

“Sustainability As:” An Analysis of the Alberta Oil Sands Industry’s Metaphorical Discourse

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Abstract

An analysis of Alberta’s oil sands industry’s sustainability perspectives from a communication, and specifically metaphorical, standpoint is a valuable endeavour due to the importance of the oil sands (both in Alberta and elsewhere) today with the world’s reliance on fossil fuels. Learning how sustainability is used and conceptualized by the industry will reward us with a more comprehensive understanding of how to approach sustainable development in industry. Moreover, analysing the industry’s sustainability metaphors in a systematic manner will allow a greater variety of metaphors to be introduced and investigated, allowing us to more succinctly articulate metaphorical conceptualizations of sustainability, sustainable and energy development, environmentalism, nature, and the oil sands themselves.

Author’s Note

Sustainability has been an ongoing interest of mine and this, combined with my affection for picking apart language, made this research too good of an opportunity to pass up. This work was funded by a grant from the Institute of Environmental Sustainability at Mount Royal University in Calgary, Alberta, Canada. It is part of a larger project that looks at metaphors not only in industry documents, but also in non-profit, government, and mass media discussions. It is obvious to me that to get anywhere with sustainable development we need to first understand what it is, and as metaphors are constantly used to conceptualize sustainability, we must analyse such metaphors. We must investigate how we speak of sustainability and sustainable development to uncover what we are truly saying when we compare the earth to an “earth goddess” versus a “bank.” Does the earth goddess or bank comparison place the responsibility of sustainable development on humanity, or does it suggest that it doesn’t matter whether we develop sustainably or not because the earth is all-powerful or there for the taking? Can we place a value on the environment? Are we simply seeing it as one of the many costs that industry has to balance? Such questions must be asked, and metaphor analysis provides the tools for doing just that.

Keywords: Sustainability, oil sands, metaphor, Alberta, environmentalism, sustainable development.

Introduction

As this analysis will demonstrate, sustainability in reference to the Alberta oil sands can be understood in a rich and diverse way through metaphor. This paper begins with a brief overview of the literature on sustainability metaphors, followed by an examination of what a systematic process for metaphor analysis should entail. The corpus in question will be briefly discussed, the precise methodology presented, and some key highlights of the research findings of sustainability metaphors in the oil sands industry dialogue put forth. Finally, consideration will be given to how useful a more detailed and systematic process for metaphor analysis specific to sustainability metaphors would be, and recommendations for future research will be provided.

Sustainability is becoming a topic of increased interest. The United Nation (UN) meetings in Copenhagen about climate change and the more informally-created meetings of smaller groups have raised the issue of how to preserve the planet despite the damage that has already been done. Efforts to protect our planet have been occurring for decades, through developments such as the Kyoto Protocol (United Nations, 1998), the UN's *World Charter for Nature*, and the *Brundtland Report* (1982; 1987), plus the various environmentally-minded groups that have sprung up across the planet, such as the Pembina Institute or the Canadian Environmental Network (GoodWork.ca, 2015).

As of 2014, the Oxford Dictionaries defines sustainable as being “maintained at a certain rate or level” and, related, “conserving an ecological balance by avoiding depletion of natural resources,” or “able to be upheld or defended” (pt. 1-2). There's an abstract idea present in the definitions of sustainable but little that is concrete. We don't know what this ecological balance, or this rate or level, are; they're simply arbitrary abstract scales. Metaphors, however, are used as a tool to facilitate the understanding of abstract concepts, including sustainability (Lakoff & Johnson, 1980, p. 3). Understanding the metaphors used to clarify sustainability, such as whether it's in reference to the environment or something else entirely, is one way to allow us to understand what most people mean when they talk about sustainability. This involves interrogating what their goals for sustainability are, what tools are required to achieve these goals, and what the duties involved in achieving such goals ought to be.

A metaphor, according to Lakoff and Johnson (1980), is a conceptual tool used both verbally and in thought processes to help people make sense of the world around them, resulting in the term “metaphor” being used interchangeably with the term “metaphorical concept” (pp. 3-6). As of 2014, the Oxford Dictionaries states that a metaphor is “a figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable” (pt. 1). This can be expanded on to develop a definition of metaphor for this paper's purposes as: A linguistic device used to facilitate the understanding of an abstract concept (in this case sustainability, environmentalism, or nature) without being literally applied to the abstract concept. Following the practice of Lakoff and Johnson (1980), the metaphors analysed will be capitalized to distinguish them from more general discussion.

Since sustainability is an incredibly broad topic in itself, analysing how a specific discourse community approaches the constructions of this concept metaphorically is a useful departure point. Consequently, this discussion focuses on

how industry players have “experienced” and “understood” (Lakoff & Johnson, 1980) the oil sands located in Alberta, Canada. This industry is directly impacted by notions of sustainability due to the fact that it uses natural resources and directly impacts the land, water, and air in which it operates. Additionally, the industry has often come under fire for apparent unsustainable practices in regards to oil, most recently involving the pipelines Northern Gateway and Keystone XL (Cryderman & Jang, 2014; McCarthy, 2014; McCarthy & Giovannetti, 2015).

Literature Review

Sustainability Metaphors

There are many ways to understand the elusive notion of sustainability, one of the more prominent being through metaphor. After conducting a Google scholar search of texts related to sustainability metaphors, 63 texts were found that, upon analysis, revealed a number of sustainability metaphors. The three most common in the articles reviewed were: (1) the idea of SUSTAINABILITY AS A SCALE/BALANCE either expressed through those words or through terms such as “equity”, “holism”, or “fairness”; (2) the idea of SUSTAINABILITY AS A JOURNEY, expressed through models such as “journey”, “process” or “way of traveling”, and; (3) SUSTAINABILITY AS AN EXCHANGE/TRADE involving “natural capital”. In addition to sustainability metaphors, three pre-eminent nature metaphors were found in the literature, including: (1) the metaphor of NATURE AS CAPITAL/STOCK, (2) NATURE AS A PERSON, and, (3) NATURE AS AN INTERCONNECTED SYSTEM/MACHINE. These nature metaphors tended to be connected to the sustainability metaphors and assisted in facilitating understanding of the sustainability metaphors. Each of these metaphors will be reviewed in greater detail below.

