Disciplined Imagination:
Art and Metaphor in the Business School Classroom

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Abstract

Business schools frequently emphasize the importance of thinking "outside-the-box," and yet very few business students are actually challenged to do so in practice. This paper presents a pedagogical technique designed to foster creativity and imagination, while providing a deeper understanding of the concepts taught in a capstone business management course. The technique requires students to create and interpret an original work of art (visual, musical, or poetry) that symbolizes an important course concept. The metaphors utilized by students are examined using Morgan's (1986) metaphors of organizations as a framework. At the end of the project, students involved provided feedback by completing a survey of student attitudes and responding to a questionnaire. We conclude that using art and metaphor enriched the educational experience by both challenging students and promoting a deeper understanding of course material.

Introduction

The integration of global markets and the resulting clash of world cultures, combined with the discovery of radically innovative technologies, have created increasingly turbulent political, social and economic environments for modern economic institutions (Friedman, 2007). Toffler's (1980) prediction of a "3rd Wave" of dramatic societal change is indeed upon us. As a result, modern organizations have become far more complex and difficult to manage. This new reality requires leaders who are creative, intuitive, empathetic, and able to find innovative solutions to complex and paradoxical challenges.

In his book, *A Whole New Mind*, Daniel Pink (2005) argues that we are quickly moving out of the "Information Age," which required logical, linear and "left-brain" analytical skills, into the "Conceptual Age" where increasingly more "right-brain" capabilities are required. In this new age, organizational stakeholders must step away from the analytical and its detailed orientations towards the abstract and its 'bigger picture" perspectives. In this "Conceptual Age," successful individuals, and their constituent organizations, must have both *high-concept* and *high touch* skills. High concept skills enable entrepreneurial individuals in complex and turbulent situations to identify unexpected opportunities and combine seemingly unrelated or paradoxical ideas into innovative, artistic and emotionally satisfying products and services. Equally important, high-touch skills enable these individuals to work effectively within complex and diverse organizations because they are able to empathize with other participants, as well as find deep personal satisfaction in pursuit of purpose and meaning.
This is a different professional education orientation than the past. Pink (2004) conjectured that future business organizations may prefer to hire MFAs from art, theater, and music programs because of their creativity and innovation skills than MBAs who are too traditionally immersed in linear thinking and analytical models.

This intriguing relationship between art and various aspects of economically productive activities has been recently noted by a number of other authors (Nissley, 2002). Norris (1997) and Galbraith and Galbraith (2004), for example, talk extensively about the "poetry" of effective labor, that fact that work and life activities should move in harmonious cycles in order to maximize personal and societal benefits. Likewise, Moorman and Miner (1998), Kamoche and Cunha (2001), Shambu and Meyer (2007), Bilton (2006) and other scholars are increasingly employing musical and theater models to demonstrate successful product innovation, strategic thinking, and organizational innovative activities, even to the point where traditional Indian melodic "ragas" and modern jazz improvisation analogies are almost common place in the management literature (Kamoche, Cunha & Cunha, 2003). Surprisingly however, given the number of authors who suggest important theoretical and philosophical ties between artistic activities and managerial education, there are few, if any, published empirical studies that actually examine this link.

Certainly, business programs are critical to the development of world societies. They address in the most fundamental manner the process of taking inputs, such as capital, labor, knowledge, and technology, and transforming them into something that has greater value to society. It is this value-added transformation that leads to economic growth, reduced poverty, and technological advancement. Are business schools, the agencies charged with training our future business managers, entrepreneurs, and economic leaders, oriented toward this new "Conceptual Age" perspective? This is, indeed, both a reasonable question to ask and a reasonable challenge for the 21st century business school. To be effective, the complexity and sophistication of strategic thinking must match the complexity and sophistication of these modern market realities. With this question in mind, management scholar Gareth Morgan (1986, 1993, 1996) has been a leading advocate suggesting the importance of applying metaphors to understanding, and ultimately improving, organizational thought. Like Pink (2004, 2005), Morgan argues that organizational thinking must become fundamentally more strategic, it must enable us to understand the multiple relevant perspectives, and grasp the multiple meanings of situations and allow us to manage the contradiction and paradox – and this requires higher order, metaphorical thought. By seeking a number of different perspectives, according to Morgan (1986), we are freed from "favored ways of thinking" and are then able to unleash our power and creativity.

In many respects, strategic thinking is fundamentally different than many other business decisions. Strategic decisions are not only complex but also involve important elements of asymmetric information and competitive interactions. In addition, strategic decisions are mostly non-repetitive in structure, addressing situations that are essentially unique experiences. Whether in business, war, or politics, these types of decisions naturally become much more inductive and intuitive in nature; formal deductive reasoning may have only limited application. As an inductive process, the decision maker's ability to understand the historical content of the situation, generate possible scenarios or analogies, and develop a set of complex higher-order decision rules becomes most critical (e.g., Epstude & Roese, 2008; Tay & Linn, 2001; Wolfgram, Dear & Galbraith, 1987). In essence the strategic manager walks, talks, and reasons in the incomplete world of "fuzzy logic." Within this context, the logic of incorporating the concept of "improvisational memory," similar to that taught in modern jazz and other art expressions, into higher-order strategic thinking makes sense (Shambu & Meyer, 2007).

