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Nurturing Employee Creativity

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Abstract. – Independent studies show that *creativity* is a consistent and statistically significant predictor of peak performance at various employment levels within the service-hospitality industry. While people often regard this construct as a stable and innate trait, we show that creativity is actually an ability that can be learned and nurtured through a series of steps or exercises that focus on healthy physiology and promoting positive “cross talk” among the three main anatomical regions of the human brain. Companies wanting to enhance the creativity of their executive management teams, specific divisions or departments, or any level of human capital can further build on these steps or exercises by taking advantage of unique executive retreats and management workshops that address creativity in the context of organizational strategies.

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Meet Randall – an unassuming man in his late 60s who is rather famous in certain psychological circles. He does not look particularly special or memorable on the outside with his salt and peppered hair, sagging facial features and slight weight problem. But his mind is a thing of unquestionable beauty. Now to be fair, his mind was not always so admired. In fact, Randall used to describe his mental acuity as the neurological equivalent of a box of *Corn Flakes*. Then something happened; Randall studied all he could find on the subject of creativity. He was tired of always being in a brain lull at home and work. Over time, he reprogrammed his mind to think differently. Now, some call him the ‘homemade genius.’ Genius is probably too liberal, but it is fair to say that Randall taught himself to be substantially more creative.

Creativity broadly refers to mental processes that involve the generation of new and appropriate ideas or concepts, or innovative associations between existing ideas or concepts. Historically, many cultures worldwide have shown special interest in individuals who have the ability to integrate or dissociate affect, imagery, ideation, and perception. Psychiatrist Jean Shinoda Bolen¹ is even credited with discovering inklings of this ‘permeable mental boundaries’ concept in the Greek ‘trickster figure,’ *Hermes*. Social scientists, including industrial psychologists, have a similar tradition of recognizing and attempting to conceptualize mental boundaries. Randall’s homemade formula for sparking creative thought was developed from the resulting psychological literature.

Randall's Recipe for Sparking Creativity

The secret recipe is simple – install the right software so you can effectively flex your hardware. This combination of proper software running on well functioning hardware will make you extremely creative and productive. Randall speaks in computer terms here, because that makes intuitive sense to him. It is also a nice metaphor for how our biology is structured and functions.

Software refers to what we put into our bodies (and hence our minds), whereas *hardware* refers to how our brains are naturally hardwired to perceive and assimilate information. People have control over both of these factors, so creativity levels are actually flexible. The goal is to manipulate our software and hardware to our advantage.

Installing the Right Software

There are four critical pieces of software you need to promote creativity and a well functioning brain (the hardware). Strive to maintain all four in your arsenal. Here are the basics:

- > **Nutrition** – We require nutrients and energy for concentration on conceptual tasks, especially those demanding problem-solving and creativity. Breakfast especially provides those nutritional necessities and prevents symptoms such as headache, fatigue, restlessness and sleepiness from competing with outcomes. Maintaining proper nutrition provides key benefits to brain chemistry as well. For a series of fascinating reviews of the latest research in this area, see <http://www.glycoscience.com>.
- > **Sleep** – Without an adequate amount of quality sleep, people do not properly function. Creativity requires efficient and effective storage and integration of information. Two stages of sleep are crucial for different aspects of memory consolidation¹⁰. Periods of slow-wave sleep are very long and produce a recall and amplification of memory traces. Ensuing episodes of REM (dream) sleep, which are very short, trigger the expression of genes to store what was processed during slow-wave sleep. Sleep allows us to transform short-term memory to long-term memory, and by so doing, synthesizes new information with old information. And we shall see later, synthesis becomes a vital part of the creative process.

