

Sustainability in Strategic Management Education: The Quest for New Root Metaphors

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The integration of sustainability into strategic management education has recently evolved from a marginal issue into one of greater importance and centrality. Sustainability-related subjects (e.g., reducing energy consumption, conserving water supplies, improving air quality, preserving endangered species and ecosystems) have been added to the curricula of undergraduate and graduate programs and to strategic management textbooks. The current reforms will not, however, create deep or lasting change if the root metaphors underlying strategic management education remain unchanged. Metaphors are integral to the way we act, interact, and think about the world. They are also central to the discussion of sustainability in strategic management, as with any complex and fluid phenomenon. While various metaphors have waxed and waned in popularity over the years, the war metaphor still guides strategic management theory, research, and education. In light of the challenges of sustainability, a reappraisal of the war metaphor is overdue. We need to consider its role and impact in our approach to sustainable strategic management education. My purpose in this exercise is twofold: (1) to arrive at an enriched understanding and deeper appreciation of the war metaphor in strategic management education, and (2) to provide some insights into how new metaphors can be created, assessed, and promoted to establish sustainability as a framework for strategic management education.

“No generation has viewed the problem of the survival of the human species as seriously as we have. Inevitably, we have entered this world of concern through the door of metaphor.”

—G. Hardin
Living on a Lifeboat, 1974

The Brundtland Report defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987: 43). Sustainable development requires integrating social, economic, and ecological

aspirations, goals, values, and related practices (Milne, 1996; Hopwood, Mellor, & O’Brien, 2005). Over the years, sustainability-related subjects have been included more or less reluctantly in the curricula of business programs (Walck, 2009). There is an ongoing debate over whether sustainability should be taught as stand-alone elective subjects or whether it should be integrated into core courses. Under the first option, sustainability would run the risk of being seen as a separate issue, disconnected from larger business concerns (Carrithers & Peterson, 2006; Gruenewald, 2004). With the second option, management educators would have to challenge students’ worldviews and encourage them to explicitly analyze their assumptions about business, the environment, and society (Ghoshal, 2005; Stubbs & Cocklin, 2008). My work here supports the second option, drawing on the rich literature on metaphor (Lakoff & Johnson,

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1980; Morgan, 1986; Tsoukas, 1993; Cornelissen, Kafouros, & Lock, 2005) to suggest how it can be used to integrate sustainability into strategic management education.

One of the challenges in integrating sustainability into strategic management education is determining how to present technically complex topics, such as energy conservation, climate change, biodiversity, and other science-based subjects to business students (Stubbs & Cocklin, 2008). A more important challenge is to find out how sustainability-related issues and values can be made an integral part of strategic decision making (Stead & Stead, 2004; Throop, Starik, & Rands, 1993).

Sustainability has always been difficult to assess directly, since it is an abstract, multidimensional construct (Milne, Kearins, & Walton, 2006). This is why management scholars and educators use metaphors to convey their message (Sama, Welcomer, & Gerde, 2004). There is a continuing and growing interest in the study of metaphors in management education (Beatty, 2004; Anderson, 2007; Taber, 2007; Musson, Cohen, & Tietze, 2007). Their heuristic value has become widely recognized (Cornelissen, 2005) as carrying useful bodies of knowledge accumulated across a variety of fields (Tsoukas, 1991).

In spite of the relative popularity of metaphor as an object of analysis, management scholars and educators are unaware of all the metaphors they employ on a daily basis (Hamington, 2009). Glucksberg and Haught (2006) noted that 25% of the words in a broad sample of science texts are metaphorical. Skorzynska and Deignan (2006) found an even wider range of metaphors in the popular and student-oriented business corpus than in the scientific business corpus. Strategic management students are accustomed to seeing metaphors explain strategic concepts (Grandy & Mills, 2004); for example, the BCG's Growth-Share Matrix uses animals (i.e., cow, dog) to help corporations decide where to allocate cash in their business units. While the use of some metaphors may appear benign, the use of others has a subtle but wider impact. Beatty (2004) notes that the reliance on economic metaphors has grown steadily across all fields of academia, even in the way we conceive the grading system. Similarly, the "natural capital" metaphor has been described as a way to impose an economic view on natural processes (Åkerman, 2005).

One of the main sources for models, analogies, and metaphors in strategic management education has been the domain of warfare/military practice and theory (Bracker, 1980; Henderson, 1989;

Cummings, 1993; MacFarlane, 1999; Talbot, 2003). Strategic management scholars and educators freely employ this metaphor in both subtle and obvious ways. The "state of war" is still implied as the basic metaphor for business activity by the field's most preeminent scholars (Porter, 2008; Ghemawat, 1999). A quick review of the business section of any bookstore will reveal numerous titles that reinforce this metaphor. Koller (2004) has shown the centrality of the war metaphor in the description of male as well as female corporate executives in business magazines. Use of this metaphor is not limited to popular business improvement books; it is one of the dominant root metaphors to have guided theory, research, and education in strategic management (Talbot, 2003). We can find examples of direct transfers of warfare theory into business strategy, such as the widespread popularity of applying Sun Tzu's *The Art of War* to business practice (Heath, 2007; Krause, 1995).

Strategic management scholars have, in general, had little to say on the implications of the war metaphor on business activity (MacFarlane, 1999). I would suggest that the deeper implicit contextual structure of this metaphor has potentially negative ramifications for sustainability, primarily because it creates or supports a bias toward adversarial relationships between business actors. In light of the challenges in achieving sustainability, a reappraisal of the war metaphor in strategic management is overdue. Moreover, emphasizing the need to generate new metaphors may foster a process of change toward sustainability (Sama, Welcomer, & Gerde, 2004; von Ghyczy, 2003; Mitchell & Saren, 2008). For students to effectively learn about sustainability, they need to develop the ability to think in new ways—to engage with different worldviews (Stubbs & Cocklin, 2008).

My purpose in this essay is twofold: (1) to arrive at an enriched understanding and deeper appreciation of the war metaphor in strategic management education, and (2) to provide some insight into how new metaphors can be developed, assessed, and promoted to establish sustainability as a framework for strategic management education. Metaphors have been described as some of the cultural artifacts that need to be changed in order to foster organizational change (Higgins & McAllaster, 2004; Johnson, 1992; Shrivastava, 1985) and pedagogical change (Ghoshal, 2005). The remainder of this essay is structured as follows: In the first section, I review the debate around the nature and repercussions of metaphors. In the second section, I describe the pervasiveness of the war metaphor in strategic management theory, re-

search, and education. I also show the benefits and pitfalls of this metaphor as well as its spillover into other fields of study, including sustainability. In the third section, I offer some thoughts on how to generate, evaluate, and disseminate new metaphors for strategic management education, given the challenges presented by sustainability.

NATURE AND POWER OF METAPHORS

There is an ongoing debate on the nature and value of metaphors in management (Cornelissen, 2005) and sustainable development (Dryzek, 2005). While some scholars see metaphors and analogical thinking as important (Llewelyn, 2003; Ferraro, Pfeffer, & Sutton, 2005), others would rather see their use restricted or eliminated (Pinder & Bourgeois, 1982; Buchanan, 2005). Tsoukas (1993) identified three distinct perspectives on metaphor: as a rhetorical device, an ideological distortion, and a way of thinking.

The first perspective views metaphors as merely ornamental and expendable linguistic, literary, and rhetorical devices (Pinder & Bourgeois, 1982). Because they distort the analysis of facts that should be stated literally, they have no place in objective, rational science. Metaphorical insights and analogical reasoning need to be transformed into a literal language that expresses real mechanisms and identities (Pinder & Bourgeois, 1982). From this perspective, metaphor should be consciously minimized or restricted as far as possible, and management scholars "should seek to express their ideas in language that is inventive, precise, and organic to the subject" (Buchanan, 2005: 19). This perspective also has proponents in the realm of sustainability. For instance, Dryzek (2005: 18) agrees that many metaphors figure in key environmental discourse (e.g., spaceship, grazing commons machine, organism, war against nature, and the goddess Gaia). However, he believes that metaphors are primarily rhetorical devices, deployed to convince listeners by throwing a particular light on a situation.

The second perspective views metaphors as potential ideological distortions (Tinker, 1986). They convey powerful biases that camouflage the social underpinnings of the reality to which they refer. Their manipulation helps dissimulate social conflict and inequality at the expense of underprivileged stakeholders. For example, Livesey and Kearins (2002) show how metaphors of caring and transparency have been used in sustainability reports in an attempt "to offset resistance by blurring the distinction between the companies and their potential critics" (Livesey & Kearins, 2002: 252).