Memory and improvisation must be tied together by imagination. Chia (1996), like Morgan (1986), persuasively argues that the most important objective of business programs should be fostering the entrepreneurial and strategic imagination, rather than rote application of conceptual material to a relatively well-known and well-understood business situation. These organizational theorists propose a radical shift in pedagogical priorities away from teaching analytical problem-solving skills to cultivating a more innovative model of paradigm-shifting

and decision-making imagination. For educators, encouraging "imagination" within a strategic decision making context requires developing a parallel set of appropriate pedagogical techniques that can be used to encourage and illustrate such behaviors. Unfortunately as Pink (2004, 2005) notes, the development of such techniques has certainly lagged with the business school environment.

In this paper we outline a student art project designed to be used in a *Strategic Management* course within a graduate or undergraduate business program. The course, sometimes also titled *Competitive Strategy* or *Business Policy*, is the capstone course tasked with teaching strategic thinking and competitive decision-making concepts, while also integrating the lessons taught in previous, more functional-level classes. The project requires students to create, and then interpret, an original work of art (visual, musical, or poetry) that symbolizes an important management concept. The art project requires students to engage in a mode of information processing not typically required by traditional coursework in business schools. By encouraging students to develop new metaphors for management issues, the art project requires imagination, creativity and innovative thinking. Ultimately, the project's objective is to expand the student's effective strategic thinking skills in a more inductive direction. In addition, this project is intended to increase both student understanding of the material and interest in the course.

Management Education and the Creative Arts

Art has been used in a variety of ways to enhance the learning experience. Drawing upon literature pertaining to arts and management education, we discuss the following four ways in which the creative arts might facilitate the education process: analogous stimulation, role playing, creative processes, and symbolic creation.

Art as Analogous Stimulation
The underlying theme of this approach is that an artistic production embodies important elements of the managerial experience, and that understanding the relational components embedded into the work of art will facilitate the students' understanding of management. This approach to art in the classroom has certain appealing elements: the art is self-contained and transportable to the classroom, it involves complex elements and interactions, there is an underlying message or theme, and it requires reasoning by analogy. The actual art piece to be studied can vary, and can include both popular and classical music (Powell & Viega, 1986); poetry (Vaill, 1981); literature (Shaw & Locke, 1993, Dhir, 1999), and drama (Mockler, 2002). Shakespeare is a particularly common point of study for managerial insight (Augustine & Adelman, 1999; Burke & Mayer, 1993; Corrigan, 1999; Shafritz, 1992).

Art as Role Playing

Role playing in management education is a well-known pedagogical technique (Baglione, 2006; Dennehy, Sims & Collins, 1998). With respect to art, this involves role playing within an artistic setting to experience a managerial concept, such as teamwork and conflict resolution. For example, a number of traveling dance and Shakespearian repertory companies offer management seminars where participants act out a dance or dramatic scene, then discuss the experience within the context of various managerial problems.

Art as Creative Processes

Studying the creative process of artists may also be of educational value. Lippin (1999), for example, has suggested that the simple process of watching an artist create his or her product provides an interesting lesson for the management of work. This theme has been echoed by many symphony conductors who have suggested that the conducting experience parallels and enhances managerial skill, and that study of this creative art form provides a powerful managerial learning process (Jonassen, 1999; Schofield, 1999; Zander & Zander, 2000).

Art as Symbolic Creation

The focus here is that the act of creation itself has important pedagogical and communication implications. In psychotherapy, for example, there is a well developed and actively debated body of thought regarding the application and usefulness of the creative arts as a therapeutic technique. The underlying thesis of much of the work, whether directed toward abused children, mental retardation, or Alzheimer's patients, is that the symbolism embodied in self-generated art allows for a deeper expression of experiences, feelings, and emotions than words (e.g., Koplewicz & Goodman, 1999; Sandrick, 1995).[1] In marketing research, an interesting derivation of this theme involves asking focus groups to generate creative pictures of a particular product usage as a basis for discussion (Ziff, 1990).

Art and Organization

In organizational development, art has also been used as a way to enable organizational members to collectively identify and visualize the many complex influences on the organization. This methodology, originally termed by Ramsey (1997) as *aesthetic intervention* leverages symbolic creation as a way to generate a shared understanding of the organizational context. Later, Orr (2003) built upon and refined Ramsey's ideas of aesthetic intervention by developing a model of *Aesthetic Practice* to be applied in the management of organizations. Orr's ideas about aesthetic practice for organizational development combine the following four distinct theoretical streams: artistic integration, collective co-creation, the expansive qualities of metaphor, and experiential learning, to synergistically create positive organizational learning outcomes that enable organizations to break free of existing perspectives and to visualize a new and more expansive picture of potential reality.

