of a leadership style arousing positive emotions over negative (P/N) ones, have been demonstrated by Fredrickson and Losada and others (2005) [16]. They found that a powerful indicator of what is possible for a system is the positivity/negativity ratio of feedback; that is, how many instances of positive vs. negative feedback we can observe in a human interaction process, such as a team meeting or in a couple's conversation. P/N is measured by counting the instances of positive feedback (e.g. "that is a good idea";) vs. negative feedback (e.g. "this is not what I expected; I am disappointed"). Marcial Losada (2004) found that high performance teams have a P/N ratio of 5.6; medium performance teams have a P/N of 1.9 and low performance teams have a P/N of 0.36 (there is more negativity than positivity). These ratios determine the level of connectivity that a team or workgroup can reach according to Losada [17].

They developed an empirical model demonstrating that the ability of a leader to project a positive emotional tone directly corresponds to the flexibility and creativity of these teams.

Some researchers are beginning to hypothesize that this positive or negative impact of leadership style on workgroup creativity actually has a neural component.

They argue that the sustainability of leadership effectiveness is directly a function of a person's ability to adapt and activate neural plasticity. Neural plasticity is the ability to adapt to new situations and environments. The *Sympathetic Nervous System* (SNS) and *Parasympathetic Nervous System* (PNS) are both needed for human functioning. They each have an impact on neural plasticity. Arousal affects the growth of the size and shape of our brain. Neurogenesis allows the human to build new neurons. The endocrines aroused in the PNS allow the immune system to function at its best to help preserve existing tissue [18].

Boyatzis explains that a contagion of positive emotions seems to arouse the PNS, which stimulates adult neurogenesis (i.e., growth of new neurons), a sense of well-being, better immune system functioning, and cognitive, emotional, and perceptual openness [19, 20, 21]. By contrast, there are suggestions in the neuroscience literature that anxiety-inducing, or negativity based leaders may not only undermine morale but may actually impede the workgroup's capacity for new learning and creative growth at a neural level. Elizabeth Gould a Princeton University psychology professor has demonstrated, in rats and primates, the detrimental effects of chronic stress on "neurogenesis" or the brain's capacity to create new neuronal connections [22].

In Dr. Bruce H. Lipton's bestseller, *The Biology of Belief*, he says, "*Our positive and negative beliefs not only impact our health, but also every aspect of our life.*" He goes on to say, "*Your beliefs act like filters on a camera, changing how you see the world. And, your biology adapts to those beliefs*." [23]

The optimal state of consciousness is to have the qualities and attributes of both hemispheres of the brain operating simultaneously, in order to have the full response potential of the mind/brain system available to us, as well as creating a "user-friendly" state of consciousness for changing subconscious beliefs. We refer to this as the *whole-brain state*. This state of being can beneficially influence an individual's own state of consciousness, and consequently his or her own performance. This positive influence extends to other individuals, as well.

A study reported in 1988 in the *International Journal of Neuroscience*, by researchers at the Universidad Nacional Autónoma de México, suggest that synchronized brain states significantly influence nonverbal communication. The study was done with thirteen paired subjects. The subjects were tested in a darkened and soundproof Faraday cage (a lead-lined screened chamber that filters out all outside electromagnetic activity). Each pair of subjects was instructed to close their eyes and try to "communicate" by becoming aware of the other's presence and to signal the experimenter when they felt it had occurred. The brainwave states of the subjects were monitored during this process. Experimenters reported that during the sessions an increase in similarity of EEG (brainwave) patterns between the pairs of communicators developed. Furthermore, the experimenters noticed, "The subject with the highest concordance [hemispheric integration] was the one who most influenced the session." In other words, the EEG patterns of the individual with less synchrony between the brain hemispheres would come to resemble the EEG pattern of the person whose two sides more closely resembled each other [24].

These conclusions in the study cited, support the proposition that our thoughts, even nonverbally

expressed, can influence others. In fact, the more whole-brained *we* become, the more we influence *others* toward that state of being as well. This is an important consideration for effective leadership.

The authors of this paper offer a point of view based on new research in biology and human consciousness. For example, the emerging field of epigenetics is fast replacing the older concept of genetics. It is apparent from the failure of the genome project that genes do not possess self-emergent properties that cause the gene to express potentialities originating in the brain. Instead, it is the epigenetic signals (signals above the genes) that trigger such events [25]. Analogously, the authors are suggesting that activity in the brain is largely triggered by epigenetic signals (signals outside of the brain, e.g. mind/consciousness field), creating subsequent biochemical and physiological responses. The essence of this new hypothesis is incorporated in this paper, and constitutes what the authors call the *mind/brain interface*.