Milne, Kearins, and Walton (2006) found the same distortion in the prevalent metaphor in businesses' representations of their engagement with sustainability: "sustainability as journey." They argue that this metaphor masks the issue of what businesses are actually moving toward. In fact, corporate discourses on sustainability appear less concerned with an ultimate destination than with a journey to somewhere undefined. The construction of a "sustainability as journey" metaphor helps business avoid becoming embroiled in debates about future desirable and sustainable states of affairs. This metaphor helps maintain the status quo on the basic assumptions, and root metaphors, of business activity; it redefines sustainability in ways that do not threaten business as usual (Milne, Kearins, & Walton, 2006).

The present essay belongs to a third perspective, which views metaphor as a way of thinking. Although metaphors can be used as mere rhetorical devices or dangerous ideological distortions, they play a more fundamental role in shaping how we make sense of our experiences and setting the problems we later try to solve (Schön, 1979: 254). According to Llewelyn (2003), metaphorical thought, or analogical reasoning, is the first level of theorization available to human beings (see also Hogler, Gross, Hartman, & Cunliffe, 2008). It constitutes "a basic structural form of experience through which human beings engage, organize, and understand their world" (Morgan, 1983: 601). Root metaphors make up the ultimate presuppositions or frames of reference for discourse on the world or a domain within it (Pepper, 1972; Lakoff & Johnson, 1980). Accordingly, there is at least one root metaphor lying at the heart of every complex system of thought (Pepper, 1972: 96). Gladwin, Kennelly, and Krause (1995: 883) found a root metaphor of the Earth at the heart of three alternative environmental paradigms: A "vast machine" in technocentrism, a "life support system" in sustaincentrism, and a "mother/web of life" in ecocentrism. These three root metaphors have repercussions on various key environmental assumptions, such as the value of nature, the relationship between humans and nature, and the role of humans in nature (Gladwin, Kennelly, & Krause, 1995).

From the "way of thinking" perspective, metaphors have both explicatory and generative impacts. Indeed, they do not simply describe an external reality, they also help constitute that reality and prescribe how it ought to be viewed and evaluated (Tsoukas, 1991). Taken together, the explicatory and generative impacts capture the main cognitive effects of metaphors on scholars' and

educators' framing and understanding of problems (Cornelissen & Kafouros, 2008). This, in turn, has repercussions on what and how educators teach as well as consequences for students' knowledge (Ghoshal, 2005); ethical behaviors (McCabe, Butterfield, & Treviño, 2006); and emotions (Hawk & Lyons, 2008). Management scholars and educators need to show more awareness and leadership regarding the metaphors they use. The fact that the language they use in the classroom is saturated with metaphors should not prevent them from assessing—and indeed should cause them to assess—the appropriateness of these metaphors or from deciding whether they should continue using them (Mutch, 2006).

THE WAR METAPHOR IN STRATEGIC MANAGEMENT EDUCATION

Critics contend that strategic management education is based on a few root metaphors but relies on a multitude of seductive models (e.g., SWOT analysis, PESTEL, value chain) that oversimplify the inherent complexity of strategic thinking (Grandy & Mills, 2004; Hill & Westbrook, 1997) to provide a false impression of rationality, efficiency, and universality (Barry & Elmes, 1997; Knights & Morgan, 1991). In this section, I explore the explicit and implicit use of the war/military metaphor in strategic management education. According to Bracker (1980), the classical view of business strategy is based on a war/military tradition complemented with an intellectual contribution from economics. This classical view is now being challenged by other views (Mintzberg, Ahlstrand, & Lampel, 1998; Jarzabkowski & Whittington, 2008), but it remains popular due to its confidence in the capacity of managers to adopt profit-maximizing strategies through rational choice and long-term planning (Farjoun, 2008).

War metaphors liken business and related behaviors to warlike activities and events (Cornelissen, Kafouros, & Lock, 2005). The terms "business" and "war" are not synonyms, but they have enough in common that the source domain, "war," enlightens the target domain, "business," in a meaningful way. Familiar war/military vocabulary in strategic management includes the words and phrases *target*, *attack*, *capture*, *declare victory*, *defend*, *deploy*, *engage*, *kill*, *launch a campaign*, *lead the charge*, *strike*, and *take a shot*. The vocabulary of corporate restructuring includes expressions such as "declare war on competitors," "combat tenacious global competitors," and "management declares war on high costs" (Dunford & Palmer, 1996). The war metaphor is also prevalent in descriptions

of hostile takeover and mergers and acquisitions, with words such as hostility, battleground, warfare, fighter, and shotgun (Koller, 2002; Boyd, 2003). Some business leaders employ the same rhetorical strategies as generals preparing soldiers for physical battle (Clancy, 1989). For example, Amernic, Craig, and Tourish (2007) showed how military metaphors and images were recurrent throughout Jack Welch's annual letters to GE stockholders.

Nowadays, virtually every strategic management textbook uses this metaphor, consciously or otherwise. For more than 3 decades, Porter's "five forces" framework has been used to teach students that firms "must compete not only with their competitors but also with their suppliers, customers, employees, and regulators" (Ghoshal, 2005: 75). The war of all against all and the quest for domination is said to form the keystone of the Porterian conceptual construction (Aktouf, Chennoufi, & Holford, 2005). In fact, war and military metaphors are so pervasive in strategic management education that their assumptions are a permanent fixture in the minds of strategic management educators. The underlying assumption is that problems in business are analogous to problems in war, and that the lessons and principles of military strategy can, therefore, be applied to business (Anthony, 1964: 27; Hansen & Smith, 2006; Danby, 2007).

Origin and Expansion of the War Metaphor

The business-as-war metaphor is a subset of the larger and older metaphoric structure that equates life to a perpetual war (Clancy, 1989). Heraclitus (521–487 BCE) saw conflict and strife as the creative force behind all processes, and thus proclaimed "war is father of all and king of all." Several centuries later, Thomas Hobbes (1588–1679) wrote that the basic human condition "is a condition of war of everyone against everyone." Likewise, the idea of an analogy between the business world and that of the battlefield is not something new (Henderson, 1989). The word "strategy" itself derives from the ancient Athenian title, *strategos*, denoting a supreme commander of the Athenian armed forces (Cummings, 1993). The term combines the words *stratos* ("army") and *agein* ("to lead"). The Greek verb *stratego* means to "plan the destruction of one's enemies through effective use of resources" (Bracker, 1980: 219). While Tsoukas (1991) holds that *strategos* has become a dead metaphor no longer associated with its progeny, other authors show a direct link between old and modern definitions of the word "strategy" (Bracker, 1980; Knights & Morgan, 1990).

The war metaphor became a key ingredient in

business thought in the latter half of the 19th century (Clancy, 1989; Knights & Morgan, 1990). However, it was the development of military strategy during the two world wars of the 20th century that ultimately provided a suitable model for private industry, which was facing pressures from local and international competition (Knights & Morgan, 1991; Ghemawat, 1999). The prestige of military leaders (e.g., MacArthur, de Gaulle, Eisenhower) derived from the victory over the Axis added weight to the view that strategy was central to this success. Since then, the business community has appropriated key elements of the war/military use of strategy, including its emphasis on a professional elite, perception of other actors as expendable resources, and treatment of the external environment as an obstacle to the organization's development (Knights & Morgan, 1990). The war metaphor provides a single unifying solution for organizations struggling to present a consistent identity and develop an "enemy mind-set" among stakeholders, marshaling attention and emotional involvement against a formidable adversary. It may even encourage greater stakeholder participation by convincing them of the magnitude of the crisis (Boyd, 2003).

There are various applications of war and military strategies to business practices. Anthony (1964) categorized business decision making into strategic, tactical, and operational levels. He believes that strategic management "should be able to profit from what the military has already learned and published" (Anthony, 1964: 27). Sun Tzu's *The Art of War* is widely regarded as a classic text, providing many lessons for contemporary management warriors (Lundell, 1997; McNeilly, 1997). The realpolitik of Machiavelli is considered an appropriate analogy to represent the harsh reality of business life (McAlpine, 1997). French military writer Antoine-Henri Jomini created the word, "logistics," in the context of military strategy, but now logistics is a major tool in operations management (Whysall, 2001). Prussian chief of staff Helmut von Moltke is admired by business academics for his understanding of strategic principles (Hinterhuber & Popp, 1992). Ries and Trout's (2006) espousal of warfare practices in marketing is largely based on the writings of Prussian military historian Carl von Clausewitz. One quote from their bestseller *Marketing Warfare* summarizes the situation well: "The true nature of marketing today involves the conflict between corporations, not the satisfying of human needs and wants" (Ries & Trout, 2006: 7).

