Embodiment – The Missing Link in Creative Innovation

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Abstract

The purpose of this paper is to demonstrate the importance of embodiment in the creative innovation process, and to highlight the skills and environment we need in order to thrive in the 21st century.

In the late 20th century, innovation stemmed from Thought Leadership. Advancement in technology such as the development of the Internet, allowed human beings easy access to information and knowledge. Think tanks and brain storming were the prevailing methods to innovate with the focus on mental capabilities. Attention was directed to what and how, giving life to many leadership academies and innovation hubs.

In the early 21st century, we find ourselves in an interconnected world where thousands of books and millions of academic papers are written annually; where thousands of courses are available; where an infinite amount of information on the internet is accessible; and where we are daily flooded by numerous electronic messages and opportunities to engage in social networks and other online forums. Yet, we fail to find solutions to the multitude of social, economic and political issues that humanity are facing.

The overload of information and numerous requests for attention bring about the need for new skills to contextualize and discern what is needed and appropriate, what to keep, what to spend time on, what to enhance and develop, what to save for later, and what to let go off. More importantly, humans need to activate new skills and abilities to innovate in a rapidly changing and evolving complex environment. Innovation is no longer purely mental, but conceptual, which in itself requires the need to enact different intelligences to sense into and anticipate what we will need in the future.

The who and why become important to be able to access all the intelligences available to us to conceptualize, internalize, integrate and articulate innovations within relevant contexts and across various disciplines. There is a direct link between how we see, feel and think about ourselves, our creative potential, others, our environment and the world at large and our ability to be innovative and creative.

Keywords: Embodiment, innovation, applied knowledge, creativity, awareness

1. Introduction

There once was a farmer who grew excellent quality corn. Every year he won the award for the best grown corn. One year a newspaper reporter interviewed him and learned something very interesting about how he grew it. The reporter discovered that the farmer shared his seed corn with his neighbors. *'How can you afford to share your best seed with your neighbors when they are entering corn in competition with yours each year?'* the reporter asked. *'Why sir,'* said the farmer, *'didn't you know? The wind picks up pollen from the ripened corn and swirls it from field to field. If my neighbors grow inferior corn, cross pollination will steadily degrade the quality of my corn. If I grow good corn, I must help my neighbors grow good corn'* (Anonymous).

We are all gifted with an equal amount of creative energy and potential, which only becomes destructive once obstructed. We generously share corn when natural flow is allowed and when we activate, access, embody, and apply our unexplored potential; a field of potential is spontaneously co-created. We cross-pollinate and foster creative innovation the moment we share our creative intelligence and insights with others.

2. Creative Energy

2.1 Creative Innovation

To understand the missing link in creative innovation it is important to understand the context of creative innovation. The word 'context' comes from the Latin word, '*contexere',* which means *'to weave together'*. Creative innovation can be thought of as a marriage between creativity and innovation, as we weave new possibilities together. This astonishing process starts with creative energy, followed by a process of embodiment and expression.

Most people see creativity and being an artist as one and the same; however, such a point of view is quite limited. Creativity takes on many forms and expressions, and is almost impossible to define. It can be described as the ability to construct new concepts that were not noticed or were irrelevant before and to make something out of it; to create something out of nothing; to connect unrelated concepts and create something new from them; to perceive new ways of being, relating, and doing; etc. The psychologist Rollo May (1975) describes creativity as "*the process of bringing something new into being*". This can be anything that did not exist before: an idea, a new arrangement, a painting, or a story.

Innovation can be perceived as the ability to improve, enhance, or expand existing concepts, objects, or relationships, or to find a better way.

2.2 The Power of Creative Energy

The entire universe is made from energy; manifesting in and flowing through all of the varied forms of creation. Dan Millman (1993) explained this energy as the mysteries spark that allows all living organisms, including plants and human beings to move, reproduce, respond and grow. He noted, "*The dynamic nature of energy demands expression and, release. The powerful force of creative energy breaks new ground, driving past old barriers and old perspectives. But this energy has a compelling force that cannot be stopped."* Energy becomes destructive if it is not directed in a constructive way. Originality and innovation in any area of life is the result of the positive direction and application of creative energy. Self-directed, centered, and self-assured, qualities, such as inner security and confidence, provide the most favorable conditions for creativity to blossom.

The effect is astonishing when we become aware of, embody and express our creative potential and energy in an intended, focused, and directed way. Most humans are not even able to comprehend the possible outcomes. Edward Lorenz's discovery illustrates this effect.