As an example of the application of aesthetic practice, art has been used as a means of creating a collective strategic vision as a starting point to organizational renewal (Parker, 1990). In contrast to a written statement of vision, this particular intervention engaged individuals from throughout the company to jointly create a work of art depicting a shared vision for the company. In this organizational intervention, the incorporation of art into the visioning process enabled participants to better make sense of the environmental factors that were creating a need for change and helped them grasp the complexity of the situation the organization was facing, both internally and externally. In addition, this aesthetic endeavor allowed participants to express the emotional aspects of organizational life and to articulate the shared values of the organization. In the end, this aesthetic intervention provided the means for breakthroughs in creative knowledge, organizational learning and ultimately provided the basis for organizational renewal and revitalization (Parker, 1990).

While the conceptual and theoretical discussion connecting art and management education has certainly expanded in recent years (see Nissley, 2002 for an excellent summary), it remains rare in the corporate boardroom[2]. And the use of art for purposes of symbolic creation in the business school classroom is even less common. We argue, however, that this experiential approach to learning, which combines the creation of art with the power of the underlying metaphor, provides students with the opportunity to develop their critical strategic thinking abilities. We believe that the symbolic creation and interpretation of art encourages creativity, deeper insight, and a more critical thinking process, particularly with a non-art oriented audience such as business students.

The Act of Creation as Experiential Learning
The process of creating a work of art is a kind of experiential learning that allows an individual to become intensely intimate with his or her creation. This act of creation yields a deeper understanding of the subject as the artist is both physically and intellectually engaged, taking something from an abstract thought to a concrete reality. Additionally, creating a work of art and interpreting it enables its author to represent a management concept on multiple levels through the use of both linguistic and artistic symbolism. This approach requires students to work simultaneously with language and artistic images in complementary ways. Costantino (2007) demonstrates the power of pedagogy by combining artistic interpretation with verbal interpretation of works of art. This combination of the verbal with the visual is considered to be an effective pedagogy to help students develop high-level cognitive skills (Costantino, 2007; Siegesmund, 2004) because it combines visual modes of thought such as visual thinking (Efland, 2004), qualitative reasoning (Eisner, 2002) and imaginative cognition (Efland, 2004) with verbal modes of thought in an interactive way.

In a similar approach, the pedagogical experiment described in this paper requires students to not only transform artistic images to metaphoric language, they must also work at translating

metaphorical language to the literal language of business. The process is not easy: it requires students to consider carefully the interconnected nature of linguistic and artistic symbolization and, in an iterative approach, work at reconciling them in such a way as to form a congruent metaphor. This process forces students to develop a significant knowledge of both the management concept as well as its metaphor. This artistic integration which combines the power of the art with the power of the metaphor in a synergistic way enhances ways of knowing and learning.

Metaphor as the Basis of Knowledge

According to the Webster dictionary, metaphor is defined as *"a figure of speech in which a word or phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them."* Since Aristotle, thinkers and writers have recognized the importance of metaphor in the process of knowledge creation. While humans perceive our experiences more or less on a continual basis, periodically language must intervene in order to allow us to express and make sense of these events (Daft & Wiginton, 1979). Through this process of "putting language" to experience, an inherent conversation between thinking and acting is established, thereby both describing and determining reality (Tsoukas, 1991).

Language, especially in the form of metaphor, is foundational to the process of describing and constituting reality. Essentially, metaphors involve thinking about one situation or phenomena in terms of something else. They enable the user to apply something he/she is familiar with (source domain) to something else they know less about (target domain) thereby describing and making sense of their experiences. In this way, metaphors are the symbolic constructs upon which reality is established and knowledge is built (Astley, 1984; Manning, 1979), and they are "…central to the ways we organize and understand our world" (Morgan, 1986, p. 339). Metaphors act as cognitive lenses through which we look at and evaluate our particular situation and the world surrounding us (Pepper, 1942).

Applying metaphors and analogies has long been a means through which complex phenomena have been explained and communicated in ways that are more easily understood. While no analogy is perfectly congruent, no symbol is universally accepted, and there is certainly debate as to how far metaphors can be pushed in an organizational context (McCourt, 1997), there is general agreement that utilizing common symbols and experiences from everyday life enables the receiver to more readily understand complex concepts and relationships. As Morgan (1986) notes, "I believe that by building on the use of metaphor – which is basic to our way of thinking generally – we have the means of enhancing our capacity for creative yet disciplined thought, in a way that allows us to grasp and deal with the many-sided character of organizational life" (p. 17).

