Going beyond the Literal: A Longitudinal Study of Metaphorical Conceptualization in Sustainability Reports

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Abstract

Language expressions are primarily shaped by conceptual metaphors. By adopting Conceptual Metaphor Theory as a tool, this study explores the communicative strategies adopted by a company’s outlook on social and environmental responsibility from a longitudinal perspective. Conceptual Metaphor theory, also known as Cognitive Metaphor Theory, is an expression used in cognitive linguistics to describe the understanding of one notion or conceptual domain in terms of another. In more specific terms, the article discusses how Structural, Orientational, and Ontological conceptual metaphors are employed in the communicative strategies adopted by Chevron Co. pre-and during the COVID-19 pandemic crisis. Chevron is an American joint-stock company that operates in the field of power generation and oil refining. The qualitative and quantitative linguistic analysis conducted using the Sketch Engine program aimed to pinpoint and clarify the ways in which Chevron and Co’s use of language creates and communicates metaphors in its Sustainability Reports.

Index terms—conceptual metaphor theory, ontological metaphor, orientational metaphor, structural metaphor, sustainability.

1 Introduction

Sustainability is a complex concept that considers the balance between environmental, social and economic aspects of human life. Businesses play a crucial role in promoting environmental sustainability, as their social and environmental impact can be considerable. In this regard, the significance of sustainability to business has grown over the past few years. The relationship between governments, business and society has undergone structural changes as a result of these challenges and the public’s expectations regarding the role of business in addressing those challenges have also changed as a result. One example of an external environmental change is the rise in public concern over environmental issues such as climate change, depletion of natural resources, ecology, species extinction and cultural change (Bastardas-Boada 2005; Thiele 2016; Lessmann and Rauschmayer 2016). These concepts provide a way to improve some of the material aspects of human existence without degrading other environmental elements that are even more fundamental and essential to nature; they serve to safeguard against the very threat to human existence (Bastardas-Boada 2005; Thiele 2016; Lessmann and Rauschmayer 2016). This does not exclude progress in science, technology, or economic development, and indeed acknowledges the key importance of healthy environments that are conducive to the survival of animal species and nature. Because the scales of values shared by society and shaped by legal codification serve as the root of the issue rather than legal dispositions, it assumes the existence of an environmental, social and ecological morality. As a result, business, societies and companies now approach social, community and environmental activities with greater strategic thinking (Galpin and Whittington 2012). In this perspective, Sustainability is now advocated by a growing number of corporations, citizens, governments and political parties, becoming "one of a few ideals that receive near universal endorsement [...]" increasingly providing "a common language, a lingua franca for the twenty-first century" (Thiele 2016: 11).
In such a setting, sustainability reporting has developed as a useful tool for managers to identify and address these sustainability-related challenges while also boosting business operations at the company. Businesses are in fact interested in sustainability, and Reporting reflects the expanding importance of sustainability in general. The motivations and outcomes in Reporting have changed together with its growing strategic importance (Morhardt 2010); earlier on, most reporters were under social and public pressure and used their reporting to establish the credibility and trustworthiness of their corporations, societies, companies, etc. (Deegan 2002). In addition to outcomes, other reporting motivation factors include strategic advantages such as the market (improving competitive position), political (reducing political pressure and regulation), social (avoiding stakeholder challenges), and accountability (the company is promoting sustainability). KPMG claims that "companies are not only expected to operate in a responsible manner, but they are increasingly asked to demonstrate strategies adopted by a company’s outlook on social and environmental responsibility from a longitudinal perspective. Conceptual Metaphor theory, also known as Cognitive Metaphor Theory, is an expression used in cognitive linguistics to describe the understanding of one notion or conceptual domain in terms of another. In more specific terms, the article discusses how Structural, Orientational, and Ontological conceptual metaphors are employed in the communicative strategies adopted by Chevron & Co. pre-and during the COVID-19 pandemic crisis. Chevron is an American joint-stock company that operates in the field of power generation and oil refining. This publicly in a report from 1999 (in Offeley and Higgins 2016: 18). Given this, it is evident that the way businesses have learned to understand sustainability has been greatly impacted by sustainability reporting.