In 1963, Edward Lorenz invited the New York Academy of Science to view his new theory with *'butterfly eyes'* (fresh eyes). In its simplest form, his theory stated:

"*A butterfly could flap its wings and set molecules of air in motion; which would move other molecules of air, in turn moving more molecules of air- eventually capable of starting a hurricane on the other side of the planet.*" (Lorenz, 1963)

But his peers looked with *'caterpillar eyes'* at his new found theory. He was ridiculed and laughed at; they all thought such a notion was preposterous. Thirty years later, physics professors proved his theory. The butterfly effect was authentic, accurate and viable; thus, the first movement of any form of matter, including humans, brings about the butterfly effect. The continuum of human potential includes all our intelligences: creative, spiritual, emotional, mental, and physical. Innovation is possible

once we put these intelligences in motion; thus, directing them purposefully. To be able to direct them, first, we need to become aware of them and then embody them. This embodiment means we are able to presence, personify, and hold the intelligence before we shape, expand, transmit and share it.

2.3 The Integrative Creative Process

The natural impulse within all living systems is the inherent need to evolve. One way is through creative innovation. Sadly, most people start at the wrong end of the continuum and have unrealistic expectations about the expression or outcome of creative potential. Their understanding misses an intricate and vital step. The evolutionary, creative process starts with the impulse itself. In the event where the impulse is not embodied, the expression, thereof, is not grounded, anchored, viable and sustainable. In such cases we often hear the phrase *'airy fairy'* because it stays as a pure mental energy.

The life cycle of a butterfly beautifully explains why embodiment is the missing link in creative innovation. A caterpillar becomes a butterfly by evolving in four completely different forms: egg, caterpillar, pupa, and butterfly. The caterpillar becomes an eating machine. In human nature, you could see it as the insatiable need to know, learn and experience; however, not much is absorbed, digested, internalized, and applied during this process of discovery. The caterpillar cannot innovate or create. It is too busy consuming, and even eats the leaf onto which it was birthed.

The transformation process starts when the caterpillar is fully grown and ready for the next transformation. The creative transmutation and birth of the magnificent butterfly happens through the process of assimilation, integration, and embodiment inside the chrysalis. The butterfly makes its glorious entrance into the world once this sacred process is completed and when the new identity is fully embodied. In this 'cocoon' phase, humans develop a deep level of self-awareness, as well as awareness of the deep self (those aspects not visible and evident on the outside), the deep self of others, and of existence, the environment, and situations we find ourselves in. This level of awareness has a direct relation to our ability to be creative and to innovate. When absent, we are not able to weave things together.

In the modern world, we expect people who are still stuck in the *'caterpillar'* phase to be creative and innovative. We skip the creative impulse phase all together as it is not clearly understood. The creative impulse needs to be recognized, owned, orientated, grounded, held, and magnetized before it can be fully expressed and directed. Most people, however, want to force the expression and outcome, missing the embodiment aspect, and therefore the awareness of the impulse and the expression thereof; both are vital parts of the creative process. The creative impulse easily stays a pure mental concept when the embodiment aspect is ignored or excluded. The creative idea is unable to evolve into a fully, alive possibility. In other words, we ignore the human and their sense of self, and their ability to relate to self, others and the world.

3. Embodiment

3.1. Understanding Embodiment

Embodiment is a term widely used to represent, personify or express something in a tangible or visible form. It can be described as the presencing of a phenomena or a concept by transforming it from a mental idea into a physical experience.

The concept of 'embodiment' in this paper expands that notion and denotes whole person living, experiencing, thinking, feeling and sensing. In this context, a 'whole person' means an individual who has the awareness, and is able to enact and presence the entire continuum of human capacities, thus both the left and right brain capacities, and who possesses knowing, curiosity and wonder, and all our intelligences (mental, emotional, physical, spiritual, energetic, creative, sensory, visceral,

diffuse, intuitive, conceptual, kinesthetic, spatial, etc.). A 'whole person' equally enacts reflective and scientific knowledge, as well as knowledge obtained through observation and experience. Furthermore, on one hand 'whole person' living includes rational, logical, analytical, and sequential thought, and an action-based, direct, goal-orientated, and scientific approach to solve problems and be innovative. On the other hand, the individual is also aware of insights and revelations in a less direct way by enacting the imagination, deep listening, intuitive hunches, gut feelings, symbolic thinking, associative thinking, embodied thinking, synthesis, co-operation, intention, receptivity, sensitivity, conception, spiritual awareness, inspiration, vision and creativity.

3.2 The Role of Awareness

The human is a central part and a channel for the creative impulse to reveal itself to the world. The impulse is not able to find its place in the world when the human is not centered, empowered, and able to tap into all his/her intelligences. The enactment and stimulation of all these intelligences enable the fullness and totality of the impulse to be expressed and directed.