The SUSTAINABILITY AS A SCALE metaphor was often used as a tool by corporations to vaguely define their work towards and understanding of sustainability (Ihlen & Roper, 2011, Conclusions, para. 3-4), however it is also understood by others as a way to demonstrate the value of humans nature (Jabareen, 2004, pp. 629-630; Livesey, 2002, pp. 336-338; Milne, Tregidga, & Walton, n.d., p. 12, 19-20; Oldfield & Shaw, 2002, pp. 394-396). Balance was argued to be key to sustainability alongside other metaphorical tools (Espejo & Stewart, 1998, p. 486, 494), and contributed to the understanding of sustainability referring to preserving the world for future generations and other species (Clugston & Calder, 1999, p. 3 & 7; Reid & Petocz, 2006, p. 117). It also included the expression of the concept of three or two sectors of sustainability – economic, environmental, and social – (Clugston & Calder, 1999; Gough, 2002; Jabareen, 2004; Livesey, 2002; Milne, Tregidga, & Walton, n.d.), the idea that there are limits to what nature or humans can do (Carew & Mitchell, 2006; Milne, Kearins, & Walton, 2006), and the act of combining disparate elements together into a cohesive whole or symbiotic relationship (Carew & Mitchell, 2006; Gough, 2002; Romaine, 1996).

The scale metaphor supports different nature metaphors as well, including the idea of NATURE AS A MACHINE (Audebrand, 2010; Haase, 2013; Princen, 2010). This conception of nature tends to lean towards believing that nature can be improved upon, and can be made more efficient or uniform via rational actions, which will in turn increase production to an ideal amount (Haase, 2013, p. 897-898; Princen, 2010,

p. 62). It operates on the belief that nature and humans are separate organisms and, furthermore, expects that nature can solve problems encountered by humans (Haase, 2013, p. 898). Nature, in such a metaphor, is truly a machine. The concept of NATURE AS A LAB suggests a similar degree of control possessed by humans over nature, with nothing being out of place and nothing in excess (Princen, 2010). The metaphor of NATURE AS AN ECOSYSTEM or similar system leaves room for less human control than the metaphors of NATURE AS A MACHINE OR LAB, but still suggests that there is a degree of order to nature; it implies that there is a natural system with specific, pre-determined ways of accomplishing and knowing things (Carew & Mitchell, 2006; Espejo & Stewart, 1998; Milne, Kearins, & Walton, 2006; Romaine, 1996).

The SUSTAINABILITY AS A JOURNEY metaphor was referred to in the existing literature via such terms as “journey”, “process” or “way of traveling”, either via the authors’ examinations of other texts or by the authors themselves (Audebrand, 2010; Camino, 2014; Gough, 2002; Ihlen & Roper, 2011; Livesey, 2002; Milne, Kearins, & Walton, 2006; Milne, Tregidga, & Walton, n.d.). At multiple points, those examining the journey metaphor often build off the work of Milne, Kearins, and Walton (2006) and point out that the journey metaphor is often used by organizations to accommodate small changes, to avoid making substantial transformations within the organization, and to avoid working towards fundamental industry changes contributing to sustainability – after all, they’re on a JOURNEY OF SUSTAINABILITY, they’re working on it (Audebrand, 2010, p. 415; Ihlen & Roper, 2011, Communicating Corporate Environmentalism, para. 2, Rationales, para. 1-3, & Conclusions, para. 5-6; Milne, Tregidga, & Walton, n.d., p. 16). Milne, Tregidga, and Walton (n.d.) found that in corporate reporting, the journey metaphor is often used not only to depict sustainable development as a process, but also to “capture movement along this process” (p. 16). The journey metaphor was used as a vague measuring tool, a justification for small action without accompanying big action, and a tool to understand an abstract process of sustainable development or sustainability. Or, in the case of the United Nations, the journey metaphor was simply used by the oft-mentioned *Brundtland Report* to further define SUSTAINABILITY AS A “process of change” (1987, pt. 30). It is this process that brings about the addition of a cycle metaphor, which is included under the umbrella of the journey metaphor because it involves a start and end point, phases of some sort, and can be used to facilitate travel. The cycle metaphor is also sometimes used to display a never-ending journey of sustainability (Haase, 2013).

This journey metaphor may also be connected to the idea of SUSTAINABILITY AS ENDURANCE OR GROWTH. In some cases, sustainability may mean holding out through a process, or maturing – which is a process in and of itself (Ihlen & Roper, 2011; Jones, 2013; Princen, 2010; Reid & Pentocz, 2006). Princen (2010) extends this understanding of SUSTAINABILITY AS GROWTH, or more specifically physical maturation, to embrace the metaphor of NATURE AS A SMALL CHILD (pp. 64-65). Princen (2010) argues this by pointing out that utilizing the idea of NATURE AS A SMALL CHILD is ideal for the maturation metaphor because the child has an established point where they will stop physically maturing, thus the dangers associated with extended maturation of something such as money, which may continue to grow until it becomes problematic, are prevented (pp. 64-65).

SUSTAINABILITY AS AN EXCHANGE/TRADE generally applies a human economic system to the natural world, bringing forth the idea of capital or similar to facilitate completing transactions between nature and nature, nature and human, and human and human to ultimately achieve sustainability (Carew & Mitchell, 2006; Haase, 2013; Jabareen, 2004; Livesey, 2002; Milne, Tregidga, & Walton, n.d.; Oldfield & Shaw, 2002; Tregidga, Milne, & Kearins, n.d.). This metaphor regularly emphasizes the importance of the financial state of an organization in achieving sustainability, arguing that before sustainability can be achieved, a profit must first be made (Tregidga, Milne, & Kearins, n.d., p. 12). This exchange or trade metaphor is often used to promote economic rather than ecological interests in sustainability (Livesey, 2002, pp. 331-334, 336).