Healthy sleep also seems to coincide with a healthy job outlook. In a study scheduled for publication in the October issue of the *Journal of Management*, researchers surveyed employees of a southeastern regional office of a large national insurance company. Each day for three weeks in February 2005, the employees logged onto a web site and rated their level of job satisfaction at the end of the workday. They also answered questions about sleep problems and emotions they were feeling. The results showed employees reported higher levels of job satisfaction if they had slept soundly the night before, and lower levels if they had experienced insomnia. Furthermore, researchers found that women were more sensitive to insomnia's effects on job satisfaction and emotions.

Individuals and their employers should take steps to improve quality of sleep to improve job satisfaction as well as overall well-being. You can improve your sleep quality by exercising regularly, limiting consumption of caffeine and alcohol, and improving general sleep habits.

- > **Avoid pessimism** – The power of positive thinking to improve health and well-being has been endorsed for years. Optimism is important; the general principle to remember is that negative thoughts lead to negative results and positive thoughts lead to positive results. In business, the “can-do-attitudes” commonly if not always prevail; while the “glass-is-half-empty” mindset more often than not is never supported. Moreover, new research¹¹ suggests that embracing positive thinking is indeed good but even more important is simply avoiding negative thinking. In other words, just because a person does not expect good fortune, you can not assume therefore that the person expects bad fortune. Optimism is not the opposite of pessimism per se, and more than having optimism, your overall levels of well-being and energy will be higher if you avoid pessimism.

To that end, use only positive forms of thoughts and statements. For example, say, “I want to win,” instead of, “I do not want to lose” or “I have to win, I can not afford to lose.” Avoid words such as *no*, *never*, *do not*, *can not* and *impossible*. Statements like, “I can not do it,” should not exist in the business world. Eliminate these words from your vocabulary, at least so far as messages you send yourself, coworkers and customers. Every time you use one of these words, immediately rephrase or reframe the statement into a positive one. For example, change, “I can not do it” to “I will work at it.”

- > **Education** – The more you know, the further you will go. That phrase is cliché but accurate in terms of creativity. The “Father of Creativity” E. Paul Torrance identified a total of 384 studies which examined the effectiveness of creativity training^{15,16}. The majority of these studies have concluded that creativity can be enhanced through formal training. Perhaps one of the most extensive and classic studies on the effects of creativity training was conducted by psychologists Parnes and Noller⁸. These investigators long ago discovered that students enrolled in a four semester sequence of college courses which focused on awareness-development, creative problem-solving and creative analysis processes scored significantly higher than a control group on measures of mental ability, creative application of academic subject matter, non-academic achievement in areas calling for creative performance, and certain personality characteristics associated with creativity. In fact, the overwhelming results of this experimental program eventually led to establishment of a permanent program at the State University College at Buffalo called the International Center for Studies in Creativity (ICSC).

Education in any form – from formal training to merely staying in touch with current events – also provides you with more content that can be used creatively. Knowledge is the building blocks of creative output. Consider this task —

Which of these words do you think connect to both WET and ARMADILLO?

Texas | Castle | Plug | Rattle | Diary | Laptop | Ear

The more educated you are, the easier it is to find associations between the target words. For example, “Texas” does not seem to connect immediately to both “Wet” and “Armadillo.” But, education empowers you to recognize that Texas has both armadillos and wetlands... so there is a creative connection between “Wet” and “Armadillo.” By the way, Texas may seem to be a desert but it has two broad categories of wetlands, interior wetlands and coastal wetlands! Interior wetlands include bottomland hardwood forests and playas. Playas are small lakes and ponds formed when seasonal rain and snowfall collects in naturally-occurring depressions. In cultivated areas, farmers modify playas for water conservation. Coastal wetlands include salt and freshwater marshes, forested scrub and tidal flats. Armadillos prefer wetland habitats!