The abilities we require to win a chess game might shed some light on this notion. In a chess game we have to use our imagination, be able to read our opponent's energy, and sense into what is about to emerge. We not only need self-awareness, but have to be interested and involved, and aware of the other player and the game. We simultaneously have to engage, think, and respond with near the speed of light. This requires us to be fully present; with both our wings intact and ready to fly. Both our wings mean we have to enact and engaging our left and right brain abilities spontaneously whenever needed; thus, using both our reason and intuition. Mindfulness and anticipation are vital as we tap into every possible move our playmate intends to make. We need to be able to read his/her mind and body language. We also have to be completely open and receptive to the next best move, and be able to adapt our strategy during the course of the game.

It is impossible to win a chess game when we are distracted or when our attention is scattered. We need feelers, like octopus arms, to feel and sense into what is about to transpire from a variety of angles. Logic plays a very small role in this process. Our absolute focus on the game is imperative. These are all examples of embodied/ embodiment abilities, whilst being fully present and available to the moment.

The 'Who', deep self-awareness and self-precedence, has a direct influence on self-worth, self-autonomy, and self-trust. Awareness of the deep self, of others, and of the environment at a level beyond the surface is the foundation of trusting others and the process. Trusting the process as it evolves naturally, is a non-negotiable quality needed for creative innovation. This is the reason why structured methodologies hinder innovation as they cannot adapt fast enough to natural changes in the environment.

The 'Why', the way we relate to and how we see, feel and think about the deep self, others, and the environment, dictates our level and depth of engagement and participation in life. The meaning we derive from engagement determines our availability and involvement in innovation. The results in the personal engagement model of Kahn (1990), showed that psychological meaningfulness and psychological availability were positively associated with engagement. In creative innovation, the 'Why' is the driving force, the passion and willpower, to move the process forward which can manifest as curiosity, trusting intuitive hunches, endurance and many more embodiment abilities which will be described in the examples below.

3.3 Role Models from the Past

Respected inventors from the past demonstrate the role of this notion of awareness and trust in the creative innovation process, and its relationship to embodiment.

3.3.1 Leonardo Da Vinci

Da Vinci is one of the best examples of embodiment and embodied leadership in his fields of expertise and innovation. Nicholl (2004) described Da Vinci as "*the most relentlessly curious man in history*". He was deeply in tune with, and observant of what was happening around him and was not satisfied with the opinions and answers of others. He wanted to find out for himself, and trusted his own ability to discern.

Da Vinci truly cared about life and was present in each moment. He wanted to know why, how and what. He was deeply aware of the interconnectedness and interdependence of life and all living organisms. He was able to observe and listen deeply and beyond what was happening on the surface. Such an ability required tremendous self-awareness and trust. A remarkable polymath, he made connections between things that had no obvious relation to each other at that time. He followed his intuition and used all his senses to experience and understand life. He did not take anything at face value. Da Vinci is the perfect example of mindfulness. He was so focused on his inner impulses and discoveries, that he could not care what others thought of his unconventional methods and actions. Most of all, he was able to explore, invent, excel, and create across different disciplines. He understood how energy flows, and how to combine his imagination and intuition. Much of his explorations, such as the dynamics of the human body, were based on gut feelings and inner knowing that there was more to uncover and know.

Besides his curious, innovative and creative abilities, Da Vinci was also an excellent politician. He knew he needed friends in high places who would commission him to create beautiful art, which in turn allowed him to make his extraordinary discoveries in other fields. He understood the value of intentional, collaborative, and win-win partnerships.

3.3.2 George de Mestral

Stephens (2007) described a young de Mestral having an inventive mind. In fact, he received his first patent for a type of model plane at the age of 12. His glory arrived many years later when he discovered Velcro. He was an electrical engineer returning from a hunting trip with his dog in the Alps in 1941 when he observed something peculiar. He noticed that the Burdock Burr, a tiny seed covered in hundreds of hooks, naturally catch onto the microscopic loops that cover fur, hair, and clothing. He wondered if such an idea could have a useful commercial application when he observed the Burr clinging to his clothes and to his dog's fur. At that time, coming back from a hunting trip, he was not looking for an idea; he was merely observant, open and available to his environment. His level of awareness and inborn curiosity made him ask questions, and encouraged him to study the Burr under a microscope. He took responsibility for his discovery, and was receptive to whatever wanted to arise from this find. After 8 years of research and perseverance, while enduring much ridicule from his colleagues, he discovered Velcro.

De Mestral had to be present to his environment to be able to observe the phenomenon. Moreover, his level of awareness to notice this after a hunting trip, his innate curiosity to ask questions about the possibilities of his find, his inner drive to pursue and explore the commercial application, and his persistence to make it work, made the link possible. Despite being an electrical engineer, he was open to a field in which he had no education or experience. He trusted his intuition and inner knowing that he was 'onto a discovery' and that something will arise from his observation.

