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The Impact of Mental Thinking Systems on Idea Generation: The Athens Olympic Ceremony

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Abstract

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International organizations are facing social, political, economic, and environmental challenges that are factors to allow or limit themselves to break out from or maintain their usual management routine. The host of the Olympic Games every four years is no exception. This study therefore shows that unconventional thinking could affect the Olympic ceremony creativity and development. An in-depth interview was conducted with Dimitris Papaioannue, the ceremony director of the Athens 2004 Olympic Games. As a result of the examination, the advantages of his visionary idea can be understood through the model of idea prediction through different mental thinking systems from invention to innovation. This model would generally allow policy-makers and practitioners to see which of mental thinking systems is best used for their organizations and society as a whole.

Keywords: Creativity; Invention; Innovation; Olympic Ceremonies.

1. Introduction

International organizations are facing social, political, economic, and environmental challenges (Piketty, 2014) that are factors to allow or limit them to break out from or maintain their usual management routine. Public and private organizations are advised to integrate “creativity” into their organizational practices to encourage a more dynamic work environment beyond their usual management (Shrivastava, In Press). The host city of the modern Olympic Games is no exception since its officials are charged with producing the most memorable Olympic ceremony. Therefore, creativity plays a crucial role in idea generation processes for Olympic ceremonies. The novelty of a given ceremony would be an anticipated result.

Olympic ceremonies are considered the most eye-catching part of Olympic events. Every four years, for the Summer Olympic Games, each host city has therefore attempted to come up with a great idea to

produce another most memorable Olympic ceremony to compete with previous ones. Regarding the study of the origins of Olympic ceremonies (Lattipongpun, 2010), Olympic ceremonies were originally initiated by Pier Baron de Coubertin, the father of the modern Olympic Games, after he experienced the American spectator sport in 1889 in the United States. He therefore attempted to generate a festive atmosphere in the modern Olympic Games, inviting scholars and artists seek possibilities to create a festive atmosphere for the modern games at the 1906 International Olympic Congress in Paris. The meeting successfully initiated a guideline for conducting both opening and closing ceremonies.

Furthermore, the ceremonies were initially conducted with a military style and a religious ritual before being transformed into a popular culture entertainment presentation. Hollywood entertainment was evident at the Squaw Valley 1960 Winter Olympic Ceremony that the Walt Disney Company was responsible for producing (see also Alan Tomlinson, 2004). This significant change has made the Olympic ceremony an eye-catching event among other Olympic sport competitions, so the conventional boring official ceremony has now been replaced by this infotainment ceremony format—giving information while enriching the audience's experience through excitement and entertainment (Lattipongpun, 2010).

Olympic ceremonies—the world stage of performing arts—are communication tools employed by the host nation and the International Olympic Committee (IOC). The IOC Executive Board is responsible for overseeing the Olympic Games with regard to the administration and management of the committee's affairs in fostering the Olympic movement throughout the world (IOC, 2011) to communicate with audiences worldwide (MacAloon, 1984). Promoting the Olympic ideology, "peace or harmony," in relationship to the mind, body and spirit of individuals is the main purpose of the modern Olympic Games (IOC, 2011). On the other hand, the ceremonies manifest the host nation's achievements in cultural, social and economic affairs with a sense of national pride. To achieve these expectations, creativity is the key factor.

For more than a decade, Olympic ceremonies have been shaped and developed by the international host nations (Adair, 2013; Lattipongpun, 2010; MacAloon, 1984; Russell, 2014; Alan Tomlinson, 1989; Alan Tomlinson, 2004; Tovell, 2013) and often have been fashioned by local and international collaborators (Birch, 1997, 2004) from various fields such as art, the humanities, management, computer science and engineering. These individuals together originate a magnificent idea and turn it into an unforgettably spectacular informative entertainment. Ceremony protocols and cultural performances are the two required focal components in Olympic ceremonies (IOC, 2004, 2008, 2011). Alongside the international collaborative processes, ceremony directors are responsible for ensuring that the Olympic value, rule number 38 in the Olympic Charter, explicitly sets forth the fundamental requirement concerning Olympic ceremonies.