We suggest that the data from our own studies and the research of others show that it is our thoughts and beliefs that drive our actions and create the results we are getting. By changing our conscious thoughts and *subconscious beliefs*, we facilitate changes in our behaviors and consequently in the results we experience.

Some conventional thinking would offer the notion that changing brainwave patterns that affect subconscious processing is a lengthy process and occurs slowly over time. This paper offers data that suggest that the brain has the ability to reorganize brainwave energy, creating the *whole-brain state*, and thus allowing for more optimal performance of subconscious belief patterns. The research further suggests that the process is not lengthy, nor must occur over a long period of time.

Subconscious Belief Patterns

US News & World Report presented a special issue February 28, 2005, entitled, *The Secret Mind*, featuring an paper, *How Your Unconscious Really Shapes Your Decisions*. The posit of the paper revealed, "According to cognitive neuroscientists, we are only conscious of 5 percent of our cognitive activity, so most of our decisions, actions, emotions and behavior depends on 95 percent of our brain activity that goes beyond our conscious awareness" [26]. The subconscious mind consists of all involuntary processes and functions including *thoughts*, *beliefs*, *emotions*, *memories*, *skills, instincts,* and *behaviors* of which we are not consciously aware. They are generated by the subconscious mind, while the effects occur in the brain and body. Many of the processes and functions of the subconscious mind involve implicit memories. Implicit memories drive much of our subconscious abilities such as, habits, skills, behaviors, reflexes, conditioned responses and emotional reactions, which we automatically demonstrate or engage in without much or any conscious awareness or thinking. If we want to change any of these subconscious implicit memories, like a recurrent automatic emotional reaction to a situation, a self-limiting or potentially self-destructive belief, or perhaps a negative attitude towards someone or something that limits our capacity to interact constructively, we must interface with the subconscious mind. Often we try to use conscious processes such as visualization, will power, and positive thinking to create the desired changes. Experience, all too often, demonstrates that these processes, when used alone, have a limited effect on creating lasting change. Using our "mind over matter" conscious adaptability is a process that generally works only in the conscious realm. We have to enter the realm of the subconscious mind to create lasting changes.

Further explanation of the significance of subconscious belief patterns suggests that our beliefs, usually subconscious, are the cumulative effect of life-long "programming." As a result of past conditioning, we sometimes think and behave in self-defeating ways. *Conscious thoughts* can be readily changed, by simply receiving information: reading an insightful book, having a compelling conversation, seeing the unarguable results of scientific research, etc. However, if conscious information were all that was needed to lead satisfying and successful lives, most of us would already be doing that. Unless changes are made at the *subconscious level*, repeating undesired reactions and behaviors will likely continue. Subconscious beliefs have far reaching consequences, both positive and negative, in every aspect of life. They affect our moods, relationships, job performance, self-esteem, and even physical health. Our contention is that it is imperative to know how to change self-limiting beliefs into self-enhancing beliefs that support our goals and aspirations.

qEEG and the Whole-Brain State

A baseline of EEG data was established for each case. Using EEG caps calibrated by Electro-Cap International, standard procedure was to inject each of the 10-20 international systems for electrode placement with standard electro-gel making contact with the scalp and the electrode. Ensuring that the dc-offset voltages were within acceptable range, three (3) baseline readings of five (5) minutes each were recorded; five minutes eyes open, five minutes eyes closed and five minutes with the brain on task (silently reading a magazine).

A Certified PER-K® Facilitator used standard PER-K® processes. PER-K® is the trade name used for the application of these processes in the business arena. The PER-K® processes are identical to the personal growth version known in the market place as PSYCH-K®. This is a *process for subconscious belief change* to achieve the *whole-brain state*. Following the intervention of the PER-K® change process (aka a *balance*), a post-intervention EEG was recorded in the same manner as the EEG baseline stated above. The *balance* took approximately 10 minutes to complete. Statistical analysis was performed by NeuroStat, a function of the NeuroGuide program from Applied Neuroscience. NeuroStat allows for individual independent t-tests to be performed. The following is an example from the base of 125 cases examined for the whole-brain state.

The independent t-test compares condition A to condition B and shows if there are differences in the dominant brain function (consider the discussion of Shannon's method in unabridged version of this paper). The legend is the same in all of the depictions shown in the illustration. The RED represents the dominant brainwave pattern prior to the facilitation of the PER-K®*balance*. The BLUE represents the dominant brainwave pattern after the *balance* had been facilitated. The thickness of the line, indicates level of P-factor, see legend below in figure 7.

The whole-brain state is considered to be the combination of RED; condition A, dominance prior to balance process, and BLUE; condition B, dominance after the balance process was facilitated.