His discovery changed the entire apparel industry at that time in history. He was able to connect unseemingly and unnoticed connections between a plant and a commercial use thereof in clothing. Furthermore, he was an explorer and discoverer. He also found that nylon threads re-

tained their shape and was resilient when woven in loops and treated with heat. He wanted to use this concept in his invention; however, it did not work well. On the verge of giving up, a new idea emerged on de Mestral. He was not afraid to put his ideas into action, and to try out new things. The actual mechanizing of his invention took 8 years; not his idea development. He was not rigid and not set on only one idea; he was open to a variety of solutions, and never gave up. These are all examples of embodied/embodiment qualities.

3.3.3 Steve Jobs

A modern day inventor and sure leader in his field, Steve Jobs was a creator and an innovator who was able to anticipate and bring to life a concept that changed the way we communicate with each other. Jobs persevered regardless of many perceived failures and losses. He wanted to co-create something long-lasting, and unforgettable; and one that would change the world. He was fully present and aware to what would improve life and sensitive to his environment. Jobs was a master storyteller, and knew exactly how to articulate and share his vision with others, and in doing so inspire innovation. He carefully took time to find the best metaphors to relay his message. He knew how to engage the imagination, and how to utilize and direct collective energy. Steve surrounded himself not only with brilliant people, but he wanted them to 'fall in love with Apple'. His innovation and anticipatory skills were evident in even the way Jobs hired people. According to Nadin (2008), when Jobs recruited John Sculley to become the president of Apple Computer, he asked, "*Do you want to continue to sell sugar water, or do you want to change the world?*"

The environments you work in stimulate not only synchronicity, but innovation. This awareness and receptivity were some of the reasons for the design of the Pixar building where Jobs envisioned and created a huge atrium: a big empty space in the center of the building. He wanted to create an open area that will allow constant communication, discussion and exploration between individuals, because such an embryonic space stimulates and encourages ideas conception and expansion. They eventually had all their meetings in this magnificent, creative space. Muller, T., and Becker, L. (2012) noted, "*In an age of intellectual fragmentation, Jobs insisted that the best creations occurred when people from disparate fields were connected together, when our distinct ways of seeing the world were brought to bear on a singular problem.*"

Jobs embodied, personified, and expressed his vision authentically. There was a level of integrity and determination visible which not many humans display. He stayed true to his vision and did not give up. These are embodied qualities that are necessary in the 21st century for creative innovation.

4. New Abilities and Skills Needed in 21st Century

4.1. Overload of Information

The arrival of the Internet and mobile technology in the last half of the 20th century ensured easy access to information that was not previously easy accessible. Thought leadership was thriving, and intellectual knowledge, externally obtained, became the norm. Thinking caps were put on which are quite a serious affair.

The 21st century meanwhile, became a conceptual era where there is a need to digest, internalize, assimilate, integrate, and employ all this knowledge and information obtained externally. In this new epoch, thought leadership alone will no longer lead the way to new discoveries and innovation; however, the ability to tap into all the knowledge available will provide the opportunity. Once digested, new concepts can be conceptualized by connecting unrelated things with each other across disciplines and industries which are demonstrated previously by Lorenz, Da Vince, and de Mestral.

4.2 Interconnected World

The silo effect is dissolving as we start to realize that everything is interconnected and interdependent. The butterfly effect does not influence only one area of life; it influences all of life. We begin to understand that different disciplines are all intertwined as each influences the other directly (such as science, law, commerce, art and social sciences, health, humanities, education, agricultural sciences, engineering, etc.). Cross-function and cross-pollination invention and innovation meet, integrate, synergize, and converge through embodiment and creativity. Creativity is a joyful and playful rendezvous expressing our creative potential. Embodiment is a luscious and meaningful love affair with all our intelligences.

4.3 Human Potential

All the information and knowledge available enable us to uncover and experience the full continuum of human potential that stretches far beyond logic. We are still in our baby shoes as we discover the wonders when we engage our body, mind, and spirit connections as integrated human beings. We are no longer indifferent to our other intelligences such as our intuition, kinesthetic intelligence (athletes, dancers and gymnasts have successfully applied this ability for decades), imagination, sensory and feeling bodies, conceptual intelligence, creative intelligence, and spatial and nature's intelligences. By activating and enacting these abilities, we are able to ascertain what is needed and appropriate, what to keep and integrate, what to save for later, and what to let go off. These abilities assist us to make sense of all this knowledge and information, and simultaneously guide us to conceptualize, and contextualize beyond the purely analytical premise in a rapid, ever changing and evolving world. We have to be open, receptive, flexible, available, fully present, mindful, and aware on all levels (self, others, existence, and environment) in order to tap into and to leverage our human potential and creative innovative abilities.