Pitfalls of the War Metaphor in Strategic Management Education

Some authors have expressed concern over the different ways that the war metaphor shapes the learning and practice of business strategy (Hansen & Smith, 2006; Oliver, 1999; Mutch, 2006; Clancy, 1989; MacFarlane, 1999). The first pitfall of the war metaphor is that it creates a bias toward adversarial relationships, which represent only one form of social interaction. In a worldview structured by competition and antagonistic relationships, mutual and reciprocal relationships are marginalized and denaturalized (Hamington, 2009). Overt or covert usage tends to polarize participants in dialogue, reducing the possibility of negotiation and compromise that might lead to more harmonious solutions (Boyd, 2003). This metaphor seems to reinforce a Hobbesian view of human nature that overshadows the human capacity to make common cause. Similarly, it can become a self-fulfilling prophecy (Ferraro, Pfeffer, & Sutton, 2005); if we assume that our protagonists are hostile, they will likely be hostile when we are hostile (Weick, 1979).

Second, the adoption of the war metaphor in the classroom may come with the endorsement of the simplistic idea that there are no rules in the conduct of warfare. But this "realist" conception of war provides an unhelpful and inaccurate caricature of the nature of both war and business behavior. In fact, there are powerful moral and social conventions that govern the conduct of war, with the notable exception of guerilla warfare (Clancy, 1989). There is a range of actions that constitute acceptable conduct in war (e.g., treating prisoners of war with decency, not shooting someone who waves a white flag). Like the conduct of warfare, business life is not akin to a Hobbesian state of nature. The conduct of war, if understood as a site of ethical decision making, can provide a meaningful analogy. It is possible to develop a more sophisticated understanding of the war metaphor in place of a simplified state of nature realism (MacFarlane, 1999). But to promote the idea of a life-and-death struggle, without limits or constraints, is to send a dangerous signal to business leaders (Clancy, 1989).

A third pitfall of the war metaphor is the perceived disconnection between morality in business and morality in society at large. By making the morality of business self-referential, business activity becomes less morally accountable to sources of normative ethics in society. Businesses might authorize the use of tactics that would be otherwise morally impermissible (Hamington, 2009). Winning and losing in the marketplace can

devastate lives; “crushing the competition” might entail behavior that endangers the interests of underprivileged, marginalized stakeholders. In the process of seeking victory or outmaneuvering an opponent, business decisions have ethical implications.

A fourth pitfall of the war metaphor is the fact that it likens the business environment to a “state of war.” The state of war is used in a popular argument employed by many strategic management scholars and educators to explain the imperatives of strategic decision making (MacFarlane, 1999). They thus maintain a stoic attachment to the warfare metaphor, secure in the belief that they are merely being realistic. However, treating business activity as if it were war cannot be justified as being more realistic or more bottom-line oriented. Sometimes, a head-to-head battle with competitors is at the expense of profitability (Hansen & Smith, 2006). In short, treating the business world as if it is ontologically in a state of war has consequences on how we relate to and understand business. Despite the many aspects of business that appear to be very much like a war, similarities should not be conflated with identity.

A fifth pitfall is that the language of war in business can depersonalize actions. Within a Hobbesian state of nature, corporate strategists can deceive themselves into believing that they are the victims of forces over which they have no control, in some sort of retreat from freedom. The “state of war” supports this type of status quo (Shrivastava, 1986) by treating some warlike routine practices as natural and immutable (Putnam, Phillips, & Chapman, 1996: 387; Knights & Morgan, 1991). Strategic management educators need to take responsibility for the consequences of what they teach. This is also true for students who, when they become business professionals, will need to shoulder individual responsibility for their actions rather than escape these responsibilities on the false pretext that things are what they are (MacFarlane, 1999).

Diffusion of the War Metaphor in Other Fields of Study

Strategic management is not the only realm conquered by the war metaphor. This metaphor pervades our thoughts, beliefs, and attitudes about many areas of life (Lakoff & Johnson, 1980). It has been seen and criticized in research and practice in biology and medicine (von Elm & Diener, 2007; Wenner, 2007). For instance, the language used by biologists when they discuss invasive species (e.g., plants or animals) reflects how they concep-

tualize such species and has implications for how they relate to and act toward these species. Although militaristic metaphors may draw attention to these species in the short term, they may ultimately generate inappropriate responses from biologists and governmental agencies (Larson, 2005). Similarly, the “medicine as war” metaphor has an effect on language, attitudes, moral beliefs, and actions with regard to the physician–patient relationship and to medicine in general (Warren, 1991). When we describe microbes as *enemies* that *invade* the body, is there a better option than to *declare war* on these diseases and unleash our *arsenal of weapons*?

As I mentioned earlier, the rich complexity of sustainability makes it difficult to grasp, and thus, the subject lends itself to figurative description. Over time, the discourse on key environmental issues has been built on a few basic conceptual metaphors (Dryzek, 2005; Romaine, 1996). The war metaphor is one of these, and is used especially with regard to the “war against nature.” In these matters, firms are sometimes described as intensive and effective environmental destroyers (Perrow, 1997). Orr (2004: 20) makes a direct comparison between World War II and the way human beings treat the environment:

Instead of World War II, think of the war being waged against nature. Instead of the Holocaust think of the biological holocaust now under way in which perhaps 20% of the life forms on the planet in the year 1900 will have disappeared by the early years of the next century. Instead of the fanaticism of the 1000-year Reich, think of the fanaticism inherent in the belief that economies have no limits and can grow forever.

Romaine (1996) examined the role played by metaphorical thought in the discussion of key environmental issues, such as global warming and loss of biodiversity. Some results suggest dramatic images of war. She found a general depiction of an escalating conflict between growth and the environment that makes some environmentalists see the need to “fight environmental threats” before it is too late. For some environmentalists, World War III has already begun, and this time it is being waged against the Earth, with the survival of the human species at stake (Romaine, 1996). The author also notes the stunning similarities between the discourse of environmentalists (e.g., to stop pollution) and that of political leaders (e.g., arguments used to justify the Gulf War). She also remarks that even the Greenpeace boat was called

Rainbow Warrior. Likewise, the pressure group *Friends of the Earth* seems to exist by virtue of its metaphorical opposition to those perceived as the Earth's enemies, as if they were opposing armies on a physical battlefield (Romaine, 1996: 178).

There must be a more appropriate way to connect sustainability with strategic management than the customary war metaphor, since war is often wasteful (e.g., in human and material resources) and chaotic (e.g., civil war, refugee camps, collateral damages), two characteristics that sustainable development proponents try to avoid. Moreover, the war metaphor assumes an enemy and the need for belligerent opposition, which may short-circuit other possible frames of reference for a given situation, including frames required for open dialogues or consensus-seeking discussions on common goals (e.g., carbon emissions reduction target). In short, environmentalists and other proponents of sustainability are now being challenged "to replace their doomsday discourse with an imaginative, inspirational, and future-oriented one" (Nordhaus & Shellenberger, 2007: 2).

A first answer to this challenge is to try to acknowledge the incidence of metaphorical fallacies, which consist of carrying a metaphor too far or holding the metaphor responsible for too much shared meaning between the source and target domains (Hamington, 2009: 475). In that case, the problem is not with metaphors per se, but with humans conflating their meanings. Hence, a second answer to this challenge is for management scholars and educators to become more deliberate about the metaphors they choose and more respectful of representations and efforts to improve them. When management scholars and educators construct and select theoretical representations of a particular target subject matter, they become both the source of variation and the source of selection (Weick, 1989).

THE QUEST FOR NEW ROOT METAPHORS

Kuhn (1962) argued that mere disconfirmation or challenge is not enough to dislodge a dominant social paradigm; this can only be achieved with a better or more convincing alternative. Similarly, Tsoukas (1993) argued that the most popular metaphors are those that reflect the dominant ideas and biases of a social era. In business schools, true transformation can only emerge once educators acknowledge the problems with the root metaphors of the dominant social paradigm and work to replace them with new metaphors in line with sustainable development (Bowers, 2001). The domi-

nance of the war metaphor should not lead us to the false assumption that alternatives do not exist. War is not the only metaphor applicable to strategic management, and certainly not the most suitable for harmonizing strategic management with sustainability. A step in this direction is to develop and promote alternative metaphors that would serve to defamiliarize, and hence raise questions or force a reconceptualization of strategic management education that is in line with sustainability.