Businesses can now speak out about sustainability-related issues, demonstrate their social and environmental performance, and the general public is now more aware of how businesses handle these issues. This is precisely the context in which the use of metaphor comes in. As Lakoff and Johnson (1980: 121) point out, "people understand what they see"; therefore, in order to ease accessibility and an accurate understanding of such important information, companies make extensive use of metaphors in their sustainability reports in order to convey their commitments to sustainability and create a positive image among the public.

2 II.

3 Theoretical Framework and Methodology

Up until recently, metaphor was examined solely in the context of rhetoric or stylistics and was considered to be merely a rhetorical device. The analytical tool of Conceptual Metaphor Theory (CMT) (Lakoff and Turner 1980) will be examined in this section in order to explain the complexity of the relationship that lies behind the creation and understanding of the Chevron & Co. Sustainability Reports under scrutiny. Conceptual Metaphor Theory is a branch of Cognitive Linguistics (CL) whose goal is to make abstract notions more understandable by treating them as concrete concepts. Indeed, according to Forceville and Urios-Aparisi (2009: 12), Conceptual Metaphor Theory (CMT) stresses the fact that “human beings can only come to grips with the abstract by metaphorically coupling it with the concrete-perceptible.” To put it another way, when a metaphor is used, an abstract idea is perceived as if it were a physical object (Charteris-Black 2004). This is because the conceptual domains of the source and the target are closely related to our everyday experiences and thus shape the way we think and what we believe about the world. The Relational process “A is B” found in the corpus such as “disease is war” can explain the way metaphor works, where the A element is the source domain and the B element is the target domain. Although there is identification between them in that they both involve something related to living beings, on closer scrutiny they come from notions that pertain to utterly different “cognitive domains” (health and armed conflict) (Ngoc Vu 2015).

Hence, Conceptual Metaphor Theory (CMT) is based on the interaction between two conceptual areas or units of cognitive association known as “cognitive domains”, which are understood to be mental representations of how the world is structured. As a result, metaphoric conceptualization based on analogy is primarily accomplished through mapping, which entails tying together two distinct conceptual structures or domains in which a concrete vehicle or source domain is associated with and uni-directionally projected towards an abstract topic or abstract domain, as illustrated in Table 1 below.

This study discusses the distribution of metaphorical mapping from a quantitative and a qualitative perspective in the Chevron Sustainability Reports published immediately before the COVID-19 pandemic crisis and during the subsequent pandemic. The aim is to understand the contrasting ways in which the two Reports (2019 and 2020) conceptualize the two different periods, and how one of the most challenging years since the end of the second World war affected the choice of metaphors in the 2020 Chevron Sustainability Report.

It has been shown that companies, politics and corporate discourse in general frequently use metaphors as they create images and leverage sensory cognition, perceptions and ideas, exerting a direct impact on the level of thought in terms of “understandings, judgments, concepts and theories” (Solonchak and Pesina 2015: 25). Any representational decision can theoretically be replaced by a new linguistic choice with a different set of consequences since referents do not have an unquestionable inherent meaning. Whether consciously or unconsciously, people adopt a categorization that emphasizes certain aspects of the concept and obscures others when we select a specific source domain to achieve it (Nicaise 2011).

The purpose of this study is to demonstrate how, through metaphor, Sustainability Reports aimed to capitalize
on their conceptual aspects both before and during the pandemic. Viewed from a longitudinal perspective, the challenge is to establish how the lexical realizations of social and environmental sustainability, as well as the near-parallel content in financial-economic concepts were distributed during the most acute period of the pandemic compared to the preceding year.

Conceptual metaphors can be divided into three different categories: Orientational metaphor, Ontological metaphor, and Structural metaphor (Lakoff and Johnson 1980). i) Ontological metaphor provides a foundation for people to describe parts of experience as discrete entities or as unified classes of matter; ii) Structural metaphor refers to the use of familiar concrete and simple descriptive structures to construct another abstract concept (Nicaise 2011); iii) Orientational metaphors organise the entire conceptual system according to another concept related to spatial orientation: up and down, inside and outside, front and back, on and off. The main point of this study is to analyze the distribution of Conceptual Metaphors, namely Structural, Orientational, and Ontological from a longitudinal perspective in the Sustainability Reports of Chevron and Co. before and during the pandemic and see what the implications are. Due to space restrictions, only the most pervasive in each metaphorical category will be considered and discussed both qualitatively and quantitatively.