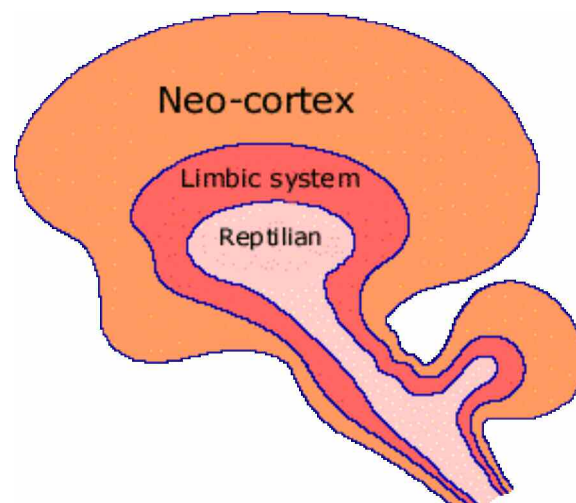
Flexing Your Hardware

Maintaining proper software is not enough to encourage creativity. You must also learn to flex your hardware. Studies of perception, imagery, and memory all provide some evidence for a threshold that mediates unconscious-conscious awareness. Thus, many people do not realize it, but everyone has the hardwiring in their brains to increase their creative potential.

A critical key to unleashing creative potential is fostering *transliminality*, or the tendency for psychological material to cross (*trans*) thresholds (*limines*) into or out of consciousness.

From a physiological perspective, transliminality refers to the degree of functional regulation of interaction among frontal cortical loops, temporal-limbic structures, and primary or secondary sensory areas and/or sensory association cortices^{13,14}. In other words, transliminality reflects *how much* and *how well* the three structures of your “triune brain” “talk” to one another. And you thought you had one mind? No, you have actually have three! Figure 1 depicts these three components of your “triune brain.”

Figure 1. Cross-section of the human brain showing the three components of MacLean’s Triune Brain Theory



Independent evidence⁹ shows that the human brain is organized into three anatomically separate, evolutionary structures identified by MacLean^{5,6} that can be thought of as different small minds. Each of these minds has its own sense of time and space, kind of intelligence, subjectivity, function, and chemistry. This hierarchy of mental structures is known as MacLean's Triune Brain Theory. According to this theory,

Each of these three evolutionary small minds continually sends messages to the others to form one “triune brain” that operates as a whole:

1. *The Reptilian Complex (R-Complex)*. Evolutionarily the oldest part of the human brain, the R-Complex comprises the basal ganglia, corpus striatum, olfactory striatum, globus pallidus, and satellite collections of gray matter. In animals such as reptiles, the brain stem and cerebellum dominate. For this reason it is commonly referred to as the “reptilian brain.” It is rigid, obsessive, ritualistic, and filled with “ancestral memories” (corresponding to what Sri Aurobindo called the “mechanical mind” and perhaps tangentially to Jung’s notion of the “collective unconscious”). In humans, this part of the brain is programmed for survival through the regulation of behavioral patterns that are mainly innate^{5,6}. This brain controls muscles, balance and autonomic functions, such as breathing and heartbeat.
2. *The Limbic System*. As therapsids evolved into mammals, neurological modifications created a group of structures referred to by MacLean^{5,6} as the paleomammalian brain, or limbic system. This consists of the amygdala, hippocampus, parahippocampal gyrus, septum, cingulate gyrus, thalamic nuclei and related structures. It corresponds to the brain of most mammals, and especially the early ones. The limbic system is concerned with emotions and instincts, feeding, the flight or fight response, and sexual behavior. As MacLean^{5,6} observes, everything in this emotional system is either “agreeable or disagreeable,” since survival depends on avoidance of pain and repetition of pleasure. When this part of the brain is stimulated with a mild electrical current various emotions and anomalous perceptions are produced. The limbic system appears to be the primary seat of emotion, attention, and affective (emotionally-charged) memories. It helps determine valence (whether you feel positively or negatively towards something, in Buddhism referred to as *vedana*, “feeling”) and salience (what captures your attention), unpredictability, and creative behavior. It has vast interconnections with the neocortex (see below), so that the brain’s functions are neither purely limbic nor purely cortical but a mixture of both.
3. *The Neocortex*. Recent mammals exhibit a third layer of neural tissue, the neocortex, which reaches its greatest extension in humans. The higher cognitive functions that distinguish humankind from other animals reside in the cortex. MacLean^{5,6} refers to the neocortex as the mother of invention and the father of abstract thought. In humans, the neocortex takes up two-thirds of the total brain mass. Although all animals also have a neocortex, it is relatively small with few if any folds (indicating surface area, complexity, and development).