Metaphors and analogies have not only been used to explain phenomena in the physical sciences, such as Isaac Newton (1643-1727) and the apple, they have also been used extensively in political economy, such as the Adam Smith (1723-1790) and the "invisible hand" of resulting "hidden" community good through the collection of more "obvious" individual self-interest pursuits. In fact, Hodgson (1993) and other influential institutional economists, such as Kay (2002), argue that biological metaphors and analogies bring the "life" back to economics while Nissley (2002) reviews a whole range of potential visual, musical, and performing art metaphor applications in management and business. In addition to their value in explaining relationships and concepts, metaphors and analogies have also been extended and used to creatively solve difficult theoretical quandaries (Holyoak & Thagard, 1995). In essence, the underlying model suggests that the pedagogical use of metaphor and analogy allows us to gain a deeper understanding of the phenomena that occur around us, whether in psychotherapy, a marketing focus group, or management education.

Some types of metaphors are considered "shallow" – simple comparisons ("as tall as a tree"), while others are considered "deep" in nature. Deep metaphors, for example, relate to similarities of relationships, processes and forms (strategic management as a growing tree) and are more meaningful because it carries multiple levels of information. Deep metaphor is of sufficient sophistication to enable the thinker to extend the metaphor in ways that generate insight and intuition. As such, deep metaphor becomes the basis of analogical reasoning, one of the cornerstones of strategic decision making. An analogy refines the metaphor by focusing on the relationships between the primary elements of the metaphor (Vosniadou & Ortony, 1989). Analogical reasoning, then, is the transfer of an explanatory structure from the source domain to the target domain.

Economic Activity, Business Institutions, and Metaphors
Viewing organizations through metaphors can illustrate a variety of perspectives that individuals might have possibility about the same situation. These various perspectives, or cognitive paradigms, generate unique insights into the underlying dynamics of the organization and lead to a more complete and comprehensive understanding of organizational phenomena. Through this process of disciplined imagination (Morgan, 1986; Weick, 1989), metaphoric insights can be refined through analogical reasoning to better understand the causal mechanisms driving organizational phenomena (Tsoukas, 1991).

Organizations are complex, ambiguous and paradoxical. Metaphorical and analogical reasoning may provide an effective way of dealing with this complexity. By opening up thought processes to various perspectives through the process of diagnostic reading and critical evaluation, a prescription for effectively dealing with the realities can be formed and acted upon (Morgan, 1986). As representative of an idea or concept, art can be conceptualized as a visual or aural metaphor. Although considered a figure of speech, through the creation of

a work of art and its subsequent interpretation, artistic symbolism and linguistic symbolism are combined to become a powerful means of describing management of organizations.

Project Description

Students in the senior-level undergraduate capstone business course were asked to create an original piece of art that depicts or represents a key management concept. The students were provided with a list of key management concepts to select from. These concepts included topics such as organizational change, leadership, strategic management process, organizational culture, competitive dynamics, etc. Students were free to choose the form of art they felt was most appropriate to convey their selected subject matter. The types of art included visual art (paintings, sketches, sculpture), music and performance art (drama, dance).

In addition to the artistic component, students were required to interpret their art in a short paper. This portion of the overall assignment provided students with the opportunity to explain how and why their selected metaphor represented the management concept and to comment on the effectiveness of the assignment. The written section of the project forced students to articulate the reasoning underlying the connections between the management concept and the metaphor they selected to represent it. In addition, students were asked to explain in more literal terms how the artistic medium and symbolism they employed was appropriate to elucidate the selected management concept.

By requiring the students to depict or portray a management concept through artistic symbolism, they were essentially asked to develop images and metaphors that represented these concepts. While the benefits of these tools seem clear, building an effective analogy requires a certain amount of appropriate experience from which to draw upon, a point perhaps lacking in some undergraduate students (Hannon, 1997). In addition, many students have little experience in formally applying analogies and symbols as a means to explain complex concepts and relationships.

The essential value of metaphors is that they enable the user to apply what they know to a less familiar, yet analogous, situation. It is expected that students, relatively unfamiliar with this pedagogy and lacking in extensive life experience, will draw upon symbols and metaphors familiar to their life experience.

Overall, the assignment generated a wide variety of artistic approaches. The vast majority of students utilized visual art, primarily in the form of paintings and sketches. However, a number of students opted for other representations. Some students penned works of poetry in conjunction with their visual art. Other students created and performed a musical representation of the management concept; a couple students even combined the music with a dance sequence. One student choreographed and performed a dance as her original work of

poetry was being read, while several students "sewed" as their creative endeavor, such as a pair of pants and or a pillow.

Very few of the students had any formal art training, so the artistic renderings were often simple and lacked technical sophistication. However, the purpose of this project was not related to the quality and sophistication of the art, but was intended to encourage students to create artistic symbolism as a way toward "outside-the-box" thinking.

The exercise has been administered from 2001 to the present time, with over 800 students in approximately 30 sections of the capstone business course at two different large public universities. Universally, business students seem to struggle with developing artistic symbolization that was more abstract in nature. As a result, many students often feel the need to include literal language within the work of art. Perhaps this is intended to "help" the viewer to understand the art, or perhaps it was due to the creator's discomfort with abstract art. As an example of this resistance to higher-order thinking in metaphors, in the first couple years of the exercise, many students created collages from magazine clippings or simply modified objects they had bought from a craft store in small ways. This seemed to indicate that many students remain timid and unwilling to "risk" expressing themselves in purely artistic ways. The use of "words" in paintings, "collages," and simple modifications of existing art were subsequently restricted in later years to force students into true metaphorical thinking.