4 III. Data Description and Selection

The choice of Chevron Corporation as a subject of study was because it is one of the world’s largest energy companies in the production of electricity and in the oil refining sector, with a significant impact on global sustainability. Chevron Corporation has a strong commitment to sustainability and reducing greenhouse gas emissions, making it an interesting case study for understanding how large companies address these issues.

In this respect, Sustainability Reports were selected because they deal with the significant issue of social and environmental questions. As a result, they play a noteworthy role in the expression and construction of public opinion. To a large extent, they also reveal the company’s ideological stance and its use of persuasion rhetoric to communicate with investors, stakeholders, and local and global communities. They thus wield a certain influence on how public opinion is expressed and formed.

The data collection period spans two years: 2019 and 2020, i.e., the year that was significantly impacted by the COVID-19 pandemic crisis, as well as the year immediately prior to the crisis. More specifically, Sustainability Reports were chosen for two main reasons: first, because they provide the most thorough information to the local as well as the global community on a larger scale; and second, using annual reports makes it possible to conduct a longitudinal linguistic analysis of the changes in the use of metaphors.

5 Analysis and Results

The research questions that guided this study were as follows:

-What metaphors were used in Chevron’s Sustainability Reports before and during the COVID-19 pandemic?
-How did the metaphors used by Chevron in Sustainability Reports change during the pandemic?
-What are the implications of using metaphors in corporate sustainability reporting? a) Overall distribution of source domains Before analyzing in depth how particular concepts are expressed metaphorically before and during the pandemic, the global distribution of source domains is displayed (Figures 1 and ??). In more specific terms, Figures 1 and ??

6 i. Conceptual Orientational Metaphor

According to the findings shown in Figures 1 and ??, Orientational metaphor was the most common category before the pandemic, accounting for 52% of all metaphors in the corpus but fell to 27% of the corpus during the pandemic. As stated by Lakoff and Johnson (1980), Nicaise (2011) etc. Orientational fundamental metaphors are among the most common (exceeded only by Structural metaphors), because they are spontaneously learned through "sensomotoric experience" (Nicaise 2011: 411) beginning in infancy and subsequently they accompany us throughout the rest of our lives. Otherwise stated, they are derived from our bodily interactions with the environment because virtually any type of dynamic characteristic of our lives but also the 'life' of a Company, or the expression of any social or economic parameter -may be described in terms of stepping forward or back, rising or falling patterns that are simple to visualise in a figure. Sustainability Reports thus tend to be particularly responsive to Orientational metaphors, as can be seen from the Examples 1-8 below: 2) Before starting a high-risk task it is an important step forward in prioritizing safety and social and environmental sustainability (Sustainability Report 2019).

7 3) Chevron has taken important steps forward to initially align our performance data table (Sustainability Report 2019).

The most common Conceptual Orientational metaphor used in the Sustainability Report published before the pandemic is “step forward”. In Example 1, the metaphor implies that support for the Paris Agreement represents...
positive progress for Chevron—and for the whole oil-refining and power generation industry—in the fight against climate change as well as social and environmental sustainability. It also suggests that support for the agreement represents a progression toward a more sustainable and better future. In the face of such ever shifting expectations, the Chevron team has been working to find solutions to the most challenging energy problems emphasizing its high ethical standards and the Company's desire for operational excellence in its stringent capital discipline and ongoing effort to lead the way in the future of energy, thus establishing a reputation for providing responsible and durable outcomes. 4) We know the world faces challenges. But we also know, from experience, the path to surmounting any challenge: pursuit of innovation, commitment to partnership, trust in markets and belief in the power of human energy.

(Sustainability Report 2019)

And this compass seems to be the value and principle guiding Chevron along its traditional "path", namely "the responsible way", which seems to become a tautological identification in "the Chevron way", as can be seen in Example 5 below: Although the occurrences of Conceptual Orientational metaphors drop dramatically in the Sustainability Reports published in 2020 during the pandemic, as is possible to see in the cake chart in Figure ?? in terms of sustainable investment solutions and insights.