NATURE AS CAPITA that can be used in transactions to achieve sustainability is frequently used in tandem with the metaphor of SUSTAINABILITY AS AN EXCHANGE OR TRADE. Nature can be measured, exchanged, or paid, all in the name of sustainability (Jabareen, 2004; Jones, 2013; Milne, Tregidga, & Walton, n.d.; Oldfield & Shaw, 2002; Remillard, 2011; Romaine, 1996). Of course, for nature to be able to participate in transactions, sometimes that means it must take on a personified presence, such as that of the goddess Gaia, of a mother, or of a friend; someone who is of equal standing to the suggested human part of the transaction (Audebrand, 2010; Camino, 2014; Romaine, 1996). Nature may also be personified as a patient, victim, small child, or another vulnerable individual, but personifying nature as such and utilizing the SUSTAINABILITY AS EXCHANGE metaphor creates an unequal exchange that may not accurately display the relationship between humans and nature that someone wishes to communicate (Audebrand, 2010; Camino, 2014). Nature can also be understood metaphorically as a store (Princen, 2010), a spaceship (Audebrand, 2010; Princen, 2010; Romaine, 1996), a neighbourhood (Jabareen, 2004; Princen, 2010), or even a home (Audebrand, 2010). Audebrand (2010) points out that such metaphors bring a wealth of accompanying ideas, such as the idea that if nature is a home, then humans are its caretakers and occupants, suggesting a responsibility towards nature by humans during, for, and beyond the sustainability transactions (p. 420-421).

Despite the aforementioned sources exploring metaphors and sustainability, very little of the literature actually specified what it envisioned metaphor to be. Those that did define metaphor commonly used the various works of Lakoff and Johnson (1980) to either borrow or create a definition of metaphor, most revolving around the idea that metaphors are a tool to facilitate both the “understanding” and “experience” of the notions of sustainability (Audebrand, 2010; Carew & Mitchell, 2006; Haase, 2013; Jabareen, 2004; Milne, Kearins, & Walton, 2006; Princen, 2010; Romaine, 1996). Other sources used different departure points, such as the observation of scientists at work, to come up with their own definition of metaphor, for example, Camino’s (2014) understanding of metaphors is that they are devices that make sense of “alien” concepts (p. 2).

The methodology used to analyse sustainability metaphors was overwhelmingly qualitative and utilized content analysis. There is a significant body of work discussing sustainability metaphors in academia, such as how higher education teachers or students view metaphors both in practice and through what they publish

(Audebrand, 2010; Carew & Mitchell, 2006; Clugston & Calder, 1999; Gough, 2002; Haase, 2013; Jones, 2013; Reid & Petocz, 2006), and industry (Ihlen & Roper, 2011; Livesey, 2012; Milne, Kearins, & Walton, 2006; Milne, Tregidga, & Walton, n.d.; Tregidga, Milne, & Kearins, n.d.). A review of the existing literature shows little attention given to the metaphors used by the media, non-profits, and the government regarding sustainability. There also appears to be a significant dearth of quantitative analysis, or use of other qualitative methods such as interviews, participant observation, or case study analysis. Moreover, existing studies of sustainability metaphors dominantly seem to focus on what is *written* by industry and academia, not what is *said*.

Based on the review of the existing conversation about sustainability, a few recommendations for future research have been identified:

- Conduct quantitative analysis on sustainability metaphors;
- Investigate the metaphors used by the government, non-profit, and media sectors, paying attention to what is written *and* said;
- Utilize a greater variety of analysis, including interviews, case studies, observation, and surveys for sustainability metaphor investigations;
- Be more precise about the methods and ways of analysing metaphors so a clearer understanding of how to identify and critique these metaphors is apparent.

It is the last of these gaps that this paper hopes to fill.

Metaphor Analysis

For Lakoff and Johnson (1980), metaphor is a verbal and internal conceptual tool used to help people make sense of the world around them (pp. 3-6). As Star (1991) articulates, metaphor is used as a “bridge between different rules” (as cited in Williams, 2010, p. 1); as such it can be used to a variety of effects, such as facilitating understanding, or evoking multiple voices or one voice (Williams, 2010, pp. 1-2). Skinnemoen (2009) and Steen (2007, p. 10-11) support this conception of metaphor being used to facilitate understanding, with Skinnemoen (2009) using this cognitive linguistic understanding of metaphor to guide her research (pp. 14-16). Metaphor as “a figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable” is the definition the 2014 Oxford Dictionaries uses (pt. 1), which can be easily melded into the understanding of metaphor described above.

By and large, the steps for metaphor analysis can be simplified to include three broad, overarching steps:

- I. Create a corpus and read the corpus (Pragglejaz Group, 2007, as cited in Steen, 2007, p. 12; Skinnemoen, 2009, p. 69; Williams, 2010, pp. 76-81);
- II. Identify the metaphors in use (Charteris-Black, 2004, as cited in Skinnemoen, 2009, p. 66; Pragglejaz Group, 2007, as cited in Steen, 2007, p. 12; Skinnemoen, 2009, pp. 69-70; Steen, 2007, pp. 16-17; Williams, 2010, pp. 81-83), and;
- III. Determine the meaning, or meanings, of the identified metaphors (Charteris-Black, 2004, as cited in Skinnemoen, 2009, p. 66; Pragglejaz

Group, 2007, as cited in Steen, 2007, p. 12; Skinnemoen, 2009, pp. 71-75; Steen, 2007, pp. 16-18; Williams, 2010, pp. 81-84).

Along with the abovementioned steps come some difficulties in metaphor analysis. There can be challenges in distinguishing between conventional metaphors and novel metaphors (Charteris-Black, 2004, as cited in Skinnemoen, 2009, p. 66; Williams, 2010, p. 83), along with alive metaphors – those that bring new insights when being used – and dead metaphors – those that are taken for granted (Williams, 2010, p. 83). As with any qualitative analysis, there are also the usual challenges associated with analytical error and the researcher's own limitations (Skinnemoen, 2009, p. 126; Steen, 2007, p. 14; Williams, 2010, p. 76, 86, 96). For example, with multiple researchers there's a higher likelihood of coming to different and arguably more varied conclusions about the texts being analysed, which may shift findings as a result. With a single researcher, such variance is less likely.