> The opening and closing ceremonies shall be held in strict compliance with the IOC protocol guide. The contents and details of all scenarios, schedules and programs of all ceremonies must be submitted to the IOC for its prior approval (IOC, 2011).

Any given ceremonies depend upon the ceremony directors' creativity as well as the policy-makers' decisions. Csikszentmihalyi (1996b) asserts that each individual who is generally diverse in terms of genetics, skills, and experience must master the old knowledge to originate a new one. Kilgour (2006)

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considers all those elements "domain-specific knowledge." Moreover, any creative attempt is always limited by the rules in a specific domain referring to areas and structures of knowledge, memes, and values as well as a field pointing to communities of practices and gatekeepers (Csikszentmihalyi, 1996b). Therefore, it is challenging for ceremony directors to generate the best possible idea for Olympic ceremonies while considering the Olympic charter and the ceremony protocol. Also, the IOC may disagree with ceremony directors' ideas. To this end, how can mental thinking systems of the IOC and the ceremony directors impact Olympic ceremony creativity and development? It is thus essential to discuss the relationship between mental thinking systems and the concepts of invention and innovation.

2. Innovation Comes after Invention

Invention is an important step of intellectual progresses toward innovation, resulting in economic development (Schoen, Mason, Kline, & Bunch, 2005). It is no exception in the field of Olympic ceremony production. To produce the most desired Olympic ceremony, the variations of invention and innovation must be verified. Thus, they are relevant to the notion of creativity.

According to Runco and Charles (1992), originality and appropriateness are two elements to weigh creativity. Likewise, Piffer (2012) states that novelty and usefulness are important elements to judge creativity. Csikszentmihalyi (1996b) said that when any given idea is considered unconventional, it only gains originality, not creativity, because creativity needs to be validated by the people in the field (the gatekeepers). The IOC is therefore considered to be the field of Olympic ceremony production. In other words, originality is the criteria to judge the uniqueness of the given idea, and therefore, that idea will be regarded as creativity only if it is accepted by the gatekeepers. Importantly, the uniqueness or similarity of any given Olympic ceremony to other existing ceremonies is subjectively defined by ceremony directors, the IOC, and audiences worldwide, often via their domain-specific knowledge. Anderson and King (1993) regard this adopted process of ideas grounded from individuals' previous experience as innovation.

> Human inventions are notable examples of the fact that nature is creative as well as repetitive. Even in the brief and narrow experiment reported . . . we have persons thinking thoughts that nobody has ever thought before (Thorndike, 1949, p. 199).

Furthermore, researchers have suggested that invention and innovation work in a linear process through five stages: research, invention, innovation, financing, and acceptance (Maclaurin, 1953). Recently, researchers have come to believe that innovation arises in a non-linear manner (Schoen et al., 2005). Importantly, these two perspectives agree that "research" is the initial stage of the process for originating new knowledge (Godin, 2006). Seelig (2012) notes that the combination of new and (old) existing knowledge is regarded as "fuel" for imagination relating to creativity. Likewise, Kilgour (2006) sees the fuel as domain-specific knowledge.

Additionally, invention arguably points to intellectual creativity and artwork. Joseph Schumpater (1939)—the pioneer of the concept of invention—regards invention as an achievement of intellectual creativity rather than economic advantages. Runco (2007) believes any creative output that is not

intended to sell is considered "artwork." Thus, invention—intellectual creativity and artwork—will become innovation only if any business model is applied to it (Schoen et al., 2005). Notably, commercial realities are the ultimate goal of innovation to turn an invention into a salable or innovative product (Enos, 1962; Higgins, 1995; Redwood, 1987).

With respect to innovation, many scholars (Bruce & West, 1994; Rank, Pace, & Frese, 2004; Scott & Bruce, 1994; West & Farr, 1990) insist that innovation refers to the implementation stage of any given idea (Rank et al., 2004). According to Higgins (1995), innovation can be products, processes, strategies, and techniques. Importantly, the key to success is the attractiveness of any given innovation (Swift & Gruben, 2000). Recently, Tom Grasty, an expert in media technology entrepreneurship and content creation, confirms this.