It has been previously assumed that the highest level of the brain, the neocortex, dominates the other, lower levels. However, MacLean^{5,6} has shown that this is not the case. Rather, the physically lower limbic system, which rules emotions, can take over the higher mental functions when required or under certain psychological states (e.g., stimulation of temporal lobe, absorption in fantasy-like mentation, psychophysiological stress, trauma, etc). Interestingly, many esoteric spiritual traditions taught the same idea of three planes of consciousness and even three different brains. G. I. Gurdjieff, for example, referred to Man as a “three-brained being”⁷. There was one brain for spirit, one for soul, and one for the body. Similar ideas can be found in *Kabbalah*, in Platonism, and elsewhere, with the association spirit-head (the actual brain), soul-heart, and the body in the belly. Here we enter upon the chakra paradigm, i.e., the idea that points along the body or spine correspond to nodes of consciousness, relating in an ascending manner, from gross to subtle. Not unlike MacLean’s triune brain model, social scientist Kurt Lewin, in the 1930s, diagrammed the mind as a number of regions acting on one another, separated by divisions of various thickness³. Others since have spoken of transliminal (“across the threshold”) processes in terms of the regulation or promotion of imagination and creativity^{4,12}. Lewin later went on to found the National Training Laboratory in Bethel, Maine and to become the Father of Group Dynamics – the principles that serve as an effective basis for team building and professional development workshops.

When psychologists speak of a creative mood, what is really meant is that a person’s mental boundaries are in a period of unusual permeability or “thinness.” What is happening on a neurological level is that the three minds (R-Complex, Limbic System, and Neocortex) are intently communicating among each other. The result is a brain experience called *syncretic cognition*. This entails a fusion of perceptual qualities in conscious experience. Examples include *physiognomic perception*, the fusion of perception and feeling; *synesthesia*, the fusion of sensory modalities; and *eidetic imagery*, the fusion of imagery and perception.

Much that is written about creativity talks about “getting out of the box” or “thinking outside the box.” These ideas slightly miss the mark. True creativity involves manipulating ourselves in the boxes that are present around us all the time – and that can mean accepting, destroying, jumping out of or jumping deliberately into the boxes or imagining that no boxes exist. Such conscious and unconscious manipulations are the hallmarks of syncretic cognition. When a person is in this “transliminal zone,” he or she will vividly perceive connections between seemingly unrelated objects, thoughts, feelings, and imaginings.

Through his studies, Randall discovered that with the proper stimulation these syncretic perceptions or innovative ways of thinking, feeling, and perceiving could be induced in nearly everyone.

Creative Exercises

You promote transliminality – and hence creativity – by first installing the right software (nutrition, sleep, positive mental attitude and education) and then subsequently flexing your hardware.

People become creative when they let their minds wander and mix ideas freely. Innovation often comes from unexpected juxtapositions. That is not to say that you can not be creative by sitting around waiting for inspiration to strike you.

The only way to create is to build your skills and knowledge, dig in and try out new ideas, even if you are confident they will not lead you to the desired outcome.

According to creativity experts, no matter what you do, the first step to tapping creativity is to show up. The next step is to put your mind in the proper frame of reference – the state of mind where the cross-talk among your triune brain is at its peak. Below are some simple exercises of the sort that Randall used to jump-start his mind and the creative process. Exercises like these are effective, because they encourage triune brain “cross-talk.”