4.4 Interpretation and Incorporation

Embodiment abilities assist us to not only respond with near the speed of light, but also bring us back into the moment, and guide us to anticipate what will be needed in the future in this fast moving world. In this way we open ourselves to creative innovation, and are able to make connections between totally unrelated concepts and things. This intimate process flows spontaneously across disciplines and industries as we become more receptive and accepting of our creative abilities.

We are able to translate the messages and symbols we receive and perceive from the field in a way that is useful for ourselves and others when we start to engage all our intelligences. We can start by applying different types of thinking and questioning, such as creative, paradoxical, embodied, and associative thinking as we are not comfortable to use these 'muscles'. They form stepping stones for us along the way.

5. Non-negotiable Elements

5.1 Favorable Conditions

In order to harvest our creative energy, the right conditions must be present. We need to create a 'garden' similar to that of the Pixar building constructed by Steve Jobs, creating the space for synchronicity to occur and for innovation to be fostered. The 'garden' needs the right atmosphere that will nurture mutual understanding, and will aid in the processes to allow the seeds to grow into beautiful fruit bearing plants.

5.2 Attitude and Resultant Experience

The right attitude towards creative innovation and embodied practices is even more imperative. Ideas need to be allowed, honored, acknowledged, inspired, nourished and supported. Poisonous opinions, ridicule, and judgment like Lorenz, Da Vinci, de Mestral, and many other inventors and creative people had to endure, do not enhance the creative process. We need patience to allow the seed to become a sprout, which in turn will become a full

grown plant, which in turn will become a beautiful flower or bear fruit. This 'garden' requires not only nourishment, but the weeds need to be removed regularly (those limiting beliefs and habits). Non-action and waiting are not the same concepts as patience.

As we begin to understand and apply the missing link in creative innovation as we embody creative impulse, we access another interesting experience of fulfillment and *joy*. The '*Joy'* factor is the natural outcome when we embody, express and direct our creative potential and energy in a purposeful way.

6. Embodiment Techniques

6.1 About Versus Experience

To talk about or to hear/read something is very different from experiencing it. One practical example of experiencing our personal energy is the following: With both feet on the ground, whether in sitting or standing position, shake your hands vigorously beside your body. Take a deep, slow breath into your belly. Rub your hands together for a few moments. Feel the warmth and heat ensuing. Put your hands upon your heart. Notice and feel your heartbeat for a moment. The warmth you created is a sign of your personal, embodied energy. Similarly, we only need to ignite our creative energy and allow it to flow.

Something happens inside our bodies when we allow our creative energy to be expressed and released in intentional ways; those trillions of cells in our bodies start to celebrate. An example is when we experience an aha-moment where our souls seem to sing, and joy and ecstasy are released through all our cells and neurons. Flow is natural to us; our blood flows spontaneously without our direct intervention or conscious instruction.

6.2 Embodiment Practices

In my 'Innovate with Awareness' experiences and interventions, which have been facilitated in a variety of settings in the business world from March 2013 to 2017, I introduced a variety of embodiment techniques and practices that assist individuals in the creative innovation process as we activate, explore, and strengthen our creative energy muscles. A few examples of such practices, which operate on an integrated body-mind-spirit level, are: Mindfulness Practices, Presencing Techniques, Essential Inquiry, Intuitive Techniques, Quantum Thinking and Questioning, Embodied Thinking and Questioning, Associative Thinking and Questioning, Symbolic Thinking, Creative Thinking, Whole System Thinking, Grafting, Guided Visualizations, Meditations, Extra-sensory Experiences, and Conscious Breathing Exercises.

6.3 Modalities Applied and Available

The innovation processes are skillfully designed to utilize and integrate modalities such as Critical, Collective and Reflexive Inquiry; Neuropsychology, Positive Psychology, Developmental Psychology, Integral Psychology, Energy Psychology, Spiral Dynamics, NLP, EFT, Artistic and Playful Expression, Creative Process, BMSH Connection, Advanced Human Potential Techniques, Integrative, Embodiment and Totality Techniques, Ideedledooing, Aesthetic Awareness, Extrasensory Perception and Imagination.

6.4 Practical Research Examples of the Effects of Enacting Whole Person/Embodiment Techniques during the Innovation Process in the 21st Century

6.4.1 October 2015 – Accra Ghana – West Africa Oil and Gas Talent Summit

A group of 42 participants from the oil industry in West-Africa was introduced to *Associative and Symbolic Thinking*.

