

A THEORY OF SITUATED CREATIVITY AND ORGANIZATIONAL DYNAMIC CAPABILITIES

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Abstract

Creativity is a vague term that traditionally referred to artistic expression (e.g. painting, singing, sculpting); now creativity is a thought process emphasizing 'newness' and can be applied in other disciplines. Creativity when used effectively can improve an organization's dynamic capabilities exponentially. Situational creativity (SC) is defined as a practical creative process; 'creativity' is the cognitive portion, while 'situated' is the action-producing or useful application of the idea. Both exploration and exploitation are interconnected aspects of dynamic capabilities. Exploration is developing new knowledge through abolishing existing standards, roles, tasks, and skills; while exploitation is defined as utilizing existing resources, extending current information and simultaneously pursuing better efficiency and improvements in order to innovate at a slower pace. Dynamic capabilities are defined as an organization's capacity to integrate, build, and reconfigure existing skill sets in order to receive economic gain from current resources. Systems thinking has shown to be associated with SC because acknowledging the situational factors at play aids in the individual's learning and problem-solving skills. Situated creativity is a novel idea that can be used in various industries or disciplines. SC is acknowledged in two context: pragmatic and locational views. Pragmatic SC is acknowledging and responding to one's situation while productively working in unison with the environment. Locational SC is bounded within places and spaces; creativity is seen as viable forces within location. In the end, this concept can be borrowed by the healthcare industry in order to combat the many changes (technological, environmental, medical, and political) and improve the industry's dynamic capabilities in the long run.

Keywords: Situated creativity, dynamic capabilities, leadership, systems theory, healthcare

1. INTRODUCTION

Creativity is such an ambiguous term because there are so many interpretations and manifestations of the concept. The opera singer, Jessye Norman; painter, Michelangelo, and sculptor, Jean Baptiste-Pigalle are all considered creative people in the traditional sense. From an organizational perspective, the terms 'creativity' and 'innovation' tend to be directed towards tech giants, such as Google, Apple, and Microsoft. These companies, for example, seem to manifest creativity in their product offering, corporate culture, and business processes. Grandadam et al. consider creativity to be a process that encompasses a "common body of knowledge" in order to emerge from a cognitive thought to a physical manifestation in the market (2013, p. 1702). Markova (2012) sees employees as the most vital creative influences of an organization; employees

successfully implement the firm's strategies in order to remain competitive in the long-term. In fact, Markova explains that the role of a Human Resources (HR) department within an organization is to intervene with issues pertaining to employee skills and motivation, "job design and work structure," and positively shaping "productivity, creativity, and discretionary effort[s]" (2012, p. 83). However, a form of creativity that is increasing in awareness is 'situated creativity' (Nonaka & Zhu, 2012, p. 196). This term was coined by Ikujiro Nonaka and Zhichang Zhu, authors of *Pragmatic Strategy: Eastern Wisdom, Global Success*. This paper aims to answer these questions:

- What are situated creativity (SC), exploration, exploitation and dynamic capabilities?
- Do systems thinking impact SC? In what ways?
- How has SC been used in various context (disciplines)?
- How can this concept be used to increase an organization's dynamic capabilities?
- Can SC improve an organization's sustainability long-term?

Situated creativity is a relatively new concept that leaders of various industries can use to continuously improve their firms' sustainability. Below, the concepts SC, exploration, exploitation, and dynamic capabilities will be defined. Next, I will address how creativity, systems thinking and organizations can improve current knowledge of dynamic capabilities of a firm. Third, various cases of SC (in two different disciplines) will be presented. To conclude, I will address how these concepts can improve the dynamic capabilities within the industry of healthcare.