Although the sophistication of the art created for this project may have been limited, the more important issue involved the sophistication and relevance of the metaphors that were embodied in the art. Ultimately the goal of the project was to increase students' reflection on important management concepts and theories as a way to develop a richer, more personal understanding of the concepts.

Metaphors of Management and Business in Student Art

In order to provide a framework for analysis of some of the metaphors students utilized to depict management issues, we utilize the foundational work of Gareth Morgan (1986) and his eight metaphors of organizations. Interestingly, all eight of Morgan's metaphors were represented in the students' efforts. The most prevalent were the "organizations as machines" and the "organizations as organisms" metaphors.

The essential idea driving the "organizations as machines" perspective is that there are identifiable goals and a rational systematic way to achieve those goals through command and control of organizational resources. Symbols depicting this included engines, boats, planes, calculators, wheels, houses and rocket ships. Figure 1 shows a "machine" metaphor of aircraft, and control of congestion on a runway.

The following quotation from another student illustrates the connection made between organizational management and machines:

Figure 1.

> An engine and a business are composed of many different 'parts.' A synergy must be accomplished to get these 'parts' to work together and accomplish the desired goal. The more working components you have, the more likely/often it is to fail. Businesses are no different in my mind.

The second most prevalent type of image is "organizations as organisms." This metaphor recognizes that organizations are dependent on the surrounding environment and that, like living organisms, they must adapt to these constraints. While a variety of living organisms have been offered, most often students built upon images of plants interacting with other elements of nature. Figure 2 shows a typical "plant" metaphor.

An example of the analogy of plants and organizations is reflected in the following quotation from a student paper:

Figure 2.

> In order for a tree to survive, it creates an extensive network of roots. These roots can be compared to the large amounts of initial capital that is so often required for a business to grow. Like the roots, during hot and dry stressful conditions food is available for the tree to survive. When the economy is down or business is slow, these funds are used to keep the business afloat.
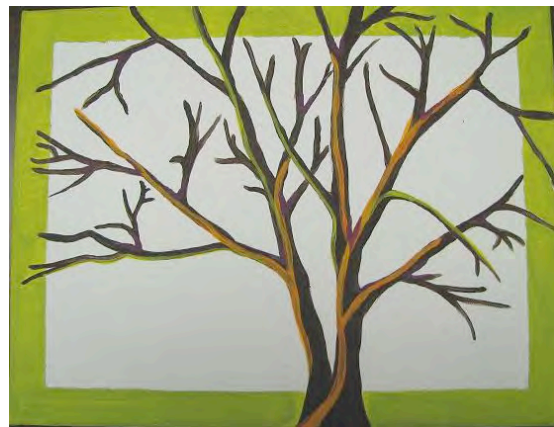
The notion of adaptation and change was a prevalent theme related to this metaphor. Images of nature, such as the metamorphosis of butterflies, were tied to organizational change and transformation. The resourcefulness of beavers using skills, knowledge and effort to make the forces of nature work for the benefit of the lodge was also used to illustrate an organization's

adaptability to environmental constraints. The power and potential of this metaphor can be clearly seen by the advent of the organizational ecology theory (Hannan & Freeman, 1989).

While organizations as "machines" and organizations as "organisms" were the two most prominent metaphors, Morgan's other images were also present in the students' work. For example, the metaphor of "organizations as flux and transformation" was captured in one student's observation that the chord progression of blues music mirrored the tension and resolution of the dialectic and that this is much like the pace and rhythm of ongoing organizational change directed through strategic management. The student explained:

> The tasks of strategic management follow a series of steps just as the form of the Blues does. The Blues sound and rhythm in this piece comes from adherence to what is called the "I-IV-V" chord progression. The "I" chord represents the task of developing a strategic vision. This chord establishes the key that the piece is in just as vision establishes the foundation of strategy. The "IV" chord represents crafting and implementing strategy. This chord is the meat of the piece. It is known as the dominant chord. The "V" chord represents the evaluation task, because this chord needs to have what is known as resolution in the listener's ear. The resolution is to return to the "I" chord.

This metaphor nicely captures the nature of strategic management as an ongoing process of "alignment" combined with improvisation. Misalignment, discovered in the evaluation stage, creates a dissonance that needs to be resolved. Often times this metaphor was presented in the form of a song or dance that could show elements of evolution, movement, and transformation to greater unity, or a modernistic painting of color transformation (see Figure 3).

Figure 3.

Morgan's "organizations as brains" metaphor was also evident in students' artwork. Projects fitting this metaphor depicted diverse elements all managerially organized into a productive whole. In one case, a student created a sphere with a large number colorful straws sticking out of it. At the end of each straw was a label which contained critical concepts and components of strategic management. The idea behind this is that all these aspects of strategic management come together, in the form of the sphere. Each is intertwined, interacts and thereby contributes to make the company successful. In a similar metaphor using a jig-saw puzzle, one student noted (see Figure 4).