Another Conceptual Orientational metaphor based on the same analogy that embodies the image schema of Chevron taking 'steps forward' through 'the path' of achieving future objectives can be seen in the Example 8 below:

Again, the metaphor is established by using the expression "on the road" figuratively to refer to the path or trajectory followed by the Group to achieve a holistic view of the 2028 sustainable development agenda, including not only energy efficiency but also environmental and social aspects. The metaphor established by using the Orientational concept "on top" in both Examples (9-10) above refers to the position of importance that the climate topic occupies in people's list of priorities, stressing also how these issues are prioritized in Chevron's list to design a sustainable future and find solutions in line with the "path of Ecological Transition" undertaken at a World level while at the same time, of course, protecting employment, the creation of local values and the continuity of electricity supplies.

8 ii. Structural Conceptual Metaphor

As stated above, according to Lakoff and Johnson (1980), Structural Conceptual Metaphor is the most frequently used category. Indeed, according to what is propounded by Lakoff and Johnson (1980), in the corpus under scrutiny related to the Sustainability Report published during the pandemic, this does seem to be the case, since it is the category displaying the highest percentage of occurrences.

The Orientational metaphor narrative that Chevron & Co. attempts to construct is based on a figurative long walk along "a path" on which the Company will continue to make "steps forward" in order "to surmount any challenge" against the backdrop of ever-changing expectations. This mindset drives the Company to invest in cutting-edge technologies, pursue novel solutions, and foster the next generation of problem-solvers across all their business, as can be noted in Example 4 below: This type of conceptual metaphor conceptualizes complex and abstract experiences based on the knowledge of concrete, straightforward experiences. The conceptual metaphor 'disease is war', which is stated through a succession of the following sentences in the corpus, is a common example used to explain this type of metaphor. It goes without saying that compared to their Sustainability Report published before the pandemic, the Report published in the midst of it uses a large number of Structural Conceptual war analogy metaphors) (3% in the Sustainability Report 2019; 49% in the Sustainability Report 2020): Again, the metaphors in Examples (12-13) are used to describe how the communities in which Chevron operates in the United States have been negatively impacted by the COVID-19 pandemic. The occurrences of "hard-hit" and "attack" suggest that these areas have suffered a serious aggression and violence by the pandemic, implying that they have undergone a serious setback not only in economic terms but above all in terms of health consequences from the spread of the virus. The metaphor used in the Examples (14-15) are "combat" and "killer". By identifying pneumonia caused by COVID-19 to a "killer" "to combat" implies that the disease poses a serious threat to human life. The metaphor also suggests that pneumonia represents a major problem that must be actively and aggressively addressed to prevent further damage.

As stated above, quantitative linguistic analysis of the Sustainability Report published during the pandemic confirmed the strong correlation with the use of war metaphors, thus confirming how 2020 was inevitably influenced by the COVID-19 pandemic; the World economy suffered a severe setback, almost grinding to a halt. Indeed, the result was a threefold crisis: health, economic, and social, with the refining industry being one of the hardest hit. Interestingly, in the 2020 Report war metaphors are never employed to describe material circumstances, i.e., financial or economic, but focus instead on a human approach to resolving problems concerning health, social and human values, through an extensive use of combat analogies.

Not surprisingly, in the Sustainability Report prior to the pandemic there are very few occurrences of Structural metaphors regarding war, and they are not linked to social, health and human values as in the Report published during the pandemic, but are related prevalently, although not exclusively, to economic and financial issues, as in Example 16 below: In Example 16 above, the metaphor of war "strategy" alludes to the 'industrial vision' in which Chevron has always considered itself to be of primary importance, holding a highly competitive position
on an international scale, and at the same time, participating in the socio-economic evolution of people and of
the environment in which it operates.

iii. Ontological Conceptual Metaphor According to Lakoff and Johnson (1980), conceptualizing our experience
as belonging to the conceptual realm of tangible or material objects enables us to separate away abstract
experiences and ideas and perceive them as actual objects or substances. The semioticization of certain aspects
of extralinguistic experience by words enables people to recognize and interpret them immediately. Once the
experience can be reduced to a particular object or substance, any classification, grouping, or quantification is
possible. This allows us to explain the experience rationally. According to Lakoff and Johnson (1980), experience
in any type of interactive process with a specific object or substance is the foundation for a wide multiplicity of
conceptual metaphors in which activities, events, ideas and feelings, etc. are considered as the essence.