1.1 Situated Creativity (SC)

Nonaka and Zhu introduce the concept of SC from a rational worldview. Specifically, SC embodies the pragmatic notion of "shili" which includes, "sense-making, context-interpreting, situation-framing, meaning-giving, fact-projecting, problem-shaping, opportunity-exploring, future-envisioning" (Nonaka & Zhu, 2012, pp. 172-173). In short, shili encompasses the "mental-cognitive" processes of the human experience (Nonaka & Zhu, 2012, p. 173). SC differs from "static conceptions of creativity" (Potts, et al., 2008, p. 2) in that it is a dynamic process of producing something original, yet useful, (Yu, Gu, & Ostwald, 2012). In other words, SC can be interpreted as new thoughts and "unexpected discoveries" influenced by changing contextual environment (Gervais, Guinote, Allen, & Slabu, 2013, p. 222). For the context of this analysis, SC is defined as a practical creative process; 'creativity' is the cognitive portion, while 'situated' is the "action-producing" or useful application of the idea (Nonaka & Zhu, 2012). Next, exploration, exploitation, and their impact on a firm's dynamic capabilities will be discussed.

1.2 Exploration and Exploitation

Nooteboom explains the importance of a firm's use of the concepts: exploration and exploitation, and how it impacts the firm's dynamic capabilities. Firms that effectively exploit their resources tend to be more successful in the long run. Andriopoulos and Lewis (2009), define exploration as developing new knowledge through abolishing "existing standards, roles, tasks, and skills" (Nooteboom, 2009, p. 3). On the other hand, exploitation is defined as utilizing existing resources (Nooteboom, 2009), while extending "current knowledge" and simultaneously pursuing "greater efficiency and improvements" in order to innovate at a slower pace (Andriopoulos & Lewis, 2009, p. 696). Nooteboom explains that organizations can choose to focus on either exploration or exploitation. An organization that can combine both tensions are labeled "ambidexterous," (Nooteboom, 2009, p. 3); these organizations are able to exploit "current competencies" (i.e. knowledge) and explore "new domains" (i.e. standards, roles or tasks) (Andriopoulos & Lewis, 2009, p. 696). Organizational ambidexterity is difficult capability for firms to master. In terms of creativity, Corbett explains the importance of exploitation in "learning asymmetries" (2005, p. 475), which are the variations in individuals' learning styles. Corbett explained that variations in learning are important because these differences affect the process of exploitation. Specifically, learning asymmetries play a crucial role in the exploitive process pertaining to "an individual's ability to initially identify opportunities" (Corbett, 2005, p. 486). Thus, if individuals are having a difficult time identifying opportunities, they will not be able to utilize existing resources and simultaneously extend knowledge in order to be innovative within their firms. Next, an explanation of dynamic capabilities will be discussed.

1.3 Dynamic Capabilities

Today's organizations must explore new opportunities and exploit current resources in order to thrive in this

competitive market. Moreover, organizations need the ability to respond to change quickly in this turbulent environment, hence the phrase, dynamic capabilities. Within the context of this paper, dynamic capabilities are defined as an organization's capacity to "integrate, build, and reconfigure" (Markova, 2012, p. 83) existing skillsets in order to receive economic gain from current resources (Ahenkora & Adjei, 2012). Organizations cannot improve their dynamic capabilities in one step; contrarily, it is an ongoing process that is more effective with incremental and cumulative change (Nooteboom, 2009). Markova explains that dynamic capabilities derive from two types of resources: "tacit and inimitable" (Markova, 2012). Researchers are still trying to understand the mechanism for how these resources generate value for organizations. Studies seek to determine if organizations create dynamic capabilities by responding to a changing environment and gaining a competitive edge through "path dependence and social complexity that makes organizational processes and know-how unique" (Markova, 2012, p. 84). Ultimately, it is important for leaders to understand and acknowledge dynamic capabilities of a firm in order for their organizations to compete long-term in this ever-changing environment.

2. SYSTEMS THINKING AND CREATIVITY

As mentioned earlier, creativity is moving beyond artistic expression and is consciously being considered a fundamental part of the human experience. Creativity is such a complex concept because of the variations in definitions, lack of understanding, and a need for standardization of measuring creativity. Hieronmyi (2013, p. 414) suggests a systems approach in order to "clarify the complexity of creativity." For the purpose of this paper, I have adopted Hieronmyi's definition of systems thinking in that it is a comprehensive approach to interrelated elements, functioning whole units, subsystems, emergence, complex chaotic environments, self-organization, information exchange, feedback, adaptation, and communal networks (2013). Systems vary from one discipline to another, for example, Markova presents a case for Human Resource Information System (HRIS) in which this system "acquire(s), store(s), manipulate(s), analyze(s), retrieve(s), and distribute(s) pertinent information regarding an organization's HR" (2012, p. 84). HRIS can vary in complexity, from simple file maintenance and record keeping to complex "multi-operational" abilities with "decision support protocol" (Markova, 2012, p. 84). Clark, Murpy, and Singer present the case of multi-hospital systems, and mention the subsystem of "for-profit governance systems" and how it can impact a CEO's role (2013, p. 361). In the end, employees are considered essential forces of creativity because they are the forces that execute a company's strategy.