> In its purest sense, "invention" can be defined as the creation of a product or introduction of a process for the first time. "Innovation," on the other hand, occurs if someone improves on or makes a significant contribution to an existing product, process or service (2012).

Thus, invention is the representation of the "new" concentrating on "originality," while innovation is the development and implementation processes of the new idea through a business model. With regard to Olympic ceremony production, both invention and innovation are selectively anticipated by ceremony directors and gatekeepers. Arguably, de Coubertin's addition in 1906 of Olympic ceremonies to the modern Olympic Games brought invention to the field of international sport competition. Later, this new meme was developed by many different ceremony directors and host nations, which influenced ideas for the production of Olympic ceremonies. Thus, the majority of past Olympic ceremonies tended to employ similar components and styles. This therefore becomes the expectation of how the ceremony should be presented by the policy-makers.

3. Mental Thinking Systems Driving Invention and Innovation

It is widely accepted that experts play an important role in validating a given idea or product (Csikszentmihalyi, 1996a). Thus, originality and appropriateness are vital aspects to determine the given idea (Mark A Runco & Charles, 1992). Furthermore, fluency, flexibility, and elaboration of creative individuals are factors in idea generation processes (Guilford, 1966). With regards to Amabile's consensual assessment technique (Amabile, 1982), experts are the most reliable people to judge creativity of products. "Every new idea or product there is a person" (Csikszentmihalyi, 1996b, p. 45), so that every person possesses mental thinking systems—critical thinking and creative thinking. Particularly, Olympic ceremony directors' mental thinking systems are the initial point directly impacting on their ceremony contributions.

"Creativity is at the heart of invention" (Seelig, 2012, p. 2); therefore, this right brain power brings forth originality and unconventional ideas (Mark A Runco & Charles, 1992). De Bono (1992) suggests that to think creatively, it is essential to switch off our usual perception, which often relies on the critical thinking mode. The creative thinking mode likely brings forth invention rather than attempting to improve things or ideas.

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Furthermore, De Bono (1992) asserts that using too much critical thinking would not encourage a big change in ideas, products, processes, strategies, and techniques because this left brain power operates to identify faults and mistakes before attempting to resolve the discovered faults and mistakes via borrowing, adopting, duplicating, and assembling. Therefore, De Bono sees this process as a problem-solving method or "an innovative approach" that just creates a small jump from one idea to another. Senge (1990) states that the greatest benefit of critical thinking helps us distinguish what is important and worth focusing on. Researchers agree that originality and appropriateness are the two primary components for identifying the best idea out of multiple ideas based on rational thought (Kilgour, 2006; Mark A Runco & Charles, 1992; Mark A Runco & Pritzker, 1999; Sawyer, 2007). This means that thinking creatively would result in ideas containing high originality, while thinking critically would give rise to ideas incorporating appropriateness. Therefore, any given idea could be measured through this concept.

> Measurement is, therefore, fundamental to evaluation, where evaluation implies comparing different phenomena with claims to creativity (Candy & Bilda, 2009, p. 10).

Ideas are generally abstract and immeasurable. However, Sydenham (2003, p. 3) refers to Galileo's saying (1610) that "count what is countable, measure the measurable and what is not measurable, make measurable." Through the concepts of invention to innovation and the mental thinking systems, they can now be facilitated as a model of idea prediction (see Figure 1).