Finding Metaphors for Sustainable Strategic Management

For several decades, scholars have developed new and challenging metaphors to describe what is happening inside, outside, and between organizations. The theater metaphor has provided a language of theater (e.g., actors, scenes, scripts) for framing and communicating identity and role attachment in organizations (Cornelissen, 2004), as well as for understanding the strategizing process (Vera & Crossan, 2004; Kanter, 2002). Similarly, several musical metaphors have been used in organization studies, including jazz and the symphony (Mantere, Sillince, & Hamalainen, 2007). Various dance metaphors have been used to describe the major changes encountered by large organizations (Kanter, 1989) and to develop leadership capabilities (Peterson & Williams, 2004). On a lighter note, Oliver (1999) suggests a food metaphor to discuss corporate strategy; images from cooking involve mixing things together, using heat to transform things, and waiting for them to be finished. Other scholars compare strategic management to a safari (Mintzberg, Ahlstrand, & Lampel, 1998) and organizations to different animals (Prince & Davies, 2004). Hansen and Smith (2006) suggest an existentialism-quest metaphor, describing strategy as an ongoing journey of realizing potential in terms of both capability and service. The challenge faced by each organization is similar to the challenge of finding one's place in the world. Just like individuals, organizations must determine not only who they are and what they are good at, but also how to translate this into something of value to the world (Hansen & Smith, 2006). Price, Roxburgh, and Turnbull (2006) have developed a metaphor combining performance and health to articulate strategizing and organizing activities in an organization. By "health," they mean the capability and capacity to deliver sustained performance over time and across multiple dimensions. They believe health should be discussed as regularly as performance, and conversations around both should be holistic, that is, concerned with the whole system rather

than focused on its parts.

Yet, not one of these metaphors has been able to supplement the war metaphor as a compelling way to understand strategic management. None is particularly in line with the key elements of sustainable development, although the health metaphor represents a move in the right direction (e.g., healthy ecosystems, ecological resilience). In order to explore new ways of integrating sustainability into strategic management, I decided to turn the question upside down. Rather than asking what strategic management can do for sustainability, one could ask: "What can sustainable development do for strategic management education?" I considered some of the metaphors used by proponents of sustainability to see whether they could help adapt strategic management to the challenges of sustainability. The first point to mention is that the proponents of sustainability have used a great many metaphors. Moreover, just as the war metaphor is embedded in a network of metaphors, sustainable alternatives are also embedded in a web of metaphors. Hence, the goal is not to find the "best" metaphor, but to find ways to work within a web of metaphors in harmony with sustainability's values and vision.

The basic conceptual metaphor used by environmentalists is "the Earth as a container" (Dryzek, 2005; Romaine, 1996). This generic metaphor gives rise to specific instantiations, such as "the Earth as a greenhouse," "the Earth as an attic," "the Earth as a storehouse," "the Earth as a lifeboat," and "the Earth as a spaceship" (Romaine, 1996). These metaphors have in common the reminder to us that there are some boundaries outside of which we cannot go or even survive. We human beings are restricted to a more or less enclosed space. If we destroy the spaceship, empty the storehouse, or deflate the lifeboat, our chances of survival are close to nil. Seeing the Earth as a lifeboat or a spaceship can trigger clear images of the actual situation and, possibly, strong emotional responses. The drawback with these metaphors is that they do not necessarily indicate what specific roles humans should play in the various containers, and they are even less effective at suggesting what roles managers should play. As Botkin (1990: 192) remarked, we may "talk about Spaceship Earth, but who is monitoring the dials and turning the knobs?" In other words, we also need metaphors that can be used to guide action.

The various "Earth as a container" metaphors are connected to the idea that this planet is our only home and that we must protect it from harm (Romaine, 1996). Interestingly, the words "ecology" and "economy" share the same root (*oikos* means

"home" in Greek). In the 16th century, economy meant "household management." This definition underscores the complexity and potential of the metaphor of the home. Indeed, it can help us grasp and visualize the basic structures of sections (e.g., the living room, bedroom, attic); objects (e.g., beds, chairs); relations (e.g., husband-wife; mother-daughter); activities (e.g., cleaning, playing, gardening, renovating); and roles (e.g., head of the household, housekeeper, caretaker) that could be translated into other contexts (Romaine, 1996: 181).

Closely related to the idea of home, Nilsen (2010) suggests a family metaphor. Her goal in proposing this metaphor is to inspire communication, consensus, and compromise between proponents of "weak" and "strong" perspectives on sustainability. Under the same roof, people might disagree, but they must ultimately cooperate or the atmosphere will become unbearable. The family can also be used to represent the inevitable coexistence of the economy and nature. In Nilsen's (2010) family metaphor, the economy is represented in the parents, and nature as a small child. The child's status and needs are structured and articulated in a different manner from those of the parents. A child's language might be less sophisticated, but its reactions are more instinctive. It is sometimes difficult for parents to understand their child's needs and reactions. The goal of the family metaphor is to underscore the well-being of the family as a whole, but also that of its individual members. This requires a partnership, which implies inclusiveness of all family members, without discrimination based on age, gender, or ability. Interests, needs, and plans must be continuously coordinated in order to maintain the well-being of the family as a whole as well as its individual members.

The stewardship metaphor is also closely related to the "Earth is our home" metaphor. The word "steward" derives from the old English word *stigweard*, meaning "guardian of the house," and, more specifically, of the farm animals. This metaphor was introduced into strategic management literature more than a decade ago. However, most of the literature on this concept concerns corporate governance and the relationship between the CEO and shareholders (Angwin, Stern, & Bradley, 2004; Davis, Schoorman, & Donaldson, 1997). When we think of stewardship in relation to the environment, we think not only of carefully tending the environment, but also of guarding it and protecting it from harm. In the context of sustainable development, stewardship is "the responsible use (including conservation) of natural resources in a way that takes full and balanced account of the

interests of society, future generations, and other species, as well as of private needs, and accepts significant answerability to society" (Worrell & Appleby, 2000: 263). The traditional responsibility of the steward toward an owner (e.g., shareholder) remains, but the metaphor introduces wider obligations to the general public, to future generations, to other species, and to the natural world. The stewardship metaphor appeals to a deep sense of responsibility. Common expressions heard from a stewardship perspective include "X is responsible for looking after something," "Y is accountable for something," and "Z is doing this on behalf of someone" (Foster, 2005).

The two previous metaphors depicted business activity as a family home and an animal farm. The next metaphor likens business activity to taking care of a garden. Mitroff (1987) suggests "the world as a garden" as a global metaphor for describing the complexity and interconnectedness of contemporary life. The gardening metaphor includes ideas such as changing in harmony with nature, nurturing, and choosing the right time to grow and harvest (Axley, 2002). One can emphasize either the whole process of gardening or some of its various stages (preparation, the different tasks involved during the various stages of production, the sense of conscious guidance and nurturing over time, and the sense of reward and closure at the conclusion of the process). The process of gardening is both active and passive. Gardeners prepare the ground, plant seeds, fertilize the growing plants, guide and thin the plants, and harvest the produce, yet the actual development of the plant occurs as part of a natural process that is essentially not in the gardener's hands (Tomlinson, 1986). One interesting aspect of the gardening metaphor is that it is somehow less gender-related, while the classical concept of strategy as well as its routine practices are said to possess strong masculinist inclinations (Kanter, 1989).

The caring metaphor is useful as a way to connect the previous metaphors. Caring is an action that can be done in the house, the farm, or the garden. In fact, caring may be broadly defined as an activity that embraces everything we accomplish to preserve, maintain, and fix our "world" so that we can all live in it as well as possible (Tronto, 1993). Caring efforts ultimately speak to our survival as a species rather than as isolated individuals. It is possible to care for distant others, strangers, animals, plants, the Earth, and humanmade things and ideas. The quality of human life cannot be entirely separated from the conditions that nurture other living things (Noddings, 2005). Sama, Welcomer, and Gerde (2004) invoke an ethic of care

to give voice to what they call the silent stakeholders (e.g., trees, plants, animals). I suggest it would be interesting to explore the merit of "caring" as one of the basic metaphors for the development of sustainable strategic management. To move in that direction, management education would need to change its focus from teaching students to care *about* the environment to teaching them to care *for* the environment. Likewise, management education would need to move its focus from teaching students to *manage* stakeholders to teaching them to *care for* stakeholders (Sama, Welcomer, & Gerde, 2004; Solomon, 1998). However, educators should also help students develop their critical thinking skills about the manipulation of the "caring" metaphor in branding, marketing, and public relation endeavors. Indeed, companies such as Shell and The Body Shop have used this metaphor to deceive stakeholders, camouflage real actions, and offset resistance (Livesey & Kearins, 2002).

