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Business storytelling about energy and climate change: The case of Brazil's ethanol industry

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ABSTRACT

Climate change narratives often evoke scary scenarios. But in business discourses, the climate change narrative often emerges as an opportunity rather than a threat. This paper examines the predominant business storytelling ploys used by Brazil's sugarcane industry association, UNICA to promote the industry as environmentally and socially responsible. We used both qualitative and quantitative narrative analysis to analyze thirty-five videos and multimedia presentations produced as part of UNICA's marketing communications. Drawing on insights about tropes variously evoking hero stories, learning stories and horror stories, we conclude that the sugarcane industry has developed hero and learning stories that portray the sugarcane industry as a sustainable business and ethanol as a 'green hero', a green, renewable energy that helps reduce greenhouses gas emissions and thus saves humanity from climate change.

1. Introduction

Brazil's program to produce ethanol from sugarcane has gone through various phases during its more than forty-year existence. Nowadays, its environmental benefits are widely touted among its advocates [1], but the country's military regime initially launched the National Alcohol Program (colloquially referred to as Proálcool), from which it arose in 1975 to meet geopolitical and energy security objectives. Ethanol production from sugarcane was spurred by a need to enhance the trade balance and national energy self-sufficiency in the context of an economically deleterious trade deficit provoked by dependence on foreign oil and the 1973 international oil crisis [2]. Proálcool became an important pillar of the military dictatorship's great ambitions to transform Brazil into a superpower [3]. The change in the energy supply matrix assumed the ability to produce food and energy simultaneously, in the process helping tropical Brazil to achieve its geopolitical ambitions [4,5].

Proálcool contributed to the successful development of the sugarcane ethanol industry. During the first ten years of the program alone (1975–1985), the territory dedicated to ethanol production doubled and production almost tripled, reflecting significant increases in yields. The expansion of sugarcane has been constant since 1975 although production was slower between 1985 and 2000 [6]. In 2003, the introduction of flex-fuel automobiles resulted in significant increases in ethanol production investments, further consolidating the industry and

leading to the formation of large companies [7].

In recent decades, recognition of the environmental benefits from sugarcane ethanol has grown in the context of worldwide interest in renewable fuels to reduce pollution and climate-altering greenhouse gas (GHG) emissions [7]. Today, Brazil is the country where renewable energy contributes the largest part of the total national energy matrix, representing 42% of all renewable energy [8], and bioenergy of sugarcane alone accounts for 18% of all energy sources [9]. The government forecasts that 45% of its energy will come from renewable sources in 2024 [10], and it presents biofuels as a necessary component of this transformation. The sugarcane ethanol is presented as a "Brazilian solution" to the problems of fossil fuel dependence and climate change [11].

As expressed in the Intended Nationally Determined Contribution (INDC) communication under the United Nations Framework Convention on Climate Change (UNFCCC), Brazil has one of the largest and most successful biofuel programs to date, including cogeneration of electricity using biomass. In its INDC communication presented in the context of the Paris Agreement, the country made two main pledges involving the energy sector: (1) achieve 45% of renewable in the energy mix by 2030, something it in large part would achieve by expanding the demand for renewable energy sources; (2) increase the share of sustainable biofuel in the Brazilian energy mix to approximately 18% by 2030 by expanding biofuel consumption, enabled by an increase in ethanol production, in part, from second generation biofuels, and

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increasing the share of biodiesel in the diesel mix [12].

Brazil's ambitious pledge under the UNFCCC, and the recognition of the strategic importance of sugarcane ethanol to achieve these commitments are celebrated by the sugarcane industry [13]. However, in addition to the poor labor conditions offered by the industry, the economic and environmental virtues of ethanol have become contested, including its alleged potential for GHG emissions reductions [14,15]. Important critics tie it to harmful land use change and deforestation, hunger in developing countries, food and water insecurity and biodiversity losses [16–19]. As these criticisms run counter to the three pillars of sustainability, the problems they point to would need to be addressed by the sugarcane sector to legitimize its claims that ethanol production indeed is sustainable.

To achieve this end, companies often employ storytelling as a strategic resource [20–22] to improve perceptions of their legitimacy in different contexts among both internal and external constituents [23,24]. Their storytelling adds to the strength of conventional corporate communications by delivering a powerful engagement message to influence their stakeholders [22].

This paper examines the predominant business storytelling ploys used by the Brazilian Sugarcane Industry Association (UNICA) to promote positive images of the sugarcane companies as an environmentally and socially responsible industry. We analyzed thirty-five videos and multimedia presentations of UNICA's marketing communications. This was carried out by means of qualitative and quantitative narrative analysis [25,26] using the software packages T-Lab [27] and Iramuteq [28], and drawing on Janda and Topouzi's story typology of hero, learning and horror stories [29].