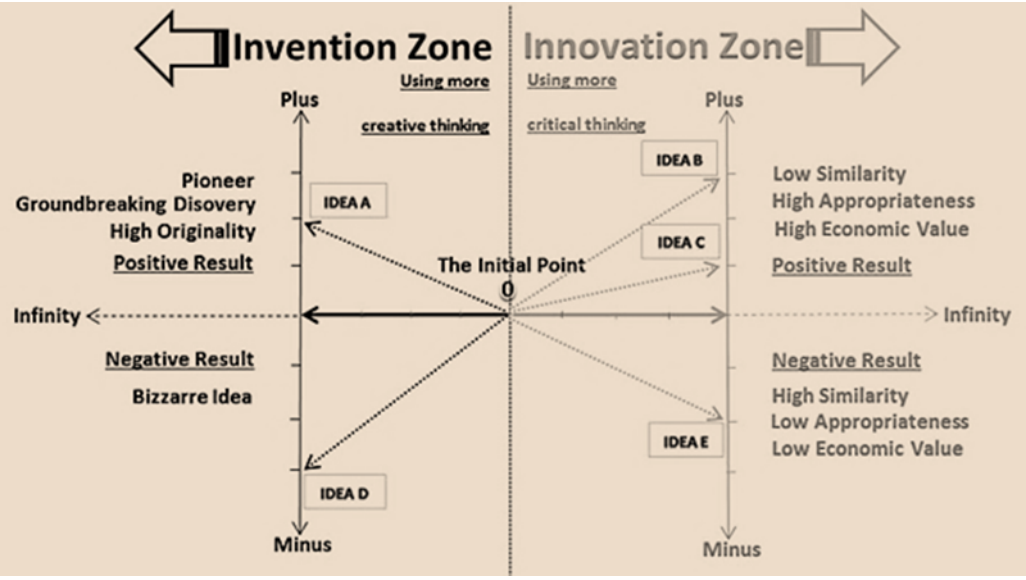

Fig. 1. The Model of Idea Prediction from Invention and Innovation (Original).

Figure 1 shows that the steeper the arrows, the more likely the given idea contains highly originality (Idea B). The calmer the arrows, the more likely the given idea (Idea C) has many similar elements to others. These two ideas are considered innovation. When the arrows point to minus zones, this implies that the given ideas (Idea D and E) are neither improved nor workable. On the other hand, using creative thinking would likely generate a totally new idea (Idea A) considered to be invention.

Moreover, both mental thinking systems are essential to idea generation processes. In particular, using creative thinking generates a big jump of ideas to the practice in a particular field. High

originality is therefore the characteristic that leads to invention. However, using creative thinking could potentially produce bizarre ideas lacking appropriateness. Regarding critical thinking, appropriateness is the key of this logical thinking system: discovering faults and mistakes before attempting to resolve the discovered faults and mistakes via borrowing, adopting, duplicating, and assembling. Therefore, using critical thinking likely facilitates a given idea that similar to other existing ideas and/or products, so this rational thought would not create a significant change in a particular field. Arguably, these two different mental modes—creative thinking and critical thinking—are therefore the predictors of idea generation processes in which one leads to invention and another to innovation.

With respect to the proposed new model for idea measurement, it will now be demonstrated through an examination of the idea for the production of the Athens 2004 Olympic Ceremony proposed by the artistic director, Mr. Dimitris Papaioannou. Interview data were collected during a 2010 interview by the researcher in Athens, Greece.

4. Papaioannou's Unconventional Idea for the Production of the Athens 2004 Olympic Opening Ceremony

Dimitris Papaioannou was invited to produce the Athens 2004 Olympic ceremony by his friend, Gianna Angelopoulos-Daskalakim who was the president of the National Olympic Organizing Committee. Papaioannou came up with a new idea for the opening ceremony that proved to be so visionary that it precipitated a major dispute between him and the IOC.

> I was trying to create a big scale show with a minimum sense . . . [I] filled the stadium with the water. [I] . . . brought out six floors high Cycladic [It was the first representation of human form] head from the center of the stadium and broke it into a few pieces . . . [I intentionally floated them in the air] in different directions.

Papaioannou's creative processes began with three research questions: "Can something really interesting happen within the frame of the large scale show?"; "What was the best possible way to create a ritual that allowed people to dream through knowing of the portrait of the civilization?"; and, "Can I make a ritual that can be liberating for people's souls?" Throughout his research, he found that Greek civilization had been noteworthy for the western world and indeed had dominated ways of life internationally. This is considered his domain-specific knowledge for staging the opening ceremony.