There are exercises that you can do to get your personal creative juices flowing, such as...

- > Look at license plates while traveling to and from work. Consider what the plate numbers or letters might mean if the vehicle was owned by quirky characters like Big Bird from the “Sesame Street” TV show or special individuals like the Dali Lama.
- > Notice and choose people randomly and create a story in your mind based on the clothes they are wearing.
- > Choose objects you see in rooms, spaces, and places you travel through and create stories about them and their owners.
- > Today, in four different rooms in which you spend time, randomly choose objects. These can range from small items on tables or shelves to pieces of furniture or objects attached to walls. Next, create stories based on someone in the very distant future discovering these “outdated” objects. To make the process more challenging, alter the type of story being told – for example, comedy, drama, romance, etc.
- > Imaginatively try to turn noises you hear into musical rhythms, turn colors you see into specific sounds, and turn sounds you hear into particular odors. The idea is to experience perceptions in more than just one of your five senses at a time.

...and then there are exercises you can do to promote brainstorming or group problem solving, such as...

- > *Alphabetizing* can be used to help teams generate a long list of ideas when their brainstorming has become stale or stalled. Write out the alphabet, list 26 famous people names starting with the letters of the alphabet. Then, virtually ask each of the famous people how they might solve the problem you are working on. Generally this will lead to unique ideas that neither brainstorming nor logic alone can produce.
- > *Assimilation* is another effective technique for individual and group problem solving. Begin by putting together a miscellaneous collection of photos, photo clippings from magazines, post cards or books of photos. Compile a mix of subjects from natural to manmade images,

paintings, sculpture, ceramics, textiles, etc. Have group members randomly select 6 to 12 separate photos that simply “speak” to each individual or attract their attention unconsciously. Deliberately allow their minds to wander so they are not tempted to rationally select photos. They might even use “soft eyes” to choose images by letting their vision blur slightly.

After all of the images are chosen, have members describe the emotions that sparked the photos they selected, discuss how the individual photos describe a problem the group is experiencing now, and then look for solutions for the problem in the photos...perhaps how nature has solved a similar problem or how an artist has solved it in their piece of work.

*...and then there are executive retreats and management workshops
you can schedule to promote creativity in organizational strategies ...*

From a historical perspective, Socrates and Plato are credited with establishing a platform for creative thought and innovation. While elements such as Randall’s software and hardware factors, family up-bringing, and significant emotional experiences have since then been identified as entering into the process of creative education, the interactive and interpersonal basics have been long established by these two sages.

Socrates knew the importance of asking provocative questions and encouraging insightful responses. He knew that to merely ask questions about what was already known would most likely reproduce feedback on the “known.” He further realized that in asking questions based on the “known” but, with a focus on evaluation, synthesis, and the power of inductive/deductive reasoning that the ultimate production of new ideas would engender creative thought.

Plato also knew that one can cultivate the thought process by being supportive of thoughts and feelings, encouraging the potential in the thought process, and giving leeway through unqualified give and take discourse – (a precursor to brainstorming). Conversely, Plato also realized that being overly directive would stifle innovation, squash creativity, and diminish any discovery process.

In our workshops and executive retreats, we have experienced the vast majority of participants thinking creatively when supported by a philosophy of the Socrates/Plato basics followed by specific steps in creative thought. Our CubeTHINK™ model provides steps for analyzing organizational strengths and challenges. Three distinct organizational *Business Success Vitals* are examined: The Technicals, Relationship Management, and Big-picture Understanding.

Most conventional approaches to organizational change ultimately do not work because they are too linear in thought: $2 + 2 = 4$. Thus, there is a need for full spectrum thinking. Our Management Cubed approach fills this need. As our organizational paradigm which we began developing over twenty years ago, this model and its supporting interactive executive retreats and management workshops has influenced the cultures of premier hospitality organizations to include The Four Seasons Hotels and Resorts, Ritz-Carlton Hotels, Inter-Continental Hotels Worldwide, Mandarin Oriental, Starwood Hotels, MGM Grand, Harrah’s Entertainment, Station Casinos, Barona Valley

Ranch Resort and Casino, as well as small-group and independent hotels such as New York's Soho Grand, Los Angeles' Beverly Hills Hotel and London's Claridge's and Dorchester Hotels.