Case Study

Background

Analysis on how the Alberta oil sands are discussed is lacking. This is evidenced by the fact that only 22 articles were found that examined how oil sands and other environmental issues were tackled by different sectors, such as the industry, government, non-profit organizations and the mass media. Overwhelmingly, the analysis that was present in such articles tended to be done through the qualitative content analysis of various non-academic texts and a splattering of discourse analysis of academic texts, with extremely few investigations involving both content and discourse analysis (DiFrancesco & Young, 2010; Way, 2011). Discourse analysis occurred independent of other analysis only once (Davidsen, 2013), as did a case study analysis (Aronczyk, 2013), and a survey (Paskey & Steward, 2012). All interviews were conducted alongside content analysis (Lê, 2013; Pulver, 2006), and only once were interviews, content analysis, and the one occurrence of participant observation, used together (Groom, 2011). Future research should involve other methods in addition to or independent of content analysis so that this topic can be more thoroughly dissected.

Through the aforementioned dominant content analysis of oil sands discussion in different sectors, it was often found that there tended to be more focus on humans and less on nature, unless nature was displayed as helping humans as a resource or as a place of leisure (DiFrancesco & Young, 2010, p. 523 & 526; Groom, 2011; Lê, 2013; Remillard, 2011). Oil sands tended to not be discussed independent of other environmental issues; instead they were connected to such things as climate change (Aronczyk, 2013; DiFrancesco & Young, 2010, p. 532; Paskey & Steward, 2012; Pulver, 2006; Soroka, et.al, 2009, p. 14), and were brought up in time with external events related to the environment, such as the Kyoto Protocol or odd weather (Paskey, Steward, & Williams, 2013, pp. 52-53; Soroka, et.al, 2009, pp. 14-15; Wolbring & Noga, 2013, p. 92, 100 & 102). Oil sands discourse could be ignored if deemed not compelling enough of an issue to discuss (Widener, 2013), tended to be simplified across all sectors (Davidsen, 2013; Paskey, Steward, & Williams, 2013, p. 59, 64 & 77), and was overwhelmingly presented from an industry perspective in the mass media (DiFrancesco & Young, 2010, p. 526; Paskey & Steward, 2012; Paskey, Steward, & Williams, 2013; Way, 2011, pp. 83-87, 92; Willard, 2011, pp. 40-45). With the industry

perspective being so widely spread through the mass media, it will be valuable to investigate the industry's perspective further so as to determine what precisely that perspective and its origins are.

Methodology

Metaphor Analysis

The sample for this study contains 26 texts. These documents were collected using the search terms "oil sands", "oilsands", "tar sands" or "tarsands" via selective Internet searching. Three texts were found through the Cumulative Environmental Management Association (CEMA, <http://cemaonline.ca>), which includes the Oil Sands Environmental Management Bibliography and the DMS Library. To help further populate the corpus, website searches were performed of the various companies active in the oil sands, such as Suncor, Syncrude and industry associations. From these website searches, 26 industry documents became a part of the corpus, including 6 from Suncor, 5 from Shell, 4 from Statoil, 4 from the Oil Sands Leadership Initiative, 3 from Syncrude, 2 from the Canadian Association for Petroleum Production, and 1 each from Devon Energy, Imperial Oil, and the Alberta Chamber of Resources. The corpus texts were organised by date to ensure that only those from 2008 and beyond were gathered, this is because that was when discussions of the oil sands began involving a wider scope of voices (Paskey, Steward, & Williams, 2013).

Research Design

To examine the sustainability metaphors used by the oil sands industry, a metaphor analysis approach was used. This approach involved three steps with organizational help from the *Dedoose* software. The three steps were: (1) collecting texts to analyse, (2) reading the texts for understanding, and (3) coding the texts.

Following the organization of the texts as described in the previous section, content analysis was undertaken with the help of a previously determined definition of metaphor. As found in Section 1, that definition of metaphor was: A linguistic device used to facilitate understanding of an abstract concept [in this case sustainability, environmentalism, or nature] without being literally applied to the abstract concept.

With this understanding of metaphor in mind, the analysis followed the below seven steps for each text, taking inspiration from the Praggeljaz Group's (2007) procedure (as cited in Steen, 2007, p. 12).

- I. Read the entire text to gain a basic understanding of it.
- II. Using the metaphors identified by Skinnemoen (2009) as a rough guide, determine the topmost levels of the coding trees.
- III. Find the basic concrete definition of the word or phrase in question using a dictionary, such as the Oxford English Dictionary.
- IV. Decide if the basic definition is different enough from the contextual meaning to be classified as a metaphor. Continue until having identified all metaphors in the text.
- V. Review the identified metaphors and disregard those that do not directly offer metaphorical understandings of sustainability, the environment, the oil sands, or nature.
- VI. Identify the topmost coding tree level the word or phrase in question falls under in the coding trees.
- VII. Identify the word or phrase using a specific general metaphor under the previously identified topmost coding tree level. Multiple metaphors within one phrase may be found.

Ultimately, the coding trees were created with two or three levels, and can be seen below.

Table 1: The codes used, in alphabetical order. Excluded code: Conscious metaphors.¹

First-Level	Second-Level	Third-Level
CLIMATE CHANGE AS	ART(S)	ACTING
		SCULPTURE
	BUSINESS/METRICS	
	COMPETITION	FAIR PLAY
		TEAM
	CONSTRUCTION	TOOLS
	EXCHANGE/TRADING	
	ILLUMINATION	
	MACHINE	TOOLS
	MILITARY	
	MOVEMENT	DRIVING
		FORWARD
	PERSONAL RELATIONSHIPS	FAMILY
PERSONIFICATION		5 SENSES
		GROWTH
CONSERVATION AS	ART(S)	ACTING
	BUSINESS/METRICS	
	COMPETITION	FIRST PLACE
	CONSTRUCTION	
	GUARD/PROTECT	
	JOURNEY	WALKING

¹ The conscious metaphors code is independent of the level system used by the other codes, being only applied to individual metaphors as necessary, and thus is not included in the table.