9 Mobility

Among the most common Ontological metaphors, Mobility metaphors feature widely in the corpus under
investigation. They are also used more frequently in the Sustainability Report published before the pandemic,
accounting for 9.4% out of 45% of Ontological metaphors than in the Sustainability Report published in the midst
of it (0.2%). These percentages are supported by regression analysis, which also reveals that energy transition,
global markets and energy solutions use Mobility metaphors more frequently than in issues of health and disease
referring to the pandemic crisis. Moving forward along this virtual path of economic, social and environmental
issues can be achieved through different means of transportation. Each means of transportation connotes its
own advantages and disadvantages as each has its strengths and weaknesses and thus a different distribution
in the corpus under scrutiny. As stated above, all these occurrences are present only in the Sustainability
Report published before the pandemic, whereas there are no occurrences of this kind of metaphor referring to the
COVID-19 pandemic in the Sustainability Report published in 2020: all of them regard social and environmental
issues, the economy, energy etc. (cfr. Example 17 below). Most of these metaphors of Mobility are founded
on image schemata that result from a physical experience related to Boat (navigation, 4 occurrences) and Train
(2 occurrences). The former is associated with directing the way that a ship will travel, or to find a direction
across, along, or over an area of water, and often has a connotation that involves difficulties, complications etc.
evoking an image of intrinsic complication, for example 'navigate in bad waters' as in the Example (18) below, "to
navigate global markets, thrive in diverse economies and cultures, operate in complex regulatory environments”
[italics added]; the latter (locomotive), on the other hand, implies moving in a favorable and fast way: 'speeding
train/locomotive'; this metaphor identifies speed to a train traveling at speed, implying that it is powerful and
unstoppable as shown in the Example (19) below. The metaphor is established by comparing the management system process to an "engine" that drives an
activity or process toward a desired goal. The modifier "main" is used to emphasize the critical importance of
the management system process as an essential engine for continuous improvement in organizations.

10 Animals

Even if the frequencies before and during the pandemic are significantly lower than other source domains-0.4%
for the Sustainability Reports published before the COVID-19 pandemic and 0 for the one published during
it -the animal world is a non-negligible source of inspiration for corporate and financial discourse in general
(Nicaise 2011). Although there is a clear predilection for War metaphors in the Sustainability Report issued
during the pandemic, one of the metaphors preferred in the Report published before the pandemic -along with
the Orientational, as seen above in 4.1.1 -is the Key metaphor, which accounts for the highest number of the
Ontological metaphors (62%). Indeed, the metaphor of the Key is pervasive in the corpus under investigation
and in the great majority of examples is always related to "human rights": The metaphor of the Key refers to
the critical importance of these issues connected to the human aspects of Chevron’s work. It works as means to
open new horizons: namely starting with "people", who are put in first place as a business resource, as clearly
stated in the letter to the Stakeholders (2019): "At Chevron, we believe our greatest resource is not the resource
in the ground -but rather the inspiration of our people".

The same metaphor is used in the following sentence taken from Example 25 in which the Key metaphor
collocates with "business", then again in a binominal construction with "human rights" in order to In this
example the company again puts strong emphasis on the ethics regarding human rights and work, especially in
the areas in which Chevron operates, considering the essential factors of health, environment and safety practices
as a core part of their comprehensive safety and protection program. The same metaphor is used in the following
sentences taken from the Sustainability Report published in 2020: 27) We engaged with key suppliers to reinforce
awareness of our policies and potential human rights issues. (Sustainability Report 2020)

28) What is the key to sustaining a culture of safety in Chevron's diverse operations across the globe?
(Sustainability Report 2020) Another essential aspect of Chevron's program expressed in the metaphor 'key
initiative' refers to Chevron's biodiversity action plan. The Company is engaged in protecting the life of
endangered species and demonstrates Chevron’s commitment to conserving biodiversity and protecting the
environment and wildlife that live in the vicinity of their operations.
11 CONCLUSIONS