Papaioaanou endeavored to produce the ceremony according to his aesthetic taste, which was a new approach to the field. He anticipated making a significant change to the way in which Olympic ceremonies used to be presented by Hollywood-style entertainment often designed in cooperation with TV commercial breaks. He insisted that "I would create a show that was coherent, condensed, and strong". He believed the ceremony was better seen and understood as a single performance without TV commercial breaks. Papaioannou noted people in many countries were watching the show without TV commercials. Furthermore, he attempted to signify the relationship between the ancient Greek—aesthetic and religious belief—and the modern Olympic Games through artistic vision. He asserted that:

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> Basic human movements . . . and ordinary people [nobody was as a star or a celebrity] . . . were the key elements . . . [my intention was to point out] the ancient Greek history [which] was about beauty. We tried to be humble and simple, young kids, boys and girls . . . it has to be allowed [audiences] to conceive in the place of the mind and the soul that [he or she] . . . cannot fully understand [sic].

In addition, Papaioannou attempted to generate enthusiasm in the TV audience by employing as minimal elements as possible. Using simple human moments by single actors—a drummer, a lonely boy, and a pregnant woman walking in the Olympic arena filled with the water in synchronize with music background and lighting—was his artistic communication strategy.

Although his unconventional idea was unique, it was criticized and discouraged by members of the IOC, who commented that the proposed idea was too abstract and not festive enough. They suggested he produce the ceremony following in the footsteps of past Olympic ceremonies, which had been highly influenced by popular culture. Papaioannou explained that:

> Everybody [the IOC] was saying there was not enough dance, there was not enough music. It is too slow, nothing is happening, nobody would be able to follow the story [sic].

The IOC could not see the potential of this new proposed idea, which would therefore not encourage a significant development in the field of Olympic ceremony production. However, Papaioannou stated that "I had to trust my instinct that this was not true and it was only that they were afraid to change the style of a large scale show" [sic]. He explained further that the IOC's decision relied too much on the conservative structure of past successful Olympic ceremonies. He therefore insisted that the old approach would not encourage the significant development in the field but rather would create the same style of ceremony that already had been done. It would neither introduce any new practice to the field nor bring any new experience to audiences worldwide.

> They create an average scene for ordinary people because they research so much what people like and they want everybody to like it. They bring it down to everybody's tastes . . . instead of trying to bring the audience to the higher point [sic].

Papaioannou admitted that his artistic ideas were quite abstract and not easily understood by audiences worldwide, but he believed it was a good opportunity to introduce something new to the audience as well as the field. Therefore, he attempted to magnify massive energy from the live audience in the Olympic arena and hoped the TV camera could capture that energy and transmit it to TV viewers at home.

> I consider them [the live audience] as a mass of energy . . . They were performers in the way, but they are unpredictable. You have to win them and if you win them they take the show and then they elevate . . . Because the ultimate goal is the TV unfortunately [sic].

Notably, he stated that "I did not allow non-artists, politicians, and the IOC to intervene the creation of the ceremony" [sic]. Instead, he was seeking new fresh ideas and diversity from ordinary people, especially someone who had never been involved in this world stage event. His ultimate goal was to introduce a unique new style of a large scale international sport ceremony through his artistic lens.

In regard to the proposed model of idea prediction from invention to innovation, it can be concluded that Papaioannou utilized creative thinking to make a significant change and present the Olympic

ceremony in an unconventional way; he also used critical thinking to consider the appropriateness of the ceremony to get the message across to the worldwide audiences. The result was an inventive ceremony that introduced great originality and groundbreaking ideas into the field of Olympic ceremony production. In contrast, the IOC expected the ceremony to be presented in the fashion of Hollywood entertainment style. This is considered an innovative approach that relied on the rational thought or critical thinking, anticipating the Olympic ceremony would be developed from the traditional structure. It therefore adds too little improvement into the field. Both mental thinking systems are crucial to the outcomes of idea generation processes, resulting invention and innovation.

5. Conclusion

This study attempts to clarify that mental thinking systems are crucial to idea prediction. Therefore, mental thinking systems are crucial to the production of ideas in Olympic ceremony production from invention to innovation. Creative thinking assists thinkers achieve a more original idea, likely called invention. On the other hand, an idea that has similar elements to existing ideas or products is likely facilitated through critical thinking. The advantages of Papaioannue's visionary idea can be understood through the model of idea prediction through different mental thinking systems from invention to innovation.