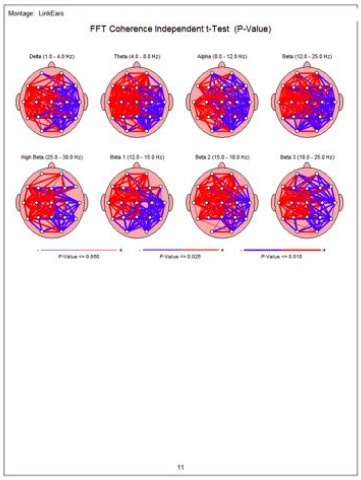

Figure 7: The Whole-Brain State

The person depicted by the independent t-test to the above, experienced profound changes. This woman had been an office manager for over ten years. Her dominant pattern before the PER-K® balance was facilitated, (seen in RED), is left hemispheric. Very logic oriented, her management style was "my way or the highway." Her approach was demanding and she expected others to do exactly as she commanded. Most of the people that worked for her did as she asked out of fear of reprisal from her or at times, experienced her uncontrollable anger. After the PER-K® balance, the dominant pattern, seen in BLUE, represents access to the emotional/right side of her brain, augmenting the qualities and attributes of her left hemisphere. The result was that her consideration of others was noticeably better, and her interpersonal relationships at home and at the office improved substantially. Her leadership abilities began to flourish and she became well liked. In addition, the office ran smoother, with greater efficiency and productivity. Her shift toward a whole-brain state created a new attitude toward others, fostering a more congenial work environment. The overall shift in the attitude of her employees toward her was supportive, resulting in a more positive feeling about the work place.

Due to the space restriction of this paper, it is not possible to provide a comprehensive treatment of this subject or the numerous changes that individuals experienced. However, the volume of data collected, and the unique properties it represents afford us the opportunity to evaluate and continue to understand what the data means, as well as providing intriguing hints as to the nature of its potential. Singularly, the most significant information to come from this research, in 98% of the cases measured, presented statistically significant correlations, demonstrating the difference between baseline measures and the presence of the *whole-brain state* after the intervention occurred.

Summary

Subconscious belief patterns circumscribe our perception and drive our behaviors. Knowing how changing perception at the subconscious level of the mind can transform a subconscious belief pattern can now be depicted in brainwave energy and the creation of the *whole-brain state*. Continued research in this area will assist in recognizing and adopting applications that will be beneficial in academics, personal health, professional performance, and virtually every area of human life. Practical applications of changing subconscious belief patterns, utilizing PER-K® belief change processes, have existed for over two decades; today we can measure them and

graphically demonstrate their efficacy, lending to further understanding and utilization of this important aspect of human existence.

Aligning the principles of business with the *Principles of Nature*, in order to achieve *sustainable success,* and effect significant thought patterns and behavioral changes in individuals who make decisions that determine the fate our world, are critical to creating a sustainable future for ourselves, and for generations to come. These Principles, when anthropomorphized from Nature, are applicable in business, and can be internalized at the subconscious level of the mind, using PER-K® belief change processes.

By better understanding the mechanisms of changing subconscious beliefs, we may well be able to ameliorate or even avoid the otherwise probable economic, ecological, and cultural maelstrom we are facing now, and in the future. A commonly heard statement in the business world is, "Don't take it personally, it's just business." The authors of this paper suggest a very *different* perspective. *We must take it personally because it is business*! Often this statement is used as a warning to others that ethics, morality, and human decency are about to be suspended in making a decision or participating in an interaction. Business decisions impact and change our world every day. By aligning the principles of business with the Principles of Nature, we can foster a world where ethics, morality, and human decency create *sustainable success* as an everyday reality, rather than an obscure, idealistic goal.

Our concern that business practices, as well as human civilization in general, are continuing down a path of *misalignment* with the Principles of Nature, speaks to a sense of urgency in making rapid changes in our business practices and mindsets. If we are to make a significant difference in the way we conduct business, as well as our personal lives, we must start refining and applying our knowledge about how the human mind/brain interface operates regarding subconscious belief systems, as well as how those belief systems affect the *global field of consciousness*, via *quantum entanglement*. As Nobel Physicist Erwin Shrodinger puts it, "*The total number of minds in the Universe is One*." It's time to evolve business beyond the outdated Darwinian model of survival of the fittest to a new model of collaboration and interconnectedness. It's time for neuroscience and Nature to take the lead in the evolution of business by *doing something different*.

Nature's business lies in evolution; the evolution of business lies in nature!

Due to the restriction on length for this paper, the authors invite you to visit www.per-k.com for more information about the PER-K process for integrating the principles of business with the Principles of Nature. In addition, you can download the other articles related to this topic.

Keywords: *QEEG, Quantum, Brain Mapping, PER-K®, PSYCH-K®, Thought, Subconscious, Belief Patterns, Business Principles, Whole-Brain State, Business, Management, Leadership, Consulting, Organizational, Education, Technology, Strategic Management*

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