The different colored puzzle pieces represent the different business units such as raw materials production, manufacturing, transportation, marketing, and retailing. The reason for the different colored puzzle pieces was to illustrate the differences between each business unit. However, unlike the different colors, each puzzle piece fits perfectly to the pieces around it. The shoestring that interlaces all of the puzzle pieces represents a strong leadership and management team that is able to efficiently bring all of the puzzle pieces together. I left off one puzzle piece to show that in order for a firm to vertically

Figure 4.

integrate effectively, all pieces of the puzzle must be intact or all business units must work together. And one the last piece of the puzzle is put into place; the shoestring can be tied, which shows success from integration.
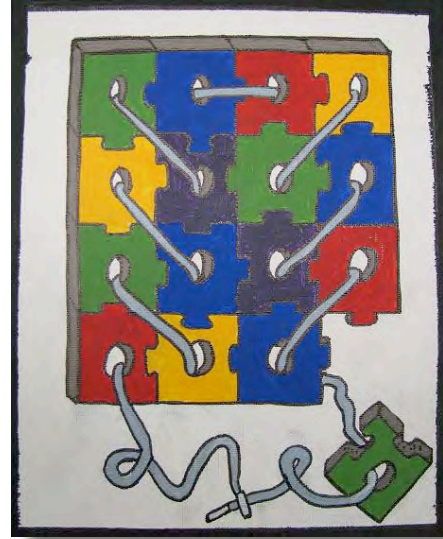
Images of "organizations as political entities" were often captured in the idea of a need for a balance of power within organizations (Figure 5). This is representative of the idea that organizations are comprised of competing self-interested parties that must resolve conflict through ongoing negotiation. One student depicted this with a balance scale. She notes:

The piece of art that depicts and represents the strategic management process in my mind is the balance. Balance is needed in every aspect of an organization for it to be successful. The balance of powers is the most important aspect of the management process. It is very important that there is not one person or a select few that have all of the power in an organization. Power needs to be spread out evenly throughout the organization.

Figure 5.

Another student (see Figure 6) illustrates the competing forces within a large corporate or political institution, and the suspicious and self-interested aspects that drive large organizations apart. In this painting tensions clearly develop that inhibit moving toward cooperative agreements and higher levels of success.

Images of cooperative activities are often presented as a symbiotic, biological or ecological relationship. In these images, two self-contained entities develop combined synergies that lead to a greater organizational productivity. In one artwork of the Rhinoceros and Oxpecker (see Figure 7), the student explains,

Figure 6.

The artwork depicts cooperative strategy between a rhinoceros and an oxpecker or tick bird. A rhinoceros can pretty much take care of itself. . . The oxpecker is a companion bird to the rhino. It perches on the rhino and eats the insects and ticks off the rhino's body. . . . This depiction is best described as a cooperative strategic alliance with skill substitution. The Rhinoceros represents a large firm that has formed a strategic alliance with a smaller firm. The smaller firm can perform a function the Rhinoceros or big firm can't do for itself efficiently, in turn the oxpecker bird gains benefit by receiving an abundance of food or 'profits'.

Figure 7.

Morgan's "organizations as culture" metaphor was seen in the work of several students. One student, for example, depicted the Round Table from King Arthur's court. The student explained how balance has important consequences for the culture of the company.

The round table also eliminated any envy and jealously between the division. Thus, I could easily see a parallel between today's business culture, specifically the value chain, and King Arthur's round table. In the center of the table is a round bowl with Strategic Management written on the side with each slice of the table touching this bowl. The bowl in the center of the table represents unity and the goals of the organization.

Morgan's metaphor "organizations as instruments of domination" was also referenced. One student, for example, depicted a large mountain. In the following segment of the picture this "mountain" has collapsed and sunk into the ocean, representing the decline of Enron into the sea of "hidden debt, bankruptcy, fraud, and shame."

Finally, a few students also utilized the "organizations as psychic prisons" metaphor. In a drawing entitled "Little Room", there is a man sitting in a small darkened room with his head down in a depressive, pensive state. Outside, through the doorway, is a sunny, bright day, a beautiful lake with scenic mountains in the background (Figure 8). The student comments:

> The work concerns a nameless man who has worked his entire life to increase his own financial standing. In financial terms, he is very successful. This man, however, is far from happy. His whole world is so dark that he does not even notice the beauty that is right outside his door. So, what will he do, remain a slave or start anew?

Figure 8.