Section 2 reviews literature focused on how climate change and energy narratives are depicted, and offers a brief description of the types of storytelling strategies that business adopt to emotionally engage stakeholders and shape perceptions of the industry's performance. Section 3 outlines the data and method used, Section 4 provides the findings of the research and the last section concludes the study.

2. Literature review

2.1. Climate change, energy and associated storytelling

The contemporary quest for a transition to a low carbon economy to reduce greenhouse gas emissions to levels that minimize deleterious interference in the natural climate system centers on moving away from fossil fuel dependence [30,31]. Fossil fuel combustion for energy generation was pointed out as the largest contributor to climate change, accounting for 68% of the world's total emissions [32].

Scientists stress that the negative impacts from fossil fuel use and the threat of climate change at the local, regional and global levels need to be countered by a transition to renewable energy sources, meeting rising energy needs with a variety of more sustainable energy technologies [2,14].

The unprecedented increase in energy consumption and the energy policies that promote it represent the energy as fundamental for development [33,34] and were portrayed with narratives of economic growth and the industrial revolution [33]. As Benites and Gremaud [35] show in a study of the Kyoto Protocol's Clean Development Mechanism (CDM) projects in Latin America and its contribution to sustainable development, the energy generation CDM projects predominate in the region. This, because in the region the energy sector is seen as strategic to maintain the economic development, and due to, this strategic importance the energy projects receive political-institutional incentives for their implementation. In the Brazilian sugarcane case, for instance, the initial motivation to execute CDM projects was by political-economic incentives, mainly related to the Program of Incentives for Alternative Electricity Sources (PROINFA), which promotes to increase the share of electricity produced from wind, biomass and small hydro sources to the national interconnected electrical system. In

addition to incentives and subsidies of PROINFA, the government provided the guarantee that all this generated energy would be purchased by Eletrobrás – the Brazilian electric utilities company. Thus, according to authors, the sugarcane industry would have the opportunity to intensify its business through the sale of energy generated from the sugarcane bagasse and the sale of Certified Emission Reductions (CERs) generated by CDM.

In recent decades, the threat of human-induced climate change assessed by the International Panel on Climate Change (IPCC) [36] has led government actors, companies, organizations and community movements to press for climate policies on the authority of the science [37,38]. Narratives deployed by these groups often reflect apocalyptic visions [39] and adopt messages of urgent, moral imperatives for a world-wide rise in cultural awareness among the political elites and wider public for the need for a new understanding and acceptance of human responsibility [40–42].

In their analysis of the climate change discourse in the UK, Ereaut and Segnit characterize climate change narratives as integrating a lexicon calling for urgent action, a lexicon which deploys two dominant repertoires that, respectively, are alarmist and optimistic [43]. Transmitting narratives and images like polar bears stranded on bits of ice sheets which have become iconic of climate change, or it depicting human struggles with famine, droughts, floods and water shortages [44]. The alarmist repertoire is fundamentally pessimistic, with narratives of doom, death, judgment, heaven and hell [43].

The optimistic repertoire comes in two versions: personal and corporate. The personal form of this repertoire is about small changes among a large number of people to counter climate change, constructed as motivated by ethics and/or self-interest [43]. The corporate model argues that tackling climate change can be handled by businesses and will result in economic benefits which are outweighing the costs. This repertoire is also one of the three key strands that Diana Liverman [45] identifies among international climate policy narratives, distinguished for its framing of the market as a source of solutions, mainly in the form of carbon trading to mitigate climate change. This repertoire is related to the emergence of a corporate social responsibility discourse (CSR) [43,46].

In business discourses, climate change emerges as a “new narrative” of opportunity [45] rather than a threat [47] positioning the companies at the forefront of the climate solutions [48]. The opportunity consists in benefits to be derived from emissions trading, and from investments in clean technology [47]. The opportunity to profit from taking action on climate change [47] emerged in the Kyoto Protocol's flexible mechanisms. An example of this, the CDM became a focus of business environmentalism [45], portrayed as a means of achieving sustainable development, economic savings for companies through economic efficiency, and as offering new business opportunities for development of projects and tradable credits for GHG reductions [49]. The CDM has also been used to showcase the CSR initiatives that benefit local communities [50].

Storytelling can be important in the “framing, explanation, motivation, and understanding of policies and strategies” such as is described by Janda and Topouzi [29]. These authors use three kinds of stories: hero stories, learning stories and horror stories to examine the UK government's energy policy for buildings. The authors describe an energy hero story as being about seeing technology as “a silver bullet (one technology) or silver buckshot (combination of things)” frequently promised to be the “magic elixir” that will save society from climate change. In a learning story, according to the authors “there are no heroes and no villains”, the protagonists are common people who need to respond to a challenge and they must rely on their own actions. This story “can be difficult and contentious” and “asks for participation, reflection and does not provide a single truth”. The story occurs in all the detailed richness and peculiar elements of the real world.

Horror stories are different from hero and learning story types that are inspiring and educational [29]. They are scary stories about the

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