	MACHINE	TOOLS
	PERSONAL RELATIONSHIPS	PARTNERSHIP
	PERSONIFICATION	5 SENSES
	SCALE	
	SYSTEM	
ENERGY AS	CONFLICT	
	LIGHT	
	MOVEMENT	DRIVING
		LEFT BEHIND
	OWNED	
	PERSONIFICATION	HEALTH
	SUSTENANCE	
SYSTEM	CHAIN	
ENERGY EFFICIENCY AS	ART(S)	ACTING
	BUSINESS/METRICS	
	CLEANING	
	COMPETITION	
	CONSTRUCTION	
	GEMS/MINERALS/CHEMICAL ELEMENTS	
	JOURNEY	ROAD MAP
	MACHINE	
	MILITARY	
	MOVEMENT	CHASE
	PERSONAL RELATIONSHIPS	COMMITMENT/PROMISE
		STEWARD
	PERSONIFICATION	5 SENSES
PLAN		
ENVIRONMENTAL IMPACT AS	BUILDING/PROPERTY	
ENVIRONMENTALISM AS	ART(S)	ACTING
		DRAWING
	BUILDING/PROPERTY	
	BUSINESS/METRICS	
	COMPETITION	FIRST PLACE
		SPORTS
		TEAM
	CONSTRUCTION	
	DESTRUCTION	
	GUARD/PROTECT	
	JOURNEY	QUEST (FANTASY)
		RAILROAD
		ROAD MAP
MACHINE		
MILITARY		

	MOVEMENT	DRIVING FORWARD
	PACKAGE	
	PERSONAL RELATIONSHIPS	COMMITMENT/PROMISE NEIGHBOURHOOD STEWARD
	PERSONIFICATION	5 SENSES FOOTPRINT GROWTH HEALTH
	SCALE	THREE
	SUSTAINABILITY	
	SYSTEM	CHAIN
	FOSSIL FUELS (CARBON ETC.) AS	ART(S)
BUSINESS/METRICS		
CONSTRUCTION		TOOLS
DRAFT ANIMAL		
EXCHANGE/TRADING		
GATHERING (OBJECTS)		
MACHINE		TOOLS
MOVEMENT		BACK DRIVING
PERSONAL RELATIONSHIPS		COMMITMENT/PROMISE
PERSONIFICATION		FOOTPRINT GROWTH HEALTH
REMOVAL		
LAND AS	ANIMAL	
	BUSINESS/METRICS	
	CONFLICT	
	CONSTRUCTION	
	MOVEMENT	FORWARD
	OBJECT	
	PERSONAL RELATIONSHIPS	COMMITMENT/PROMISE NEIGHBOURHOOD STEWARD
	PERSONIFICATION	FOOTPRINT GROWTH HEALTH
	REPAIR	
	SUSTAINABLE	
	SYSTEM	SELF-SUSTAINING
OIL SANDS AS	ART(S)	ACTING
	BUILDING/PROPERTY	

	BUSINESS/METRICS	
	COMPETITION	CARDS
		FIRST PLACE
	JOURNEY	ROAD
	MACHINE	
	MOVEMENT	DRIVING
	PACKAGE	
	PERSONIFICATION	FOOTPRINT
		GROWTH
POWER		
SYSTEM	CHAIN	
SUSTAINABILITY AS	ART(S)	ACTING
		SCULPTURE
		SEWING
		TAPESTRY
	BUILDING/PROPERTY	
	BUSINESS/METRICS	
	COMPETITION	FAIR PLAY
		FIRST PLACE
		SPORTS
	CONSTRUCTION	TOOLS
	ENVIRONMENTALISM	
	EXCHANGE/TRADE	
	GUARD/PROTECT	
	JOURNEY	PATH
		RAILROAD
		ROAD MAP
	MACHINE	TOOLS
	MILITARY	
	MOVEMENT	DRIVING
		FORWARD
	NUTRIENTS	
	PERSONAL RELATIONSHIPS	COMMITMENT/PROMISE
		PARTNERSHIP
		STEWARD
	PERSONIFICATION	5 SENSES
FOOTPRINT		
GROWTH		
HEALTH		
INFANT		
SCALE	THREE	
SYSTEM	SELF-SUSTAINING	
TOP		
SUSTAINABLE LIVING AS	ART(S)	MOLD
	CONSTRUCTION	

	PERSONIFICATION	5 SENSES	
SUSTAINABLE/ENERGY DEVELOPMENT AS	ART(S)	ACTING	
	BUSINESS/METRICS		
	CLEAN		
	COMPETITION	FIRST PLACE	
		TEAM	
	CONSTRUCTION		
	JOURNEY	PATH	
		QUEST	
		ROAD MAP	
	LOCK		
	MOVEMENT	DRIVING	
		FORWARD	
	PACKAGE		
	PERSONAL RELATIONSHIPS	COMMITMENT/PROMISE	
		NEIGHBOURHOOD	
PARTNERSHIP			
STEWARD			
PERSONIFICATION	5 SENSES		
	GROWTH		
	HEALTH		
SCALE	THREE		
SYSTEM			
WATER AS	ART(S)	ACTING	
	BUSINESS/METRICS		
	MACHINE		
	PERSONIFICATION	FOOTPRINT	
HEALTH			

Initially, after reading a text and coding it individually as per the above steps, I then compared my findings with my supervisor’s until we felt confident that we understood the coding system identically. The coding process involved going back to the codes multiple times to ensure that the coding remained consistent. Despite this, there were challenges when it came to coding vague metaphors such as “long-term” – it may go under the journey metaphor or another metaphor, – “chain” – it could refer to a CHAIN AS A MACHINE or a CHAIN AS A SYSTEM, – or even “first place” – it could belong under the journey or competition metaphors. When confronted by such challenges, I discussed it with my supervisor and we came to conclusions that then carried across the coding system.

The last coding done (excluded from table) was for consciously used metaphors. These were identified as metaphors that were deliberately included by the text’s authors for a specific reason. These metaphors were recognized by, first, the amount of times they appeared within the same text section as multiple uses of the same metaphor suggests that it was a conscious use of the metaphor, and second, if they appeared in different forms that came down to the same root metaphor, which

suggests that the root metaphor was known to the text's author and used for a specific reason.

Like Steen (2007, p. 15), I did not mark words such as "key" as a metaphorical expression when it was used as an adjective, such as through the phrase "key piece." In such a phrase, any metaphor associated with key is not used; instead it is a conventional phrase and is understood as such (Steen, 2007, p.15).