Importantly, this does not mean that there will only be one thinking mode used in idea generation processes. In fact, both thinking modes are beneficial in different ways. To that end, any given idea can be predicted based on mental thinking systems and can result in either invention or innovation. Moreover, the likelihood is that any given idea would be defined as invention only if the idea leads to the first introduction. On the other hand, any given idea would be categorized as innovation only if the idea includes similar elements to existing ideas. In summary, it is worthwhile for policy-makers and practitioners to see which of mental thinking system is best used for their organizations and society as a whole.

References

Adair, D. (2013). Olympic ceremonial, protocol and symbolism. *Managing the Olympics*, 182.

Amabile, T. M. (1982). Social psychology of creativity: A consensual assessment technique. *Journal of Personality and Social Psychology, 43*(5), 997-1013.

Anderson, N. R., & King, N. (1993). Innovation in organisations. In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organisational Psychology* (Vol. 8, pp. 1-34). Chichester: John Wiley.

Birch, R. (1997). The planning and organisation of Olympic ceremonies Retrieved from http://ioa.org.gr/en/search/archive/?ordering=&searchphrase=all. Retrieved September 17, 2008, from The International Olympic Academy http://ioa.org.gr/en/search/archive/?ordering=&searchphrase=all

Birch, R. (2004). *Master of ceremonies: An eventful life*. Crows Nest: Allen & Unwin.

Bruce, D., & West, M. (1994). Changing work environments: Innovative coping responses to occupational stress. *Work and Stress, 8*(319-331).

Candy, L., & Bilda, Z. (2009). *Understanding and evaluating creativity: A tutorial*. Paper presented at the ACM Creativity and Cognition 2009, University of California Berkeley. http://research.it.uts.edu.au/creative/linda/CC09TUTE/CC09Candy_Bildahandout.pdf

Csikszentmihalyi, M. (1996a). *Creativity: Flow and the psychology of discovery and invention* (1997 ed.). New York: Harper Perennial.

De Bono, E. (1992). *Serious creativity: Using the power of lateral thinking to create new ideas*. New York: HarperCollins.

Enos, J. L. (1962). Invention and innovation in the petroleum refining industry. In UN Bureau (Ed.), *The rate and direction of inventive activity: Economic and social factors* (pp. 299-322): UMI.

Godin, B. (2006). The linear model of innovation: The historical construction of an analytical framework. *Science, Technology and Human Values, 31*(6), 639-667.

Grasty, T. (2012). The difference between "invention" and "innovation." Retrieved from http://www.pbs.org/idealab/2012/03/the-difference-between-invention-and-innovation086/

Guilford, J. P. (1966). Measurement and creativity. *Theory into practice, 5*(4), 185-189. doi:10.1080/00405846609542023

Higgins, J. M. (1995). *Innovate or evaporate: Test and improve your organization's I.Q—Its innovations quotient*. New York: New Management Publishing Company.

IOC. (2004, 13 Augest 2004). *Opening ceremony media guide*. The Athens 2004 Organising Committee of the Olympic Games, Athens.

IOC. (2008). FACTSHEET: Opening ceremony of the Summer Olympic Games Retrieved from http://multimedia.olympic.org/pdf/en_report_1134.pdf. Retrieved July 18, 2008, from International Olympic Committee http://multimedia.olympic.org/pdf/en_report_1134.pdf

IOC. (2011). *The Olympic Charter*. Lausanne, Switzerland: International Olympic Committee.

Kilgour, M. (2006). Improving the creative process: Analysis of the effects of divergent thinking techniques and domain specific knowledge on creativity. *International Journal of Business and Society, 7*(2), 79-107.

Lattipongpun, W. (2010). The Origins of the Olympic Games' opening and closing ceremonies: Artistic creativity and communication. *The Journal of Intercultural Communication Studies, 19*(1), 103-120. Retrieved from http://www2.kumagaku.ac.jp/teacher/~judy/abstracts1.pdf

MacAloon, J. J. (1984). *Rite, drama, festival, spectacle: Rehearsals toward a theory of cultural performance*. Philadelphia: Institute for the Study of Human Issues.