Participants were asked to work in groups of 6 people each and received 5 totally unrelated objects. They were requested to come up with practical solutions to solve an industry related and relevant problem on how to develop a workforce steep in innovation and creativity, by using the objects given to them. Each group came up with innovative and practical ideas that

they were not able to conceive when traditional and conventional ways of brainstorming and logical thinking were used. At the end of the summit, they reported that this way of symbolic and associative non-linear thinking influenced their conclusions and subsequent next steps. They agreed to integrate the knowledge each group received and the overall insights and experiences they gained into their workplace environments. A unanimous insight was that they have to change their mindset about business practices and how they treat human beings in the workplace.

6.4.2 October 2016 – Pretoria South Africa - Public Transport Innovation Summit

A group of 78 participants from the public transport industry in South Africa was introduced to *Symbolic, Associative and Embodied Thinking* to come up with ideas that will attract more commuters to use public transportation in South Africa. The participants were divided into 8 groups and were given 5 totally unrelated objects to instill creative thinking by enacting *Symbolic and Associative Thinking*. Each group came up with innovative and creative ideas. Aside from creating a bond between strangers and competitors, a congenial atmosphere broke all boundaries. '*Idea Graphs*' were created for each idea that are accessible on their knowledge portal for inspiration and encouragement. Each group had to presence and embody their solutions without using words; each participant had to actively participate in this part of the exercise. The creative ways of expressing and personifying their solutions were highly innovative and stirred up many emotions as these expressions were authentic and heart-felt within their particular landscapes of operations. The feedback was phenomenal. Each participant was inspired and felt supported by the process.

6.4.3 June 2017 – Johannesburg South Africa – 2nd Public Transport Innovation Summit

A group of 74 participants from the public transport industry was introduced to *Symbolic, Associative and Embodied Thinking* to solve several, related issues at 3 different occasions during the Summit. An online voting system platform (*www.mentimeter.com*), was used to capture not only insights but participants' experiences with non-conventional creative thinking practices. These participants represented countries such as Brazil, South Africa, Tanzania, and Windhoek. Language barriers of Portuguese and English were gracefully overcome as participants engaged in creative thinking and embodied practices to come up with innovative, practical and inspirational ideas. The participants were divided into 10 groups. Each group received different objects and visual aids for each exercise. In the first exercise, they had access to a table number, a color and a quality. Each group had to use these clues to assist them in actualizing their personal intentions for their participation during the summit. In the second exercise, each group were given one, totally unrelated object to be used to create a marketing campaign that will educate commuters about the use and purpose of public transportation and to entice them to use it. The creative and mental energy in the room was palpable. Enthusiasm took on another meaning as strangers and competitors bonded again in a fashion that can only be explained in one word: coherence. In the 3rd exercise, each group was given a page with a different color, an action and a number. They were allowed to use the object from the previous exercise should they wished to do so. Each group had to use *Symbolic and Associative Thinking* to come up with practical actions and ideas on how each person in the group can participate in growing the society that was established during the event. *Embodied Thinking* was again used to demonstrate their particular point of action to the rest of the group by acting it out and presencing the ideas without speaking or using words. Again creativity ensued that would not have been possible by logical and rational thinking alone. Aside from strengthening the rela-

tions built throughout the summit, closeness, determination and group dynamics developed as participants dipped into intelligences that they were not accustomed in using. Their feedback, both verbally and on *Mentimeter*, were evident of the effect of enacting embodiment practices not only during the innovation processes but during daily activities and meetings in the workplace.

Curiosity, being fully present, playfulness, imagination, intuition, sensory abilities and the excitement that were generated throughout the processes, were all big contributors to igniting and purposefully directing creative energy.

6.5 Supporting Endorsements by Esteemed Scholars in the Field of Innovation in 2017

Scholars, Prof. Piero Formica from the Maynooth University in Ireland, and Prof. Noboru Konno from the Tama Graduate School of Management and Graduate School of System Design and Management (SDM), Keio University and the Japan Innovation Network both highlighted and emphasized the importance of a *Whole Person* approach in innovation during their expositions on June 13 and 14 2017 entitled "Open Innovation 2.0 Conference" in Cluj, Romania.

7. Insight and Conclusion

A lot of people are unhappy, frustrated and unfulfilled because their creative energy is not allowed, expressed, and embodied. It is either blocked or inhibited, which is against their true nature to evolve. Deep dissonance is experienced, not only on a heart level, but on a cellular and molecular level.

Endless possibilities can occur when we start to direct and engage our creative energy in a more embodied, intentional and anticipatory way. The level of deep awareness of self, others and existence, has a direct relation to the level of the creative innovation.