Using the dictionary definition of words to help determine metaphorical usage is a common method for analysing metaphors, and was used during this analysis (Lakoff & Johnson, 1980; Skinnemoen, 2009; Steen, 2007). During this analysis, the 2014 Oxford Dictionaries was used. The word "path", according to the dictionary, is "a way or track laid down for walking or made by continual treading" (pt. 1). Due to this definition, the use of "path" in the phrase "sustainability path" is clearly metaphorical and should be coded as such.

Findings and Analysis

Coding Overview

A total of 262 metaphors applied a total of 2355 times was found in 26 texts via 1057 excerpts. This makes 10% of the 26 texts metaphorical in nature.

While I stuck to the understanding of metaphor outlined in the previous sections, there were some challenges in identifying whether something was a metaphor pertaining to sustainability or not.

For example, Suncor Energy often mentioned a "Journey to Zero" program that initially I thought was in reference to some sort of sustainability journey (Suncor Energy, 2009, p. 2, 12 & 16; Suncor Energy, 2010, p. 2, 6, 7 & 16; Suncor Energy, 2011, p. 2, 6, 7 & 16; Suncor Energy, 2012, p. 2, 8, 9 & 27; Suncor Energy, 2013, p. 2, 25, 28 & 29; Suncor Energy, 2014, p. 26, 30 & 31). Further investigation in the texts that incorporate the Journey to Zero program, however, revealed that the program was a workplace safety program and largely irrelevant to the sustainability discourse of the company.

A greater challenge was figuring out what to code some metaphors as. For example, the metaphor of SUSTAINABILITY AS AN ENGINE could be coded as a driving metaphor, and therefore a movement metaphor, or as a machine metaphor. In the end, it was decided to code the SUSTAINABILITY AS AN ENGINE metaphor as both a driving and a machine metaphor. The metaphor of SUSTAINABILITY AS A CHAIN, however, could have been coded as either a machine or a system metaphor, as seen above. Largely, the SUSTAINABILITY AS A CHAIN metaphor was coded only as a system metaphor because the chain often referred to a value chain, therefore a part of an idea instead of a part of a machine.

Rare metaphors tended to be more challenging to code simply because I lacked a background in understanding them. Thus, in one case, I considered the metaphor of ENVIRONMENTALISM AS A HARNESS to be a restraint metaphor, but when looking into the dictionary definition of the word "harness" I found that it was more accurately referring to a draft animal instead of restraints. As a result, there is one occurrence of a draft animal metaphor.

Challenges arose when creating the coding trees as well. One particularly irksome challenge revolved around the competition metaphor. I spent a lot of time trying to figure out if it was more valuable to have separate competition and sports metaphors or to keep them connected, with sports being sub-codes under competition. Ultimately, due to the fact that most sports metaphors referenced competition in some way rather than a friendly non-competitive sports match, I decided to keep sports metaphors as sub-codes under the larger competition metaphor. However, I did decide to separate the competition and military metaphors, due to the fact that the military metaphors tended to invoke references not usually found in the competition metaphor, such as the word “frontline.”

Metaphor Trends

13 root (or top tier/first-level) metaphors were uncovered. The most common first-level metaphors were SUSTAINABILITY AS and ENVIRONMENTALISM AS with 210 and 203 occurrences respectively. On the other end of the scale, the least common first-level metaphors were SUSTAINABLE LIVING AS and ENVIRONMENTAL IMPACT AS, with two and one occurrences respectively. Only two first-level metaphors were found related to nature: LAND AS (53 occurrences) and WATER AS (six occurrences). However, there were a number of first-level metaphors related to resources, including: oil sands metaphors (41 occurrences), fossil fuels (28 occurrences), and 15 excerpts related to energy. The most common second- and third-level metaphors of the aforementioned most prevalent root metaphors are described below.

Sustainability Metaphors

SUSTAINABILITY AS PERSONIFICATION and SUSTAINABILITY AS PERSONAL RELATIONSHIPS were the most common ways to imagine sustainability metaphorically, occurring 42 and 41 times respectively. SUSTAINABILITY AS PERSONIFICATION was used as a code because of the third-level metaphors of 5 SENSES, FOOTPRINT, GROWTH, HEALTH and INFANT, which made up 38 of the 42 occurrences, with the remaining four occurrences coded as PERSONIFICATION because of the use of language such as “social”, “issues facing” and “mindset”. The most common third-level metaphor was GROWTH, used 15 times, when “grassroots” (which would of course grow as grass or anything with roots does), “evolution” and the word “growth” itself were used in reference to the environmental sustainability of the organization, which may grow, evolve, or rise from a grassroots beginning. This seems to be similar to the metaphor of NATURE AS GAIA (Audebrand, 2010; Camino, 2014; Romaine, 1996), which has the problem of assuming that the environment can bounce back from most anything due to being an all-powerful goddess, which may or may not be true, and assumes that sustainability can be tracked in small changes or stages (evolution) and is ongoing with no apparent end (i.e. maturation vs. unlimited growth). However, the NATURE AS GAIA metaphor does, from my perspective, seem to facilitate greater understanding as to what nature and sustainability mean for the organization using the metaphor. Nature and sustainability are thus characterized as important and powerful.

With 28 occurrences, the next most common second-level metaphor was SUSTAINABILITY AS JOURNEY, with the third-level metaphors of PATH, RAILROAD, and ROAD MAP making up 17 of the 28 occurrences. The third-level metaphors occurred whenever the words themselves (path, railroad/train tracks, road map) were used,

specifying a particular type of journey. The only large difference between the three was that, unlike when “path” or “railroad” or “train tracks” was used, “road map” was generally used to highlight the fact that the organization had a plan of some sort pertaining to sustainability. There was a destination and it could be mapped out. This obviously harkens back to the general understanding of SUSTAINABILITY AS JOURNEY, which tends to utilize the journey metaphor as a way to demonstrate that sustainability is a process of some sort through which small changes can be tracked. This of course also carries with it the problem of the journey metaphor, which is that it is often used by organizations to justify tiny, nearly completely insignificant changes to organizational practices because SUSTAINABILITY IS A JOURNEY and the organization is on that journey (Audebrand, 2010, p. 415; Ihlen & Roper, 2011, Communicating Corporate Environmentalism, para. 2, Rationales, para. 1-3, & Conclusions, para. 5-6; Milne, Kearins, & Walton, 2006; Milne, Tregidga, & Walton, n.d., p. 16). As a result, critiques about how the organization is going about that journey is ineffective because of the idea that one cannot critique a journey without seeing its end (which has not been reached because the journey is still in process). Thus, the journey metaphor could be used as a smokescreen blocking substantial change.