12 Conclusions

This study has focused on the question of how much the pandemic crisis had an impact on choice of metaphor in the Sustainability Report of one of the biggest joint-stock companies in oil refining and power generation at a World level, namely Chevron & Co. By adopting a Conceptual Metaphor Theory approach using the three different types of cognitive metaphorical expression, namely Orientational metaphor, Ontological metaphor, and Structural metaphor (Lakoff and Johnson 1980; 2003), this study has attempted to analyze all the metaphorical realizations from a longitudinal perspective in the Sustainability Reports of Chevron & Co. published before (2019) and during the pandemic (2020).

The results seem to partially corroborate Lakoff and Johnson’s (1999) claim about the fact that Structural conceptual metaphors belong to the core of conceptual metaphors that are employed in the great majority of cases irrespective of linguistic, culture or thematic differences. Indeed, although this is true regarding the metaphors found in the Sustainability Report published during the pandemic, in which in the majority of cases Structural metaphors are those with the highest percentage, it does not seem to be the case in the use of metaphors in the Sustainability Reports published before the pandemic, in which Orientational metaphors have the highest percentage. In line with this perspective, therefore, the data suggest that the two periods have their own metaphorical preferences as regards specific domains. It could be inferred from this that effective communication in different periods of time -although in this case not with any significant timespan, but certainly with extraordinary discrepancies due to the tragic event of the pandemic marking it -requires awareness of different metaphorical implications; when in a given period a source domain is seen to be more productive, a locutor, or an energy company, as in this specific case, may benefit from this different conceptual competence reflecting its attitudes towards the world in general and the life of the community in particular.

Quantitative and qualitative analysis of Chevron’s 2019-2020 Sustainability Reports revealed that the company mainly focuses on reporting information about its financial and operational performance, but above all including environmental, social, and health aspects; needless to say, the emphasis on health concerns the Report of 2020. In addition, analysis of the metaphors used in the reports revealed that Chevron mainly adopts a familiar and humane perspective with the reader in managing environmental, social and health issues.

Regarding the types of rhetorical figures and their frequency, in the 2019 Sustainability Report (prior to COVID-19), Chevron uses mainly Orientational metaphors, but also Ontological ones (“Key”, ”step forward”, etc.); while in the 2020 Sustainability report (during COVID-19), Chevron uses Structural metaphors, nouns and adjectives conveying war images. (“hit”, ”killer”, etc.).

This piece of research has tried to highlight the importance for energy companies to communicate their environmental and social commitments effectively. Companies should adopt a more humane and collaborative approach to managing environmental and social issues in order to improve their public image and increase consumer trust. In addition, the use of more incisive metaphors could be an opportunity to improve the effectiveness of corporate communication in this area.

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1 ESG is the acronym which stands for Environmental, social, and corporate governance, also known as environmental, social, governance, is a business framework for considering environmental issues and social issues in the context of corporate governance.

2 It is interesting to note, for instance that investor optimism is a hallmark of bull markets, whereas bears predict the market will provide negative returns. Both metaphors likely have their roots in the way that the animals attack their foes. In order to represent upward and negative trends, a bull raises its horns while a bear lowers its paws (Cfr. Nicaise 2011).
Figure 1: Distribution of source domains in the Sustainability Report 2019

Figure 2: Distribution of source domains in the Sustainability Report 2020
7) We believe that our Sasb index is a positive step forward in further aligning our Edgard reporting (Sustainability Report 2020).

In Examples 6 and 7 above the metaphor (positive) "step forward" refers to a significant and progressive advance in aligning Chevron’s reports with the ESG disclosure standards.

8) We expect to spend about $2 billion by 2028, on the road to delivering our 2028 performance metrics [...] to meeting [...] great challenges - eliminating poverty, creating prosperity for all and delivering the sustainable environment everyone desires. (Sustainability Report 2020)

6) Chevron has taken steps forward to align its performance data table relative to the goals they had set for themselves.

[Coffey and Higgins (2015)] *Improving how sustainability reports drive change: s critical*, B Coffey, C Higgins. 2015.