As I mentioned above, the goal is not to find the best metaphor, but to provide space for a web of metaphors to grow and develop into an appealing alternative to the war metaphor. Morgan (1986: 13) noted the value of using multiple metaphors. I believe that there is a need for metaphorical pluralism in strategic management education in order to embrace sustainability. Each metaphor conveys a very different view of reality and represents a special way of seeing (Schön, 1979). Exposure to and the use of different metaphors can lead to different lines of reasoning about decision-making processes (Boers, 1997). Because there is no single metaphor that best captures the complexity of any phenomenon, students should be encouraged to develop the art of reading social situations through the lenses of a wide range of metaphors (Tsoukas, 1993). By using different metaphors to understand the complex and paradoxical character of sustainable strategic management, we are able to see things in ways that we may not have thought possible before. Metaphorical pluralism is a vital component of a polyphonic vision of strategy (Barry & Elmes, 1997).

Assessing the Strengths and Weaknesses of Metaphors

In order to probe more deeply and generate new insights on sustainability and strategic management, we need to imagine apt and meaningful metaphors and then assess their strengths and weaknesses. Some metaphors are deficient and have a limited capacity to generate insights. Cornelissen, Kafouros, and Lock (2005: 1563) identified six heuristics (i.e., judgment rules) that could be

used by strategic management scholars to select and develop metaphors: the integration, relational, connection, availability, distance, and concreteness heuristics. The *integration heuristic* refers to the need to bring partial images together in such a way that they produce a fully integrated image with an easily manipulable representation. The *relational heuristic* suggests that the relationship between the source domain and the target domain should be based on relations rather than attributes. The *connection heuristic* means that aspects of the target domain can be explained using the vocabulary of the source domain. The *availability heuristic* refers to the ease with which concepts from the source domain can be brought to mind and used in the target domain. The *distance heuristic* suggests the need for the source and target domains to be different enough to trigger new ideas and surprises, and to work to find resemblances that did not seem to exist beforehand. The *concreteness heuristic* means the need to use concrete rather than abstract source domains, because they are more easily mapped, used, and understood.

These six heuristics embody the rules and constraints by which metaphors are developed and selected, and they represent important determinants of the aptness of a metaphor and of whether a metaphorical image will resonate. The danger is that when using metaphors originally developed in other fields the limits of a particular metaphor will not be recognized due to a lack of expertise (Tsoukas, 1993). Management scholars and educators may have no knowledge of the practices from which the metaphors they use were derived. Metaphors can creep into writing and thinking without an adequate exploration of the deeper implications, difficulties and ambiguities associated with their use. For instance, Wight (2007) shows how Smith's "invisible hand" has been diluted and distorted over time through extension and misuse. Hence, conceptual borrowing needs to be informed if it is to be of any real value (Tsoukas, 1993). Educators should be able to identify and explain the main limits of the metaphors they use when they teach sustainable strategic management.

Tsoukas (1991) argues that to have lasting impact, metaphorical insights must be transformed into bodies of scientific knowledge, so the invariance between the source domain and the target domain must be delineated. He provides a procedure for transforming metaphors to dispose of their literary variety in order to yield their potential literal identities. Using this methodology, scholars and educators can gradually refine metaphorical insights by building conceptual and similar mod-

els that dispose of unnecessary variety and preserve crucial relationships. Isomorphism is the highest form of resemblance: Two systems that are isomorphic are virtually interchangeable (Tsoukas, 1991). The population ecology perspective (Hannan & Freeman, 1977) is an illustrative case, in which the use of biological metaphors has yielded a significant amount of scientific output in the form of explanations of organizational variety and of the relationships between organizations and their environments. The same principles pertaining to the theory of natural selection have been applied to organizational populations and form the basis of a research program (Tsoukas, 1991).

Metaphorical thought may lead to a successful model, but it is important to caution that our relationship with models is different from our relationship with metaphors. We use models to find ready-made lessons or answers and metaphors to spark creativity and innovation (von Ghyczy, 2003). Potential metaphors related to sustainability should not be pressed into service as models too quickly; rather, they should be an invitation to embark on a road to discovery. We need to avoid hasty modeling, which could lead to oversimplified thinking (Grandy & Mills, 2004) or bad management theories (Ghoshal, 2005).

Using Metaphorical Thinking Inside and Outside the Classroom

New metaphors of sustainable strategic management need to be disseminated in the classrooms in order to have an impact on students. There are many ways to engage students in thought about sustainable strategic management, as well as specific ways to use metaphors inside and outside the classroom. In the following paragraphs, I describe four possible interventions: simulations and analogically situated experiences, embodied metaphor workshops, case method teaching, and class or group discussions.

Simulations and analogically situated experiences belong to the same family of pedagogical methods that involves *analogical learning* (Gentner, 1989). This type of learning experience is a process in which learners compare two sets of information in order to understand one of them better (Gavetti, Levinthal, & Rivkin, 2005). Simulations can be used to place students in managerial roles and call on them to make challenging choices in unfamiliar settings. Simulations recreate an environment in which sustainable business skills can be practiced and honed (e.g., managing a zoo or a national park). In analogically situated experiences (Houde, 2007), participants are engaged in

activities that have a deep structure similar to a real work environment, but with an extremely dissimilar surface structure (e.g., outdoor activities requiring survival skills). This practice "involves immersing participants in a novel, simulated context specifically chosen and designed to produce an insightful learning about the participants' work context" (Houde, 2007: 321). I believe one task of business schools in general and strategic management educators in particular is to create simulated contexts that will help students learn about, care for, and act on sustainable issues.

Metaphors may occur nonverbally in sculpted artifacts, pictorial signs, gestures, and sounds. This diversity of metaphorical manifestations opens up a whole new set of pedagogical methods for strategic management educators. Heracleous and Jacobs (2008) put forward what they labeled "embodied metaphor workshops," in which strategy is viewed as a crafting practice where crafters construct their own perceptions of strategic issues with the material at hand (e.g., Lego blocks). These workshops could use only recycled material and focus on helping students care for humanmade things (Noddings, 2005). Embodied metaphor workshops provide strategic management students "with the opportunity to conceptually and physically construct and inter-relate the strategic elements they deem relevant in a synthetic, integrative manner" (Heracleous & Jacobs, 2008: 310). The resulting artifacts, which will vary among participants, will reflect the different ways in which they orient themselves regarding their organization, strategic management in general, or a specific strategic issue. Each embodied metaphor activity could be followed by a plenary session in which each participant, or team of participants, would have to share with others the implications of the metaphors underlying their artifacts.

For a new metaphor to have any potential to work, students must be able to understand it, make choices, and take actions based on it. They must be able to develop both literacy in and familiarity with the metaphor. For a new metaphor to stick, textbooks, teaching cases, and other teaching techniques must be altered on the basis of this metaphor. For instance, to achieve the goals of a caring approach in sustainable strategic management, students need to understand what the meaning of caring is, and what it implies in different situations. In other words, students need to be educated in how to make strategic decisions within a caring framework. This can be achieved only if educators themselves integrate the new metaphor in their teaching, with a special focus on the teaching cases they used in their classroom. The case

method is a long-standing teaching tradition that consists in bestowing the students with a case that is putting them in the role of a decision-maker facing a problem (Hammond, 1976). Most of the time, educators have a role to play in the choice of cases they use in their classroom, but also in the types of questions they ask about the situations depicted in the cases. Ideally, they should have access to cases written with this metaphorical lens in mind. At the least, they should have the ability and the capacity to ask relevant questions with this metaphor in mind. The questions asked of students after reading a case study must be modified to reflect the new metaphors (Burton & Dunn, 2005: 464). Indeed, a large part of learning in case study analysis is connected to the type of questions that students are asked (Hammond, 1976). Educators need to pay attention to the implications of the questions they ask and to the answers they are looking for.