2.1 Context and Organizational Systems

As mentioned earlier by Clark, Murphy, and Singer, external forces cause the greatest impact on organizations. However, upon deeper analysis, Clark et al. show that is not true for every case, specifically in the case of healthcare systems. Sometimes environmental context and external forces may be the "dominant influence of external effects among public-direct hospitals," meanwhile certain organizational or internal forces may be the "dominant facility effects among non-profit and for-profit hospitals" (Clark, Murpy, & Singer, 2013, p. 370). In fact, the authors explain that there has been a lack of research pertaining to "organizational features," creativity, systems thinking and how leadership is affected (Clark, Murpy, & Singer, 2013). Their study used a quantitative approach to measure variance attributed to multi-level healthcare systems. Equation 1 and Table 1 both display the equation used and the corresponding variables and values.

Equation 1. Analytical Model of hospital financial performance as measured by ROA. (Clark, Murpy, & Singer, 2013)

$$r_{hijkt} = \mu + \gamma_t + \alpha_h + \beta_i + \delta_j + \varphi_k + X_{jt} + \varepsilon_{hijkt}.$$

Table 1. Variables used in ROA Equation (Clark, Murpy, & Singer, 2013, p. 367).

Variable	Definition
r_{hijkt}	Return on Assets (ROA) in year t for CEO k in hospital j , a member of system i , operating in local market h .
μ	Average ROA over the entire time period,
γ_t	Premium over the average in year t
α_h	Premium associated with being in local

	market h
φ_k	Premium associated with being a member of system i
δ_j	Premium associated with hospital j
X_{jt}	Premium associate with CEO k
X_{jt}	Vector of hospital variables
ε_{hijkt}	Residual value

The authors used ANOVA statistical method to analyze the various governance data from different types within their study (Clark, Murpy, & Singer, 2013). In the end, it appeared that leaders still exert a notable force that influenced their organizations. They must address and navigate external constraints, but ultimately CEOs have greater influence on the financial effects of their firm.

Lee et al. further addresses the issue of environment and externalities as a function of organizational systems. The authors posit that the ability to innovate “is a product of a local environment” or a location’s ability to attract “creative” people (Lee, Florida, & Gates, 2010, p. 13). From this perspective, cities can be considered “open systems” that attract creative, talented, and diverse individuals (Lee, Florida, & Gates, 2010, p. 14). Certain metropolises can be seen as “incubators” for new ideas – such as, Silicon Valley in California, Wall Street in New York, and technology hubs in Tokyo, Japan (Lee, Florida, & Gates, 2010, p. 14). Current research corroborates with the notion that there is a connection between “human capital and regional growth” (Lee, Florida, & Gates, 2010, p. 14). Innovation is a multi-part concept – there are three important aspects (i.e. human capital, creative cognition, and diversity of thought) that work in conjunction with one another in order for a firm, product, or process to be considered innovative (Lee, Florida, & Gates, 2010). It is important to note, the significance of location, environment, and context; Lee et al. explain that “highly educated people” seem to be more innovative, and this innovation leads to “development of industries... regional income and population growth” (Lee, Florida, & Gates, 2010, p. 14). Florida, specifically, researched the concentrations of creativity within certain geographic regions in his book, *The Rise of the Creative Class* (2002) (Lee, Florida, & Gates, 2010). Florida explains that the “Creative Class” brings their creative knowledge to specific geographical locations; therefore producing great amounts of innovation and adding to the level of diversity and inclusion at their organizations and within their communities (Lee, Florida, & Gates, 2010, p. 14). Specifically, Lee et al. measured a few important variables in their study that affect innovation: human capital, creativity and diversity (2010). Table 2 provides a detail explanation of these four variables. After performing a multivariate regression analysis, their findings show that regional-level innovation is positively associated with “human capital, creativity, and diversity” at one percent statistical significance (Lee, Florida, & Gates, 2010, p. 21). Again, that is the basis for this analysis, defining the concept of situated creativity, understanding how the environment affects creativity, and realizing that leaders can effectively and practically apply this form of creativity to improve their organization’s profit margin and organizational performance.