The idea behind this particular metaphor is that organizations are sustained by conscious and unconscious processes where people are trapped and confined by images, thoughts and ideas or favored ways of thinking. Organizations force individuals to repress their innermost desires. In the case above, the man is repressed, trapped in an unhappy unfulfilling career and is unable to recognize the beauty just outside his door.
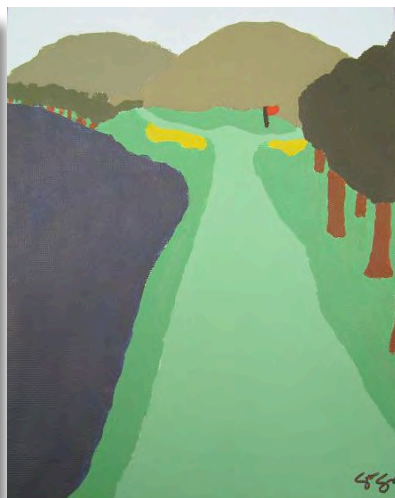

In addition to Morgan's metaphors of organizations, many students also depicted strategic management as a competitive game. Within this context, a variety of metaphors were utilized including baseball, football, golf, chess, billiards, or golf (see Figures 9 and 10).

Figure 9.   *Figure 10.*

These conceptualizations of strategic management emphasized competition and competitive dynamics. These depictions often noted the limitations of competition in the way of laws and regulations as well as ethical behavior. While this metaphor is not included in Morgan's model, it does imply a very structured setting with participants doing specific tasks in an environment that is structured by rules.

Also, a significant number of students wanted to personally connect management principles with their own lives. They looked at management as having a significant parallel to the cycle of life they have experienced, utilizing metaphors developed from various theories such as the punctuated equilibrium model of organizational change or competitive economic models to discuss their own career strategies. One student wrote a poignant poem which detailed the struggles of her life as a minority single mother, and the leadership required to "keep her life together" and achieve her goals.

Project Evaluation

In order to assess the extent to which the project accomplished its pedagogical objectives, students were asked to complete a short, survey. The survey included a series of items that were quantitatively measured utilizing a 7-point Likert scale and an open ended question that asked students to provide their overall impressions about the project and its effectiveness. The survey included items designed to evaluate the extent to which the art project encouraged reflection and deeper understanding of management issues. A second section of the survey included items designed to better understand the affective responses (fun, frustration, satisfaction, etc.) of students to the art project. Finally a series of classification questions were included to help identify factors such as their major area of study, gender, and orientation toward art utilizing instrument of aesthetic orientation reported in Galbraith, Siguaw & Lim (1995).

The surveys were administered immediately upon submission of the art project. The students were informed that the survey was "intended to gather your thoughts and opinions of the use of art in a management class." Students were encouraged to be as candid as possible because their answers would have no effect on their project or course grade. To minimize the effects of positive response bias, the survey did not require the students to identify themselves. After completing the surveys, students returned them to a departmental secretary. Because all students submitting projects were asked to complete the survey, a 100% response rate was achieved.

The data reported in this study was collected over a recent two year period (6 class sections). In total 157 surveys were returned. The respondents represented a variety of majors, including: management (28%), marketing (22%), MIS (14%), finance (12%) accounting (9%), international (7%) and miscellaneous (8%). Fifty-one percent of the sample was female.

Survey Results

Four questions were developed to assess student learning perceptions (see Table 1). The four items correlated highly and demonstrated a high level of reliability (Cronbach alpha = .87). The high level of internal reliability indicated by Cronbach's alpha suggests the four items reflect a single underlying dimension related to student learning. As a result for subsequent analysis the data were aggregated into a single item measure of the student assessments of learning outcomes. The results provide evidence that the students perceived that the project was effective learning tool (mean = 5.76 on a seven point scale).

Table 1: *Learning Outcomes*		
Learning Outcomes: Cronbach Alpha = .87	Mean 7= Strongly agree 1= Strongly dis.	Std. Dev.
The art project helped increase my understanding of strategic management.	5.91	1.05
While working on this art project, I found myself engaging in a deeper level of thinking than I normally do when preparing for exams or studying to understand key management concepts.	6.01	.99
The art project helped me to think about how the various parts of strategic management fit together and relate to the strategic management process as a whole.	6.07	.89
Through doing this art project, I learned things about strategic management that I wouldn't have if I had not done it.	5.08	1.30
Learning Outcome (average of above items)	5.76	.90

In addition four items were developed to assess students' level of satisfaction with the project (see Table 2). The four items demonstrated an adequate degree of reliability (Cronbach alpha = .76) and were therefore aggregated into a single satisfaction variable for subsequent analysis. The results provide evidence that the students found the art project to be a positive experience (mean = 5.91 on a seven point scale).

Additional analyses were carried out to see if these findings differed by gender or major field of study. Neither gender nor major field of study had a significant impact on perceptions of learning outcomes or positive outcomes. Thus contrary to what might be expected, students from more quantitative disciplines, such as finance or accounting, did not find the project any less enjoyable or any less of a learning experience than students from less quantitative majors.