The value of good metaphors also lies in the richness and rigor of the debate they engender (von Ghyczy, 2003). Hence, metaphorical thinking works best in the company of others, through a discussion centered on creativity and innovation rather than on truth and validity. Alas, the focus of metaphorical thinking is primarily on the similarities or overlaps between domains, which can divert attention away from dissimilarities or tension (Ortony, 1975). Metaphorical thinking operates within what Oswick, Keenoy, and Grant (2002: 299) describe as a "cognitive comfort zone." They believe that this emphasis on a middle-range similarity is cognitively conformist rather than liberating, and they recommend more attention to paradox, irony, and anomaly (Oswick, Keenoy, & Grant, 2002). One way to escape the cognitive comfort zone is to employ a source domain relatively unfamiliar to business students, such as evolutionary biology, in order to spark creative thinking about a familiar target domain, such as strategic management (von Ghyczy, 2003). This can work only if the students, with the help of their educators, make an effort to overcome the unfamiliarity of the source domain. The goal is not to become an expert in the source domain, but to re-educate students about the world they know by shaking up the target domain with fresh ideas extracted from the source domain. One way to achieve this in the classroom is to ask students to re-examine a familiar business situation with a strange metaphor. This doesn't need to be a boring, abstract activity. For instance, educators could ask students to imagine how the business world would be if business relationships were similar to the relationships between Pandora's original inhabitants,

in James Cameron's famous movie, *Avatar*. The goal of such discussions is to familiarize students with forms of strategic management in line with sustainability-related metaphors.

The four aforementioned interventions—simulations and analogically situated experiences, embodied metaphor workshops, case method teaching, and class or group discussions—do not exhaust the possibilities of action, but give an idea of how strategic management education can be subtly altered in order to more profoundly incorporate sustainability. The aim of these interventions is not merely to sprinkle some sustainability-related topics over the usual content of strategic management courses, but to contribute to a reconceptualization of strategic management education in a sustainable-related fashion.

DISCUSSION AND CONCLUSION

Sustainability has become a key issue for organizations (e.g., constructing energy-efficient buildings, installing or upgrading recycling systems, using renewable energy, purchasing environmentally preferable equipment and supplies), as they increasingly acknowledge that their practices have social and environmental consequences. Sustainability concerns in management theory, research, and education have evolved from marginal issues to become more central and important (Gladwin, Kennelly, & Krause, 1995; Prasad & Elmes, 2005). Business schools work hard to improve the content of their undergraduate and graduate programs so that they broadly integrate sustainability. The ultimate goal is to comprehensively ground sustainable development in strategic management education.

In order to reach that goal, management scholars and educators must consider how deeply embedded practices, such as an overreliance on some root metaphors, perpetuate unhelpful conceptualizations of sustainability in strategic management education. Root metaphors provide taken-for-granted conceptual frameworks used to understand current and new phenomena (Pepper, 1972). Management scholars and educators define their reality in terms of metaphors and then proceed to act on the basis of these metaphors. They draw inferences, set goals, make commitments, and execute plans, all on the basis of how they partly structure their experience, consciously and unconsciously, by means of metaphor (Lakoff & Johnson, 1980). Metaphors not only guide scholars and educators' perceptions and interpretations of reality, they help them

formulate their visions and goals (Cornelissen, Oswick, Christensen, & Phillips, 2008).

In this essay I have expressed my concern for the implications on sustainability of using the war metaphor in strategic management education. More than a decade ago, Oliver (1999: 8) argued: "At the end of a century in which wars claimed more lives than the rest of history put together, maybe it's time for some new strategic analogies." However, use of the war metaphor is so widespread that we may not appreciate how often we encounter it. In fact, it is so pervasive in strategic management education that it even pervades recent attempts to rebuild the field on new foundations. In an article named "Searching for a Strategy to Teach Strategy," Greiner, Bhambri, and Cummings (2003) still look at business activity through a war metaphor. Their article repeatedly uses expressions such as "intense global competition," "new threats and opportunities," "win against competitors," "allocating resources to gain a competitive edge," and "find ways to retaliate." In order to get out from the metaphorical fallacy trap, strategic management educators must acknowledge that it is only a metaphor, and that other metaphors might also shape learning in different ways. An understanding of the limitations of the war metaphor and its associated imagery in strategic management theory, research, and education should help us focus on generating alternatives.

The pervasiveness of metaphors in our everyday language does not mean that we are forever trapped in the same old metaphors. We can develop alternative root metaphors that will ascribe new conceptual structures to business activities (Hamington, 2009). Changing the name of an object changes our relationship to the object and how we will behave in relation to it (Srivastva & Barrett, 1988). Metaphors help create the feature to which they refer, and distinctive metaphors have the capacity to generate alternative social realities. Metaphorical pluralism encourages different ways of thinking, which enable educators and students alike to focus on, explain, and influence different aspects of complex phenomena (Tsoukas, 1991).

Alas, we cannot hope to succeed in this endeavor if we focus on changing cultural beliefs without addressing political and economic change. "The sociohistorical privilege attached to some metaphors is the result not just of some intellectual game but of a competition of existing and institutionally established discourses that select for or against the import of particular foreign constructs" (Maasen & Weingart, 1995: 17). The education of a new generation of managers with

sustainability-compatible metaphors will not necessarily enable them to overthrow the unsustainable ones already in use. Organizational socialization processes might render these managers incapable of introducing new metaphors before they rise to positions of influence. Just as metaphors are embedded in discourse, discourse is embedded and embodied in institutions (Dryzek, 2005; Phillips, Lawrence, & Hardy, 2004). The challenge is even greater since the war metaphor is embedded in a complex network of metaphors that includes anthropocentrism, individualism, patriarchy, mechanism, and progress (as well as their derivations).

However, at their microlevel of activity, strategic management scholars and educators must accept responsibility for developing approaches that combine sustainability and business strategy. They need to be mindful of how metaphors are used and the images that they evoke. Part of the challenge in teaching sustainability is to deal with student perceptions about the nature of business activities. Management education should encourage diverse perspectives for understanding sustainability, with a special interest in promoting metaphorical pluralism. Our sustainable future is critically dependent on which metaphorical conceptions predominate in the long run (Romaine, 1996). It is imperative that we develop new methodologies and frameworks that will facilitate students' understanding of sustainability in the business environment.

REFERENCES

- Åkerman, M. 2005. What does "natural capital" do? The role of metaphor in economic understanding of the environment. *Environmental Education Research*, 11(1): 37-52.
- Aktouf, O., Chennoufi, M., & Holford, W. D. 2005. The false expectations of Michael Porter's strategic management framework. *Problems & Perspective in Management*, 4: 181-200.
- Amernic, J., Craig, R., & Tourish, D. 2007. The transformational leader as pedagogue, physician, architect, commander, and saint: Five root metaphors in Jack Welch's letters to stockholders of General Electric. *Human Relations*, 60(12): 1839-1872.
- Anderson, M. H. 2007. "Why are there so many theories?" A classroom exercise to help students appreciate the need for multiple theories of a management domain. *Journal of Management Education*, 31(6): 757-776.
- Angwin, D., Stern, P., & Bradley, S. 2004. Agent or steward: The target CEO in a hostile takeover. *Long Range Planning*, 37(3): 239-257.
- Anthony, R. N. 1964. *Planning and control systems: A framework or analysis*. Cambridge, MA: Harvard Business School.
- Axley, S. 2002. How does your garden grow? *Industrial Management*, 44(5): 19-26.
- Barry, D., & Elmes, M. 1997. Strategy retold: Toward a narrative view of strategic discourse. *Academy of Management Review*, 22(2): 429-452.
- Beatty, J. E. 2004. Grades as money and the role of the market metaphor in management education. *Academy of Management Learning & Education*, 3(2): 187-196.
- Boers, F. 1997. "No pain, no gain" in a free market rhetoric: A test for cognitive semantics? *Metaphor and Symbol*, 12(4): 231-241.
- Botkin, D. 1990. *Discordant harmonies*. Oxford, UK: Oxford University Press.
- Bowers, C. 2001. How language limits our understanding of environmental education. *Environmental Education Research*, 7(2): 141-151.
- Boyd, J. 2003. A quest for cinergy: The war metaphor and the construction of identity. *Communication Studies*, 54(3): 249-264.
- Bracker, J. 1980. The historical development of the strategic management concept. *Academy of Management Review*, 5(2): 219-224.
- Buchanan, L. 2005. No more metaphors. *Harvard Business Review*, 83(3): 19.
- Burton, B. K., & Dunn, C. P. 2005. The caring approach and social issues in management education. *Journal of Management Education*, 29(3): 453-474.
- Carrithers, D. F., & Peterson, D. 2006. Conflicting views of markets and economic justice: Implications for student learning. *Journal of Business Ethics*, 69(4): 373-387.
- Clancy, J. J. 1989. *The invisible powers: The language of business*. Toronto: Lexington Books.
- Cornelissen, J. P. 2004. What are we playing at? Theatre, organization, and the use of metaphor. *Organization Studies*, 25(5): 705-726.
- Cornelissen, J. P. 2005. Beyond compare: Metaphor in organization theory. *Academy of Management Review*, 30(4): 751-764.
- Cornelissen, J. P., & Kafouros, M. 2008. The emergent organization: Primary and complex metaphors in theorizing about organizations. *Organization Studies*, 29(7): 957-978.
- Cornelissen, J. P., Kafouros, M., & Lock, A. R. 2005. Metaphorical images of organization: How organizational researchers develop and select organizational metaphors. *Human Relations*, 58(12): 1545-1578.
- Cornelissen, J. P., Oswick, C., Christensen, L. T., & Phillips, N. 2008. Metaphor in organizational research: Context, modalities and implications for research—Introduction. *Organization Studies*, 29(1): 7-22.
- Cummings, S. 1993. Brief case: The first strategists. *Long Range Planning*, 26(3): 133-135.
- Danby, P. 2007. The way of the warrior. *Business Strategy Review*, 18(3): 61-64.
- Davis, J. H., Schoorman, F. D., & Donaldson, L. 1997. Toward a stewardship theory of management. *Academy of Management Review*, 22(1): 20-47.
- Dryzek, J. S. 2005. *The politics of the Earth*. Oxford, UK: Oxford University Press.