Table 2. Three important variables associated with innovation (Lee, Florida, & Gates, 2010).

Variables	Explanation
Innovation	Dependent variable. Based on number of patents issued. Patents are used to recognize novel ideas.
Human capital	Percentage of adults with a bachelor’s degree and above.
Diversity (gay index)	Measure of the concentration of same-sex male unmarried partners (gay male couples). This measures “openness or tolerance” to new members to the region.
Creativity (bohemian index)	Proportion of artistically creative (i.e. authors, directors, painters, sculptors, photographers, dancers, and performers) people in a region.

2.2 SYSTEMS APPROACH TO CREATIVITY

An interdisciplinary systematic approach to understanding creativity and how it can be applied to an organization's strategic plan is beneficial to the organizations sustainability in the long run. So far, researchers have only been concerned with the traditional definition and/or approach to studying creativity. Many authors agree that developing systems is important to assist in the "organisational learning" (Ahenkora & Adjei, 2012) process by developing an extensive systems perspective that includes environmental (contextual) issues to solving creative problems (Steiner, 2009). Currently, there is a gap in the knowledge in terms of a creative framework within an organizational context; there is still a need to understand how to manage and maintain a comprehensive system when solving creative issues (Steiner, 2009). There are many interworking levels within creative issues that are similar to organizational hierarchy of a system: individual, social interactions, and problem solving amongst various demographic groups (cultural and national).

Many scientists theorized that creative problem solving research involves multi-level analysis, which is a complex issue to gather data to analyze (Steiner, 2009). Furthermore, the phrase "open creativity" is difficult to study and quantify because it includes "internal and external collaborative creative sources" and requires "highly innovative developments" (Steiner, 2009, p. 7). Along with this, Steiner stresses the need for interdisciplinary networks amongst corporations in order to foster creativity in value chain, strategic partnerships and network activities development (even with competitors) (Steiner, 2009). Sousa and Coelho also corroborate that creativity is fostered best when organizations focus on developing networks within the organization and with other resources outside of the organizations (2011). Diversity of thought has shown to be a vital component of the creative process; employees from "varied backgrounds come together to generate new and novel combinations of existing technology and knowledge to create innovation" (Lee, Florida, & Gates, 2010, p. 15). In the end, diversity of thought fuels creativity and innovation within a system (i.e. a city or organization), which leads to more effective problem solving skills. Next, I will explain a few examples of situated creativity in different context.

3. CASES OF SC

Situated creativity is a novel idea that can be used in various industries or disciplines. In the past, the term 'creativity' was associated with individual's personality traits and attributes (Sosa & Gero, 2003). It is important to note that Sosa and Gero are not negating the fact that "individual differences" affect creativeness nor are they attributing an entire creative outcome to a situation (2003, p. 3). In certain situations, (i.e. hazardous or risky), a person's behavior may be ascribed not only to situated factors, but to the person's "traits, attributes, preferences, and choices" (Sosa & Gero, 2003, p. 3). Due to the nature of a hazardous or dangerous situation, certain factors may be outside an individual's control or "indirectly possible to control" (Sosa & Gero, 2003, p. 3). Ultimately, creativity, specifically situated creativity, is a subjective topic to research; therefore a standard or formal research framework is needed in order to understand if and when situated factors are the cause of certain outcomes (Sosa & Gero, 2003).