Henry Ford once said: "*Enthusiasm is the yeast that makes your hopes shine to the stars. Enthusiasm is the sparkle in your eyes, the swing in your gait. The grip of your hand, the irresistible surge of will and energy to execute your ideas.*"

8. Related Studies

8.1 The Theory of Multiple Intelligences

Dr. Howard Gardner, professor of education at Harvard University, developed the theory of multiple intelligences in 1983 which suggests that the traditional notion of intelligence, based on I.Q. testing, is far too limited. Dr. Gardner (1983) proposed eight different intelligences to account for a broader range of human potential in children and adults. This theory has strong implications for adult learning, development, creativity, and innovation.

8.2 Self-Actualization and Creativity

Maslow's (1980) "*hierarchy of needs*", expresses the idea that human beings have a set order of needs: Water and food come first, then security, the sense of belongingness, and ultimately self-actualization i.e., realizing one's potential. The desire to innovate is low on the priority list when your basic needs are not fulfilled such food and water, and safety. The higher levels of the hierarchy of needs lend themselves more towards creativity and innovation.

Furthermore, Maslow, in the 1960's invented the term *peak experiences*, which he believed contain two components: an emotional one of ecstasy and an intellectual one of illumination. He proposed that these *peak experiences* lead to self-actualization which is a strong motivation to improve oneself and realize one's talents and abilities in as many ways possible. These peak experiences bring a sense of contemplation and a fusion with what he called the value of being (B-Values) such as truth, beauty, aliveness, simplicity, goodness, fairness, wholeness, uniqueness, effortlessness, richness and playfulness. Peak experiences open us up to the creative process.

Mark Runco and his colleagues (Runco, Ebersole, & Mraz, 1991) used the Short Index of Self-Actualization to assess

self-actualization and found a positive relationship between self-actualization scores and two measures of creativity.

8.3 Sensory Intelligence

Carla Hannaford, PhD (2005) a leader in neuroscientific observation and research in recent years, who focuses on the new paradigm of body-mind unity, discovered that thought, creativity and learning arise from experience. She discovered that as we experience, we bring in information and build the neural networks that allow us to use that information so we may better understand the world and how to thrive in it. Hannaford noted, *"A major component of experience is sensory input from our environment via our eyes, ears, taste buds, nose and skin; and from our bodies via nerve receptors on each muscle and organ.*" Her latest research insights assist humanity to better understand the human mind, thought, emotion, learning, imagination, creativity and the full spectrum of our capacities.

Other scholars such as Rivlin, R. and Gravelle, K, (1984) have discovered that we have more sensory abilities than the 5 senses we are aware of and that all of these sensations give us images of ourselves and our world, and provide the essential raw material from which knowledge, thought and creativity arise. They discovered 14 other senses with known receptor sites, such as the sense of magnetic orientation, atmospheric pressure, airborne ionic changes, UV, sense of wet and dry, etc.

9. Recommended Areas for Further Research

To take this body of knowledge to the next level, the areas for research in the succeeding sections are currently being investigated and explored. Students and young entrepreneurs from 5 Continents will participate in a *Whole Person Online Journey and Experience* in 2017 where they will have the opportunity to enact *Whole Person* abilities such as those mentioned in this paper, which have the potential to not only impact their level of awareness, perceptivity, receptivity, and the way they absorb information, but will also enable abilities such as self-organizing, self-generating, self-adjusting, self-efficacy and self-precedence which are all needed to thrive in the 21st century. This research will be shared during an innovation conference in Melbourne Australia in December 2017 and at the "IAM Conference" in Japan in February 2018.

9.1 The Necessity of Enacting Self-Organizing Intelligence in 21st Century Innovation

In a world where we need to create and develop our own opportunities, where we are no longer guaranteed a cozy job, a good salary and ample benefits because we have tertiary education, the *self-organizing* principle becomes highly important in terms of creativity, invention and innovation. This body of knowledge has been emerging over the last two decades and the emergent resulting possibilities are becoming invaluable. Wheatley, J. M. (2006) proposed that the self-organizing principle plays a big role in creativity and results in the creation of strong, adaptive systems through which new strengths and capacities emerge as an outcome of new relationships that form during the process. A network of independent relationships ensues when people with similar interests and passion meet. They begin to organize themselves, and discover how to work together and make things happen.

9.2 Sensory Intelligence and Genius

Extrasensory ability and sensory intelligence in relation to giftedness, genius and invention is another area worth investigating for further research. According to Dabrowski, K., and Piechowski, M. (1977), our developmental potential is expressed by excitabilities (OEs: heightened emotional, intellectual, imaginational, sensual, and psychomotor experiences), individual interests and capabilities, and a drive to autonomy known as the *Third Factor*.