Environmental Metaphors

ENVIRONMENTALISM AS ARTS – ACTING, ENVIRONMENTALISM AS BUSINESS/METRICS and ENVIRONMENTALISM AS MACHINE were the most common second- and third-level metaphors, with 59, 56 (out of 59), 69, and 59 occurrences respectively. Metaphorizing ENVIRONMENTALISM AS ACTING was overwhelmingly done through use of the word “performance”, which was cross-coded with ENVIRONMENTALISM AS BUSINESS/METRICS and ENVIRONMENTALISM AS MACHINE, which accounts for the large occurrence of the business/metrics and machine metaphors. It accommodates not only theatre performance but also business performance (as in working on corporate financial or personnel goals) and machine performance (as in a machine working on the task set out for it). Using a performance-oriented metaphor places the actor as the company or the environment, which are performing a play (in the acting version) or task (in the business/metrics or machine versions) in a way that can support environmentalism either through the act of performing the play or task, or from the outcome of the play or task. It can be assumed from the sheer prevalence of the use of the word “performance” that has resulted in this abundance of ENVIRONMENTALISM AS ARTS – ACTING, BUSINESS/METRICS, and MACHINE – that such language is deeply imbedded in the industry’s culture and therefore may not be a conscious metaphor but an incidental one, a result of being educated and working in an industry that favours such language. Accordingly, it may be the case that the use of the ENVIRONMENTALISM AS ARTS – ACTING, BUSINESS/METRICS, and MACHINE – doesn’t so much demonstrate the inner sustainable workings of an organization than demonstrate the external face of an organization, making the organization simply look sustainable rather than be sustainable.

ENVIRONMENTALISM AS PERSONAL RELATIONSHIPS – COMMITMENT/PROMISE or STEWARD – occurred 40, 18 (out of 40) and 18 (out of 40) times, respectively. ENVIRONMENTALISM AS PERSONAL RELATIONSHIPS – COMMITMENT/PROMISE – was overwhelmingly used in reference to the use of words

such as “responsibility” and “accountability,” speaking of a commitment the company has to environmentalism. This commitment implies a sense of relationship between the company and the metaphor’s target, environmentalism, reinforcing the idea that it is the company’s responsibility to act as though there is a relationship and to treat environmentalism with some semblance of respect and dignity.

Occurring 44 and 31 (out of 44) times respectively was ENVIRONMENTALISM AS PERSONIFICATION – FOOTPRINT. This builds from the idea of an environmental footprint, which is “the productive area required to provide the renewable resources humanity is using and to absorb its waste” (Global Footprint Network, 2014, para. 3), and gives the idea that not only does the company have a footprint, but that the company can step on environmentalism and harm it by creating said footprint. Simply, the larger the footprint the larger the surface-area affected by the step and the more the harm. This is an easy metaphor to use due to the general understanding of the environmental or ecological footprint that readers are assumed, and likely do have, whether through learning in school repeatedly or through work. The use of such a footprint metaphor makes understanding the organization’s comprehension of sustainability easier than it may be with more obscure metaphors.

Nature and Oil Sands Metaphors

LAND AS PERSONIFICATION – HEALTH were the most common second- and third-level metaphors used, occurring 24 and 13 (out of 24) times, respectively. This is unsurprising as the general goal of environmental sustainability seems to be to ensure that the land is not damaged, and this can be easily translated to the personification of the land by saying that healthy land is the goal of environmental sustainability. This personification metaphor harkens back to the metaphor of NATURE AS GAIA, A PATIENT, A SMALL CHILD, or A MOTHER. In the analysed texts, save for where it is specifically stated that the land is sick and must be healed (i.e. NATURE AS A PATIENT) thus placing the organization in the role of caretaker, it’s largely unclear what type of person the land is presently or is meant to be, besides healthy. This makes it difficult to understand comprehensively the metaphor target or the position of the organization. Is the organization a caretaker or healer? Is the organization a maintenance worker? These are very different roles with quite divergent responsibilities.

This difficulty is partially answered by the finding of the second- and third-level metaphors LAND AS PERSONAL RELATIONSHIPS – STEWARD, which occurred 16 and 15 (out of 16) times, respectively. A steward, according to the 2014 Oxford Dictionaries, is essentially someone responsible for managing or supervising something else. Due to the common use of the phrase “land stewardship” for this metaphor, this places the organization squarely in the role of steward towards the land, therefore creating a relationship based on an inherent responsibility the organization has towards the land. Once, this metaphor occurred in tandem with that of LAND AS PERSONIFICATION – HEALTH, clearly showing that the land is a responsibility roughly akin to an elderly relative, and the organization is responsible for that land/elderly relative. This does the exact opposite of the NATURE AS GAIA metaphor and instead of assuming the environment can bounce back from any harm done to it, it assumes that the environment must be maintained by humans and is often threatened.

OIL SANDS AS PERSONIFICATION – GROWTH were by far the most common second- and third-level metaphors, occurring 16 and 13 (out of 16) times, respectively. These metaphors occurred largely thanks to language referring to the oil sands' explicit "growth", "life cycle," and "life span". Specifically, the language of "life cycle" and "life span" makes it seem as though the oil sands are living substances or beings with beginnings, middles, and ends. In short, they're implied to be able to grow.