The model employs analysis and synthesis, convergence and divergence, as well as deduction and induction. It fosters integrative, heuristic, reflective, and active thinking, and it is best applied to complex organizations many of which are already at the top of their game but which greatly value an ability to stay number one in their competitive set.

We believe that organizational creativity can be purposefully and systematically developed because the process depends upon the learnable skills of thinking, communication, and problem-solving. Moreover, the process is further reliant on such human aspects as intuition, emotional intelligence and right-brain thinking. As detailed below, CubeTHINK™ puts together these elements in one holistic approach.

CubeTHINK™ Steps to Creativity, Innovation, and Change



Walking in Randall's Shoes

Randall's methods and the CubeTHINK™ approach are grounded in sound science, and, when practiced and honed, they are effective for facilitating *creativity* as well as *productivity*. As he would say, creativity and energy feed on themselves. As you begin to perceive and contemplate information in new ways, the result is even more creative output and energy for accomplishing new tasks. Soon, you will find that approaches and solutions to your current problems and challenges can offer insights to seemingly unrelated problems and challenges. That is what it feels like to walk in Randall's shoes.

A wonderful example of this comes from Art Fry, the inventor of the "Post It® Note" – an individual who is exceptional at syncretic cognition – that fusion of affect, imagery, ideation, and perception. He tells the story of how he needed to walk for exercise in order to improve his general health and to help with physical therapy for a shoulder accident he had a month prior. He also had another errand that day, namely to take his car for some minor, while-you-wait work. On top of these responsibilities, he struggled to find time to objectively review some current problems, challenges and opportunities.

Rather than think of these circumstances as negative and unrelated chores, he saw them as positive opportunities that reinforced one another. He dropped his car off and then walked along the busy road where his dealer was located. It was a place he never walked before. Walking provided the exercise and therapeutic movement for his arm and shoulder, and being in a new environment provided him visual and other sensory clues that he used as symbols and metaphors for his current challenges, as well as the time and inspiration for multi-level tasking that helped keep him more objective. When he returned he wrote up a basic plan for three challenges that had top priority and began implementing his plan with the energy and creative drive that the walk and new scenery provided him.

By the way, when the 3M Company tried developing a new and improved adhesive, one of their results was a glue product that would not completely stick and obviously something for which they were not originally looking. It was only after Art Fry "synthesized" the non-sticky glue and his need for movable paper bookmarks that would not fall out that 3M realized the applicability of a non-sticking glue. Hence the Post-it® Note was invented and a worldwide phenomena was born!

Of course, this synergy does not always occur. Highly creative individuals are not necessarily consistently creative or can conjure brainstorming at will. Creativity is a process that must be consciously nurtured and honed. It is a skill that with time and effort can become a competency for you, just like it did for Randall.

Some days are diamonds, some days are stones.

Some days you are the pigeon, some days you are the sculpture.

Some days you enjoy the fruit, some days you are stuck with the pit.

I NOTE

Creativity is one of ten core competencies that predict peak performance in the service-hospitality industry and is a key component in the 20 | 20 Skills™ assessment v2.0. Individuals who look for new ways of solving recurring problems, who take a creative approach to their tasks, and who are able to innovate when required, move their organizations forward and help maintain a competitive advantage. With the increasing rate of change, staff at all levels who respond creatively to new challenges and new opportunities will be in demand in the coming decades. Identifying and nurturing creative individuals is essential. Not only do creative managers bring fresh perspectives to organizations through their own contributions, they also inspire those around them to think innovatively as well.

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