Giftedness, genius and innovation are inseparable. Houston, J. (1982) proposed that "*a lot*" of giftedness, though by no

means all, is possible by engaging heightened perceptual and sensory awareness, and the full spectrum of human intelligence that includes the visual, auditory and kinesthetic, emotional and intuitive intelligences.

9.3 Intuitive Abilities and Discernment

Both logic and intuition are needed in the creative process. Moreover, our intuitive abilities are essential in the 21st century to assist us in discerning the information that is valuable to us so we do not drown in the overload of information.

Gerd Gigerenzer, a director at the Max Planck Institute for Human Development, talked about intuitive hunches as the instinctive understanding of which information is unimportant and can thus be discarded. He feels that he is both intuitive and rational. He responds to intuitive hunches in his scientific work and his instinct in his personal life. Gigerenzer (2007) noted, "*I can't explain always why I think a certain path is the right way, but I need to trust it and go ahead. I also have the ability to check these hunches and find out what they are about."*

9.4 The Effect of Altered States of Consciousness and Various Levels of Awareness in the Creative Process.

Altered states of consciousness impacts the ability to perceive ideas. Various esteemed scholars such as Arthur Koestler (1964) in *The Act of Creation*, Jacques Hadamard (1945, 1980) in *The Psychology of Invention* in the Mathematical Field, Brewster Ghiselin (1952) in the *Creative Process* and Stanley Krippner's (1974 – 2012) many papers concerning the phenomena of creative work, have explored the role that altered states of consciousness play in the creative process. Further research in this area can be beneficial to 'whole person' innovation and embodiment.

9.5 The Role of Self-determination in Embodied Innovation

Theories such as *self-determination theory* (Ryan & Deci, 2002) and *psychological empowerment theory* (Spreitzer, 1995) can be considered to expand the effect of embodiment in creative innovation.

9.6 Integrative and Totality Intelligence and Creative Innovation

Polymaths and some of the greatest inventors of our times have presenced, embodied and directed integrative intelligences in terms of Gardner's *Theory of Multiple Intelligences* across multiple disciplines such as science, mathematics, art, music and the likes. Leonardo da Vinci is but one such exemplar. This is a field worth exploring on a deeper level.

Students from Sri Lanka will enter a *'Discovery with Awareness'* journey where the effects of enacting our integrative and totality intelligence will be experienced and tracked.

9.7 Synchronicity and Serendipity

The awareness and deeper understanding of synchronicity, serendipity and unconscious creativity are essential aspects of the creative process. To be able to benefit from the unexpected in the creative process, it requires us to enact our embodiment abilities such as being fully present at the moment, mindfulness, essential inquiry, intuition, quantum thinking and questioning, embodied thinking and questioning, associative thinking and questioning, creative thinking, and whole system thinking.

The work of esteemed scholars such as Jung (1955), Koestler (1964), Peat (1987) and Bohm (1980) demonstrated the important link between creative innovation and synchronicity.

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About Author

Hannelie Venucia (previously Pienaar) is the Co-founder and Principle Sensemaker at the Sensemaker Institute, Finland. An avid learner and enthusiastic scholar in human potential and awareness, she co-created the perfect environment to further explore and research the ground-breaking area of 'whole person' (embodied) living, relation, engagement, learning, creativity and innovation.

A Sensemaker, Innovation Strategist, Potential Catalyst, Inspreneur, Leadership and Self-Leadership Awareness Mentor, Facilitator, Public Speaker and Published Author, with 28 years of experience in Business, Management, Information Technology, Human Resources and Strategy Consulting, Hannelie served many CXO level clients and politicians in the USA, Europe, West Asia, Middle East and Africa as a trusted advisor and mentor.

Whilst participating in 2015 in the U.Lab Program of the MIT-Sloan School of Management, Boston, USA, she envisaged and designed a prototype that now evolved into the Sensemaking Institute. Several global Universities collaborate with her to introduce her innovation and self-mastery short courses to their students.

Hannelie has been a speaker at various events in the UK, Japan, Spain, Turkey, Romania, Malaysia, UAE, Ghana, Malawi, Rwanda, Zambia, Kenya, and South Africa. A prolific, published author and gifted facilitator, she shares new perspectives, and contributes to constructing new models of understanding, relating, thinking, sensing, creating, interacting and acting.

In her role as Sensemaker, Hannelie shares techniques, knowledge, wisdom, insights, ideas and experiences that have the potential to improve our ability to thrive in VUCA (volatile, uncertain, complex and ambiguous) and Postnormal Times; that enables us to sense into what is possible; and that introduces, especially our younger generations, to the abilities and skills we need in order to create abundant livelihoods in the 21st Century.