Conscious Metaphors

Out of the 262 total metaphors, 145 conscious metaphors, or 55%, were found. Of those conscious metaphors, 75, or 52%, were SUSTAINABILITY AS metaphors, with 10 (13% of the 75) occupying the SUSTAINABILITY AS JOURNEY metaphor sub-category. ENVIRONMENTALISM AS metaphors showed up 29 times out of 145, or 20%, with ENVIRONMENTALISM AS COMPETITION occurring 6 times (21% of the 29). For more nature-oriented metaphors, 13 of 145, or 9%, were OIL SANDS AS metaphors while 7 of 145, or 5%, were LAND AS metaphors.

The conscious metaphors, particularly those involving SUSTAINABILITY AS, ENVIRONMENTALISM AS or SUSTAINABLE DEVELOPMENT/ENERGY DEVELOPMENT AS DRIVING assume that the reader will understand the metaphor based on their personal experiences. As such, they'll be able to understand that when something is referred to as an ECONOMIC ENGINE it is the economy and therefore capital resources that will help to result in greater sustainability. Similarly, when something is referred to as DRIVING SUSTAINABILITY or TOWARDS SUSTAINABILITY, it is assumed that the reader will understand that the vehicle used to move towards sustainability is the company (Syncrude, Suncor, etc.), or, more specifically, the company's official sustainability plan. The same assumption occurs when using the journey metaphor in all its incarnations (i.e. SUSTAINABILITY AS A PATH, A ROAD MAP, A QUEST). It is assumed that the reader understands what a journey is, that when they speak of a "path" or a "road map" they are referring to a plan with steps that may or may not be clearly defined but will, nevertheless, lead to sustainability. This assumption occurs again whenever construction metaphors are used. It is assumed that when a SUSTAINABILITY MODEL is referred to the reader will understand that the model is a tool used to reach sustainability. When the term "concrete" is used in reference to sustainability it is assumed that the reader will understand that sustainability, or that which is used to reach sustainability, or the sustainability plan – whichever is referred to using the term "concrete" – is stable.

The conscious metaphor of SUSTAINABILITY AS, ENVIRONMENTALISM AS or SUSTAINABLE DEVELOPMENT/ENERGY DEVELOPMENT AS SCALE – THREE, calling back to the idea of the three-legged stool seen in the literature review, is more explicitly explained. At least once, whenever the THREE metaphor is used, the industry text will specify that the three parts to this SCALE – THREE metaphor are: environmental, social, and economic dynamics, or equivalents. It's just enough specification for the reader to understand, assuming they understand what a scales does, that those three parts – environment, social, and economic – must be balanced to achieve the above SUSTAINABILITY, ENVIRONMENTALISM or SUSTAINABLE DEVELOPMENT/ENERGY DEVELOPMENT.

An obscure conscious metaphor, that of OIL SANDS AS PLAYING CARDS, which did not appear in the preliminary research, is more clearly explained in text by explicitly referring to oil sands as “the ace” and “the trump card,” therefore apparently referring to the sustainability of the economy as a card game (Syn crude Canada Ltd., 2009, p. 5). This metaphor is not expanded on elsewhere, and assumes a basic knowledge of card games that use a trump card. Freeman refers to a card metaphor to explain an “interactionist model of social identity” wherein the cards in one’s hand can be equivalent to real world “social-structural processes,” thus having different cards will affect how you can and will play the game (2001, p. 293). This seems to be similar to how the OIL SANDS AS PLAYING CARDS metaphor is used.

Conclusion

The sheer breadth and variety of metaphors found makes it clear that utilizing a systematic methodology to analysing texts for metaphor use is extremely valuable. Metaphors are so engrained into our society that the use of a word such as “performance” can be used to refer to a theatre performance, business performance, or a machine’s performance (see section 5.2.2) and be understood. However, these performance metaphors are so engrained and common they become less and less meaningful for promoting a rich and varied discussion of oil sands sustainability.

The personification of NATURE AS GAIA, MOTHER, PATIENT, or CHILD permits a conceptual understanding of sustainability as being something fragile that one is responsible for (i.e. patient or child) or sustainability as something independent that is responsible for itself (i.e. Gaia or mother). The metaphorization of SUSTAINABILITY AS JOURNEY offers an opportunity to critique the actions of organizations that claim to be on a journey towards sustainability but do not place a limit on how long the journey must take. A journey can last anywhere from a second to two hundred years to a few thousand years to all of human existence, but generally when the metaphor of SUSTAINABILITY AS JOURNEY is used there is no specification of a timeline and the destination is largely obscured by the journey smokescreen. SUSTAINABILITY AS A SCALE or BALANCE offers a slightly more defined understanding of sustainability and the organization’s part in sustainability. What creates a discussion is figuring out what the parts of the scale or the pieces being balanced are, exactly. As previously mentioned, generally they are divided into three parts – environment, social, and economic – but little is specified beyond that. What part of the environment, society, and the economy must be balanced? All of it or just a section? Figuring out the answers to such questions will help promote a more sophisticated understanding of what sustainability can and should look like. Perhaps this may come about through further creative use of the personification and balance metaphors. Metaphorizing the environment to someone in their late teens rather than a small child or a parent would suggest that the environment was independent and self-sufficient to a degree, and will periodically object to involvement or guidance from others (i.e. humans), but often does nevertheless require some limited assistance or guidance from others. Such a metaphor would provide a more balanced approach to sustainable development, without arbitrarily dividing the world into three sectors as the scale metaphor tends to.

This is why metaphor analysis is important. It illustrates many components of sustainability that we have difficulties discussing in a consistent way, which can explain the problems we already have communicating with people about sustainability and

other complex topics. The analysis of metaphors, however, has to occur with a systematic methodology otherwise the understanding of the metaphors used will be lacking. Comparing the metaphors found during the literature review and those found through this analysis clearly displays the importance of a systematic methodology when analysing metaphors. It could be that the oil sands industry uses a greater variety of metaphors in its published texts than those texts analysed by others looking into metaphor, but this is unlikely as the analyses in the literature review may not have used the same texts but did focus on the same general topic – sustainability – which, judging by the similar metaphors found through the literature review and the industry text analysis, tends to be understood via similar metaphors across society sectors, texts, and individuals. In sum, it is a systematic analysis that permits an immense variety of metaphors to be found, analysed and understood in any metaphor analysis. Thus, metaphor researchers should consider their methodology and its degree of systematic analysis thoroughly before beginning their research.

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