3.1 Pragmatic SC

As mentioned earlier, the term situated creativity was coined by Nonaka and Zhu in their book, *Pragmatic Strategy: Eastern Wisdom, Global Success*. Nonaka and Zhu's book is based on the eastern philosophy of Confucianism. Nonaka and Zhu define Confucianism as a pragmatic world-view that includes "creative imagination and moral sensibilities" in order to live harmoniously between communities and nature (Nonaka & Zhu, 2012). The six characteristics of Confucianism are as follows: (1) tightly organized society, (2) collectivist, (3) hierarchical, (4) emphasizes social order and harmony between family and society, (5) views conflict in society more negatively, (6) highlights gaining social approval of group (Niu, 2013). In comparison to Western culture, it would appear that Eastern Confucious society may not seem as creative. On the contrast, Niu believes if members of the Confucious society were in an environment (i.e. westernized environment) that encouraged creativity, their creativity may flourish more (2013). Niu defines Confucian creativity as acknowledging and responding to one's situation while productively working in unison with the environment (2013). Confucian creativity requires individuals to be "flexible" and "open-minded" pertaining to contextual dynamics and environmental forces (Niu, 2013). Confucianism acknowledges situated creativity as nestled between the past and the future because "newness" of ideas is considered relative (Niu, 2013, p. 280). Moreover, Niu states that because the environment, context, and situational factors are different from the past, an idea, product, or process is considered new (2013). Along with this, creativity in Confucious thinking highlights "human intention in the creative process" (Niu, 2013, p. 282). Confucious school of thought explains that creative individuals are always "situated in appropriate positions" in order to "maximize

their influence" within their community, organization, society, and the world as a whole (Niu, 2013, p. 282). This is the goal of SC from the Confucian school of thought – human beings must acknowledge, respect, interact, and collaborate with their environment in order to achieve creativity.

3.2 Locational SC

Another perspective of SC is locational in which places and spaces are seen as viable forces of SC. Grandadam et al. explain the value of places and spaces because these areas allow members of communities to exchange information and learn (formally and informally) from each other (2013). An area is considered a place when it is near, familiar, and bounded; while a space is far, detached, and relative (Grandadam, Cohendet, & Simon, 2013). When addressing SC it is vital to recognize location, specifically, "communities of the middleground" as mentioned by Grandadam et al. (2013). The middleground is defined as the area between the upperground and underground; it is a petri dish of "spontaneity" that feeds "creative skills that are not explicitly controlled or owned by firms" (Grandadam, Cohendet, & Simon, 2013, p. 1703). Places (e.g. cafes, restaurants, performance halls) are considered middlegrounds within communities where actors can share knowledge and information; these areas contribute to SC in a way that is not fully understood by current research methodologies (Grandadam, Cohendet, & Simon, 2013).

4. CONCLUSION

Situated creativity (SC) is a contemporary approach to creativity. Artistic expression as the sole definition of creativity is a myopic view of the concept. Throughout this analysis, various forms of creativity and specifically SC were examined. It is important for organizations to reach their full potential through dynamic capabilities. Edensor and Millington agree that the outcomes of SC are nestled amongst the cultural norms and values and is also influenced by an individual's choices or personality (2013). In fact, the outcomes of SC can be seen as cushioned amongst the cultural norms and values within an organization as opposed to the leader's (i.e. CEO, company president) choices or personality. Dynamic capabilities are vital concepts that deserve more research due to the volatile nature of the current business environment. Again, SC is applied creativity, or "action-producing" innovation (Nonaka & Zhu, 2012, p. 196). SC is realizing that we as humans are in relation to our environmental conditions, and it is when individual behavior combines with situational factors is "behavior(s) actually executed" (Sosa & Gero, 2003, p. 8).

Biological, technological, environmental, and political factors are all dramatically affecting the healthcare industry. Traditional approaches to healthcare problems are not effective in the 21st century. It is time for a new thought process; utilizing SC from another discipline may prove to be effective. An interdisciplinary approach to healthcare, and utilizing SC as a thought process, may aid in solving issues and leveraging the dynamic capabilities of the organization. In healthcare, SC means redefining disease, reimagining the physical attributes of a disease, revising healthcare data and access, and reviewing the quality of healthcare administered in our society. Again, SC is a perspective or world-view, that has practical implications that can truly improve healthcare and other disciplines to reach their maximum potential and long-term sustainability.

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