- Dunford, R., & Palmer, I. 1996. Metaphors in popular management discourse: The case of corporate restructuring. In D. Grant & C. Oswick (Eds.), *Metaphors and organizations*: 95–109. London: Sage.
- Farjoun, M. 2008. Strategy making, novelty and analogical reasoning—Commentary on Gavetti, Levinthal, and Rivkin (2005). *Strategic Management Journal*, 29(9): 1001–1016.
- Ferraro, F., Pfeffer, J., & Sutton, R. 2005. Economics language and assumptions: How theories can become self-fulfilling. *Academy of Management Review*, 30(1): 9–24.
- Foster, J. 2005. Making sense of stewardship: Metaphorical thinking and the environment. *Environmental Education Research*, 11(1): 25–36.
- Gavetti, G., Levinthal, D. A., & Rivkin, J. W. 2005. Strategy making in novel and complex worlds: The power of analogy. *Strategic Management Journal*, 26(8): 691–712.
- Gentner, D. 1989. The mechanisms of analogical learning. In S. Vosniadou & A. Ortony (Eds.), *Similarity and analogical reasoning*: 199–241. London: Cambridge University Press.
- Ghemawat, P. 1999. *Strategy and the business landscape: Text and cases*. Reading, MA: Addison-Wesley.
- Ghoshal, S. 2005. Bad management theories are destroying good management practices. *Academy of Management Learning & Education*, 4(1): 75–91.
- Gladwin, T. N., Kennelly, J. J., Krause, T. 1995. Shifting paradigms for sustainable development: Implications for management theory and research. *Academy of Management Review*, 20(4): 874–907.
- Glucksberg, S., Haught, C. 2006. Can Florida become like the next Florida? When metaphoric comparisons fail. *Psychological Science*, 17(11): 935–938.
- Grandy, G., & Mills, A. J. 2004. Strategy as Simulacra? A reflective look at the discipline and practice of strategy. *Journal of Management Studies*, 41(7): 1153–1170.
- Greiner, L. E., Bhambri, A., & Cummings, T. G. 2003. Searching for a strategy to teach strategy. *Academy of Management Learning & Education*, 2(4): 402–420.
- Gruenewald, D. A. 2004. A Foucauldian analysis of environmental education: Toward the socioecological challenge of the Earth Charter. *Curriculum Inquiry*, 34(1): 71–107.
- Hamington, M. 2009. Business is not a game: The metaphoric fallacy. *Journal of Business Ethics*, 86(4): 473–484.
- Hammond, J. S. 1976. *Learning by the case method*. Boston, MA: HBS Publishing.
- Hannan, M. T., & Freeman, J. 1977. The population ecology of organizations. *American Journal of Sociology*, 82(5): 929–964.
- Hansen, F., & Smith, M. 2006. *Handbook of Business Strategy*, 7(1): 201–206.
- Hardin, G. 1974. Living on a lifeboat. *BioScience*, 24(10): 561–568.
- Hawk, T. F., & Lyons, P. R. 2008. Please don't give up on me: When faculty fail to care. *Journal of Management Education*, 32(3): 316–338.
- Heath, J. 2007. An adversarial ethic for business: Or when Sun-Tzu met the stakeholder. *Journal of Business Ethics*, 72(4): 359–374.
- Henderson, B. D. 1989. The origin of strategy. *Harvard Business Review*, 67(6): 139–143.
- Heracleous, L., & Jacobs, C. D. 2008. Crafting strategy: The role of embodied metaphors. *Long Range Planning*, 41(3): 309–325.
- Higgins, J. M., & McAllaster, G. 2004. If you want to change, don't forget to change your cultural artifacts. *Journal of Change Management*, 4(1): 63–73.
- Hill, T., & Westbrook, R. 1997. SWOT analysis: It's time for a product recall. *Long Range Planning*, 30(1): 46–52.
- Hinterhuber, H. H., & Popp, W. 1992. Are you a strategist or just a manager? *Harvard Business Review*, 70(1): 105–113.
- Hogler, R., Gross, M. A., Hartman, J. L., & Cunliffe, A. L. 2008. Meaning in organizational communication: Why metaphor is the cake, not the icing. *Management Communication Quarterly*, 21(3): 393–412.
- Hopwood, B., Mellor, M., & O'Brien, G. 2005. Sustainable development: Mapping different approaches. *Sustainable Development*, 13(1): 38–52.
- Houde, J. 2007. Analogically situated experiences: Creating through novel contexts. *Academy of Management Learning & Education*, 6(3): 321–331.
- Jarzabkowski, P., & Whittington, R. 2008. Directions for a troubled discipline. *Journal of Management Inquiry*, 17(4): 266–268.
- Johnson, G. 1992. Managing strategic change—Strategy, culture and action. *Long Range Planning*, 25(1): 28–36.
- Kanter, R. M. 1989. *When giants learn to dance*. London: Simon & Schuster.
- Kanter, R. M. 2002. Strategy as improvisational theater. *MIT Sloan Management Review*, 43(2): 76–81.
- Knights, D., & Morgan, G. 1990. The concept of strategy in sociology: A note of dissent. *Sociology*, 24(3): 475–483.
- Knights, D., & Morgan, G. 1991. Corporate strategy, organizations, and subjectivity. *Organization Studies*, 12(2): 251–273.
- Koller, V. 2002. "A shotgun wedding": Co-occurrence of war and marriage metaphors in mergers and acquisitions discourse. *Metaphor and Symbol*, 17(3): 179–203.
- Koller, V. 2004. Businesswomen and war metaphors: "Possessive, jealous and pugnacious"? *Journal of Sociolinguistics*, 8(1): 3–22.
- Krause, D. 1995. *The art of war for executives*. London: Nicholas Brealey.
- Kuhn, T. S. 1962. *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Lakoff, G., & Johnson, M. 1980. *Metaphors we live by*. Chicago: University of Chicago Press.
- Larson, B. M. H. 2005. War of the roses: Demilitarizing invasion biology. *Frontiers in the Ecology and the Environment*, 3(9): 495–500.
- Livesey, S. M., & Kearins, K. 2002. Transparent and caring corporations? A study of sustainability reports by the Body Shop and Royal Dutch/Shell. *Organization and Environment*, 15(3): 233–258.
- Llewelyn, S. 2003. What counts as "theory" in qualitative management and accounting research? Introducing five levels of theorizing. *Accounting, Auditing & Accountability Journal*, 16(4): 662–708.
- Lundell, D. 1997. *Sun Tzu's Art of War for trader and investors*. London: McGraw-Hill.