The three "art orientation" items (from Galbraith, Siguaw & Lim, 1995) were: 1) perceived personal importance of art, 2) personal perception level of creativity, and 3) perceived level of art related knowledge (see Table 3). These items correlated highly and a reliability analysis

Table 2: *Project Satisfaction*

Project Satisfaction: Cronbach Alpha = .77	Mean 7= Strongly agree 1= Strongly dis.	Std. Dev.
I am very satisfied with my efforts on this assignment	5.95	.94
I would encourage the professor to continue to utilize this assignment.	6.27	1.05
This assignment was more fun than a normal exam.	6.38	1.08
The art project was very frustrating. - R	2.94	1.72
Project Satisfaction (average of above items)	5.91	.92

indicated that these items demonstrated a high internal reliability (Cronbach alpha = .80). Thus these items were aggregated into a single measure of the student's art orientation. The results indicated that students viewed themselves as relatively art oriented (mean = 4.41 on a seven point scale with seven = high art orientation).

A correlation analysis was performed to examine the impact of the student's art orientation on their evaluations of the art project. The analysis indicated that students' art orientation was significantly and positively related to both: 1) their satisfaction with the project (ρ=.472, p<.001) as well as 2) the perceived effectiveness of the project as a learning tool (ρ=.250, p<.001). These findings were further analyzed by creating subgroups of high, moderate and low level or art orientation. Encouragingly, even the students in the low "art orientation" group held favorable impressions about the project (mean of learning = 5.52, mean of satisfaction = 5.40).

Table 3: *Art Orientation*

Art Orientation: Cronbach Alpha = .80	Mean 7= Strongly agree 1= Strongly dis.	Std. Dev.
Art is an important part of life for me.	4.78	1.76
By nature, I'm a creative person.	4.89	1.69
I consider myself to be very knowledgeable about art.	3.56	1.65
Art Orientation (average of above items)	4.41	1.44

The open ended question asking students to comment on the assignment as a learning experience provided additional insight into students' perceptions of the project and the extent

to which the assignment encouraged them to engage in creative and "big picture" thinking. The reaction to the assignment was overwhelmingly positive. The responses below highlight the challenges that the project demanded of students not typically required to be creative.

> When this assignment was first given, I was very puzzled at what exactly the purpose of it was. Most of my assignments have been papers, case analyses, spreadsheets, excel, powerpoint, etc. This project made me realize that even though "thinking outside of the box" has always been an emphasized concept that a good strategic manager must possess, students aren't given many opportunities to actually do this. It did take me a while to come up with an idea of what concept I wanted to focus on and how I was going to represent it. However, afterward I realized that coming up with a piece of artwork to represent the strategic management process really made me review all of the many concepts that I have learned about.

Several students described the creative process and how they arrived at the metaphors they depicted in their art projects. The comments from the student below highlight the type of non-linear thinking that the project fostered among many students.

> Doing this project forced me to think about management in a different light. For the first few days after the assignment was given to us I was quite frustrated about having this as my final exam. After all, you are asking a business student, who is taught to start at step 1 and move directly down the list until it is complete, to think outside of the box. Be creative….how do I do that? I woke up one morning and what popped into my head was a picture of the solar system. How could I apply that to management? It really did not all come together for me until I actually had the physical artwork in my hands. Once I actually had something tangible to look at from different angles, it all fell into place. Suddenly, I had a rush of ideas and concepts I had learned over the semester and could not write them down quickly enough. From that point on the project became fun. I enjoyed analyzing my artwork and turning it into management in its physical form."

Conclusion

As the students' comments seem to indicate, the project does appear to accomplish its overall objective. As a pedagogical device, we wanted to use art to help students build a deeper understanding of the strategic management of organizations and the topics covered in the course, but also think at a higher level, using imagination and metaphors. The process of creating an art work, then interpreting the metaphors and themes embodied in the art work, clearly encourages students to develop a deeper understanding of the material. In addition, we

wanted to provide students with the opportunity to simply exercise their creative muscles, which as many authors and students have pointed out, has been sorely neglected in the business curriculum. Finally, we wanted to make the learning experience more meaningful and memorable. While most students seemed to enjoy and learn from the experience, some students were inhibited from fully expressing themselves through abstract thought and art, and felt more comfortable working in more "shallow" metaphorical representation rather than deeper symbolism and reflection. This perhaps is an indication that assignments such as this one should be introduced to students earlier in their business studies.

This paper represented an experiment on several dimensions. Art in the professional business school remains a "foreign" concept. We feel that this is unfortunate. If we are to adequately prepare our students to be effective business leaders in an increasingly complex world, we need to help them develop effective thinking skills that match in sophistication and complexity the environment.

Notes

[1] A related path of research has suggested, in fact, that just by experiencing an artistic situation such as music, reasoning and other cognitive skills can be improved. This phenomenon is now known as the "Mozart Effect," and has lead to a virtual industry of classical music videos and art appreciation programs for babies and children.

[2] There does appear to be a small, but expanding group of consultants that advocate "corporate art therapy" as a way of complex communication within a business setting (e.g., Harris, 2001, Laywine, 2008). Several universities, including the University of Hertforshire, have recently developed courses in "art therapy" which often include a business component. Moorman and Miner (1998) review a range of corporate art therapy papers.

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