Maclaurin, W. R. (1953). The sequence from invention to innovation and its relation to economic growth. *Quarterly Journal of Economics, 67*(1), 97-111.

Piffer, D. (2012). Can creativity be measured? An attempt to clarify the notion of creativity and general directions for future research. *Thinking Skills and Creativity, 7*(3), 258-264. doi:http://dx.doi.org/10.1016/j.tsc.2012.04.009

Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge, M.: Belknap Press.

Rank, J., Pace, V. L., & Frese, M. (2004). Three avenues for future research on creativity, innovation, and initiative. *Applied Psychology: An International Review, 53*(4), 518-528.

Redwood, H. (1987). *The pharmaceutical industry—Trends, problems and achievements*. Felixstowe: Oldwicks Press.

Runco, M. A. (2007). *Creativity: Theories and themes: Research, development, and practice*. California: Elsevier Academic Press.

Runco, M. A., & Charles, R. E. (1992). Judgments of originality and appropriateness as predictors of creativity. *Personality, Individual Differences, 15*(5), 537-546.

Runco, M. A., & Pritzker, S. (1999). *Encyclopedia of creativity*. San Diego: Academic Press.

Russell, K. (2014). The two words Steve Jobs hated most. Retrieved from http://www.entrepreneur.com/article/232343

Sawyer, R. K. (2007). *Group genius: The creative power of collaboration*. New York: Basic Books.

Schoen, J., Mason, T. W., Kline, W. A., & Bunch, R. M. (2005). The innovation cycle: A new model and case study for the invention to innovation process. *Engineering Management Journal, 17*(3), 3-10.

Schumpeter, J. A. (1939). *Business cycles: A theoretical, historical, and statistical analysis of the capitalist propcess* (Vol. 2). New York: McGraw-Hill.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behaviour: A path model of individual innovation in the workplace. *Academy of Management Journal, 37*(580-607).

Seelig, T. (2012). *inGenius: A crash course on creativity*. New York: HarperCollins.

Senge, P. M. (1990). *The Art and practice of the learning organization*. Random House.

Shrivastava, P. (In Press). Special volume on organisational creativity and sustainability theme "Paths for integrating creativity and sustainability." *Journal of Cleaner Production*. Retrieved from http://dx.doi.org/10.1016/j.jclepro.2014.06.015

Swift, C., & Gruben, K. (2000). Gender differences in weighting of supplier selection criteria. *Journal of Managerial Issues, 12*(4), 502-511.

Sydenham, P. H. (2003). Relationship between measurement, knowledge and advancement. *Measurement (02632241), 34*(1), 3. doi:10.1016/s0263-2241(03)00023-x

Thorndike, E. L. (1949). The psychology of invention in a very simple case. *Psychological Review, 56*(4), 192-199.

Tomlinson, A. (1989). Representation, ideology and sport: The opening and closing ceremonies of the Los Angeles Games. In R. Jackson & T. McPhail (Eds.), *The Olympic movement and the mass media: Past, present and future issues* (pp. 7.3-7.11). Calgary: Hurford Enterprises.

Tomlinson, A. (2004). The disneyfication of the Olympics? Theme parks and freak-shows of the body. In J. Bale & M. K. Christensen (Eds.), *Post-Olympism? Questioning Sport in the Twenty-first Century* (pp. 147-163). New York: Berg.

Tovell, B.-M. (2013). *Spectacle and sport: Narrative tenets and the inclusion of music in the vancouver 2010 Olympic Opening and Closing Ceremonies.* (Master of Human Kinetics), University of Windsor. Retrieved from http://scholar.uwindsor.ca/cgi/viewcontent.cgi?article=6001&context=etd&sei-redir=1&referer=http%3A%2F%2Fscholar.google.co.th%2Fscholar%3Fhl%3Den%26q%3Dlattipongpun%26btnG%3D%26as_sdt%3D1%252C5%26as_sdtp%3D#search=%22lattipongpun%22

West, M. A., & Farr, J. L. (1990). *Innovation and creativity at work: Psychological and organisational strategies*. Chichester: John Wiley.