- Maasen, S., & Weingart, P. 1995. Metaphors—Messengers of meaning. *Science Communication*, 17(1): 9–31.
- MacFarlane, B. 1999. Re-evaluating the realist conception of war as business metaphor. *Teaching Business Ethics*, 3(1): 27–35.
- Mantere, S., Sillince, J. A. A., & Härmäläinen, V. 2007. Music as metaphor for organizational change. *Journal of Organizational Change Management*, 20(3): 447–459.
- McAlpine, A. 1997. *The new Machiavelli: The renaissance of realpolitik for modern managers*. Oxford: Oxford University Press.
- McCabe, D. L., Butterfield, K. D., & Treviño, L. K. 2006. Academic dishonesty in graduate business programs: Prevalence, causes, and proposed action. *Academy of Management Learning & Education*, 5(3): 294–305.
- McNeilly, M. 1997. *Sun Tzu and the art of business: Six strategic principles for managers*. Oxford: Oxford University Press.
- Milne, M. J. 1996. On sustainability; The environment and management accounting. *Management Accounting Research*, 7(1): 135–161.
- Milne, M. J., Kearins, K., & Walton, S. 2006. Creating adventures in Wonderland: The journey metaphor and environmental sustainability. *Organization*, 13(6): 801–839.
- Mintzberg, H., Ahlstrand, B. W., & Lampel, J. 1998. *Strategy safari: A guided tour through the wilds of strategic management*. New York, NY: Free Press.
- Mitchell, I. K., & Saren, M. 2008. The living product—Using the creative nature of metaphors in the search for sustainable marketing. *Business Strategy and the Environment*, 17(6): 398–410.
- Mitroff, I. 1987. *Business not as usual*. San Francisco, CA: Jossey-Bass.
- Morgan, G. 1983. More on metaphors: Why we cannot control tropes in administrative science. *Administrative Science Quarterly*, 28(4): 601–607.
- Morgan, G. 1986. *Images of organization*. Beverly Hills, CA: Sage.
- Musson, G., Cohen, L., & Tietze, S. 2007. Pedagogy and ‘the linguistic turn’: Developing understanding through semiotics. *Management Learning*, 38(1): 45–60.
- Mutch, A. 2006. Organization theory and military metaphor: Time for a reappraisal? *Organization*, 13(6): 751–769.
- Nilsen, H. R. 2010. The joint discourse ‘reflexive sustainable development’—From weak towards strong sustainable development. *Ecological Economics*, 69(3): 495–501.
- Noddings, N. 2005. *The challenge to care in schools: An alternative approach to education*. New York, NY: Teachers College Press.
- Nordhaus, T., & Shellenberger, M. 2007. *Break through: From the death of environmentalism to the politics of possibility*. Boston, MA: Houghton Mifflin.
- Oliver, R. W. 1999. Real time strategy: Strategy as sports! War! Food? *Journal of Business Strategy*, 20(5): 8–10.
- Orr, D. W. 2004. *Earth in mind*. Washington, DC: Island Press.
- Ortony, A. 1975. Why metaphors are necessary and not just nice. *Educational Theory*, 25(1): 45–53.
- Oswick, C., Keenoy, T., & Grant, D. 2002. Metaphor and analogical reasoning in organization theory: Beyond orthodoxy. *Academy of Management Review*, 27(2): 294–303.
- Perrow, C. 1997. Organizing for environmental destruction. *Organization & Environment*, 10(1): 66–72.
- Peterson, T. O., & Williams, J. K. 2004. So what does dance have to do with it? Using dance to teach students about leadership. *Decision Sciences Journal of Innovative Education*, 2(2): 193–201.
- Pepper, S. C. 1972. *World hypotheses*. Berkeley, CA: University of California Press.
- Phillips, N., Lawrence, T. B., & Hardy, C. 2004. Discourse and institutions. *Academy of Management Review*, 29(4): 635–652.
- Pinder, C. C., & Bourgeois, W. V. 1982. Controlling tropes in administrative science. *Administrative Science Quarterly*, 27(4): 641–652.
- Porter, M. E. 2008. *On competition*. Boston, MA: Harvard Business Review Book.
- Prasad, P., & Elmes, M. 2005. In the name of the practical: Unearthing the hegemony of pragmatics in the discourse of environmental management. *Journal of Management Studies*, 42(4): 845–867.
- Price, C., Roxburgh, C., & Turnbull, D. 2006. Strategizing and organizing for performance and health. *Long Range Planning*, 39(6): 649–662.
- Prince, M., & Davies, M. A. 2004. The animal within. *Business Strategy Review*, 15(4): 48–51.
- Putnam, L. L., Phillips, N., & Chapman, P. 1996. Metaphors of communication and organizations. In S. Clegg, C. Hardy, & W. Nord (Eds.), *Handbook of organizational studies*: 375–408. London: Sage.
- Ries, A., & Trout, J. 2006. *Marketing warfare*. New York: McGraw-Hill.
- Romaine, S. 1996. War and peace in the global greenhouse: Metaphor we die by. *Metaphor and Symbolic Activity*, 11(3): 175–194.
- Sama, L. M., Welcomer, S. A., & Gerde, V. W. 2004. Who speaks for the trees? Invoking an ethic of care to give voice to the silent stakeholder. In S. Sharma, & M. Starik (Eds.), *Stakeholders, the environment and society*: 140–165. Northampton, MA: Edward Elgar.
- Schön, D. A. 1979. Generative metaphor: A perspective on the problem-setting in social policy. In A. Ortony (Ed.), *Metaphor and thought*: 254–283. Cambridge: Cambridge University Press.
- Shrivastava, P. 1985. Integrating strategy formulation with organizational culture. *Journal of Business Strategy*, 5(3): 103–111.
- Shrivastava, P. 1986. Is strategic management ideological? *Journal of Management*, 12(3): 363–377.
- Skorczyńska, H., & Deignan, A. 2006. Readership and purpose in the choice of economics metaphors. *Metaphor and Symbol*, 21(2): 87–104.
- Solomon, R. C. 1998. The moral psychology of business: Care and compassion in the corporation. *Business Ethics Quarterly*, 8(3): 515–533.
- Srivastva, S., & Barrett, F. J. 1988. The transforming nature of metaphors in group development: A study in group theory. *Human Relations*, 41(1): 31–64.
- Stead, W. E., & Stead, J. G. 2004. *Sustainable strategic management*. Armonk, NY: M. E. Sharpe.

- Stubbs, W., & Cocklin, C. 2008. Teaching sustainability to business students: Shifting mindsets. *International Journal of Sustainability in Higher Education*, 9(3): 206–221.
- Taber, T. D. 2007. Using metaphors to teach organization theory. *Journal of Management Education*, 31(4): 541–554.
- Talbot, P. A. 2003. Corporate generals: The military metaphor of strategy. *Irish Journal of Management*, 24(2): 1–10.
- Throop, G. M., Starik, M., & Rands, G. P. 1993. Sustainable strategy in a greening world: Integrating the natural environment into strategic management. In P. Shrivastava, A. Huff, & J. Dutton (Eds.), *Advances in strategic management*, 9: 63–92. Greenwich, CT: JAI Press.
- Tinker, T. 1986. Metaphor or reification: Are radical humanists really libertarian anarchists? *Journal of Management Studies*, 23(4): 363–384.
- Tomlinson, B. 1986. Cooking, mining, gardening, hunting: Metaphorical stories writers tell about their composing processes. *Metaphor and Symbolic Activity*, 1(1): 57–79.
- Tronto, J. 1993. *Moral boundaries: A political argument for an ethic of care*. New York, NY: Routledge.
- Tsoukas, H. 1991. The missing link: A transformational view of metaphors in organizational science. *Academy of Management Review*, 16(3): 566–585.
- Tsoukas, H. 1993. Analogical reasoning and knowledge generation in organization theory. *Organization Studies*, 14(3): 323–346.
- Vera, D., & Crossan, M. 2004. Theatrical improvisation: Lessons for organizations. *Organization Studies*, 25(5): 727–749.
- Von Elm, E., & Diener, M. K. 2007. The language of war in biomedical journals. *The Lancet*, 369: 274.
- von Ghyczy, T. 2003. The fruitful flaws of strategy metaphors. *Harvard Business Review*, 81(9): 86–94.
- Walck, C. 2009. Integrating sustainability into management education. *Journal of Management Education*, 33(3): 384–390.
- Warren, V. L. 1991. The “medicine as war” metaphor. *Hospital Ethics Committees Forum*, 3(1): 39–50.
- Weick, K. E. 1979. *The social psychology of organizing*, 2nd ed. Reading, MA: Addison-Wesley.
- Weick, K. E. 1989. Theory construction as disciplined imagination. *Academy of Management Review*, 14(4): 516–531.
- Wenner, M. 2007. The war against war metaphors. *The Scientist*, February 16, 2007.
- Whysall, P. 2001. The war metaphor in retailing: Do soldiers see going to war as like going shopping? *Qualitative Market Research*, 4(1): 34–41.
- Wight, J. B. 2007. The treatment of Smith’s invisible hand. *Journal of Economic Education*, 38(3): 351–358.
- World Convention on Environment and Development (WCED). 1987. *Our common future (The Brundtland Report)*. Oxford: Oxford University Press.
- Worrell, R., & Appleby, M. C. 2000. Stewardship of natural resources: Definition, ethical and practical aspects. *Journal of Agricultural and Environmental Ethics*, 12(3): 263–277.

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