

The imagetic-cognitive discursive argumentation of aspects of environmental sustainability in “charges” and cartoons: critical humor strategies through conceptual metaphors

*A argumentação discursiva imagética-cognitiva
dos aspectos da sustentabilidade ambiental em
charges e cartuns: estratégias de humor crítico por
meio de metáforas conceituais*

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Abstract: This study aims to investigate how the imagetic-cognitive discursive argumentation of charges and cartoons is built in discourses about environmental sustainability. Our goal is to demonstrate how argumentation can be understood from the cognitive point of view and how metaphors can be part of the argumentation of these types of discourse. The theoretical bias of Lakoff (1987; 2006) is adopted to explain the metaphor on the cognitive plane, as a natural process of the human mind. In the imagery of the genres under study, the analysis is performed from Peirce's semiotics to understand the functioning of the image. Perelman's theory (1996) is used to explain the argumentation as a form of persuasion. As a methodological character, the corpus linguistics will be carried out from discourses of “charges” and cartoons, published in the journalistic media focused on environmental sustainability theme. Discourse analysis is used to understand the argumentation of this kind of discourse. We observed the epideictic discourses as those that appeal to socially shared values and how environmental sustainability is conceptualized and understood. We conclude that visual metaphors and conceptual metaphors act as argumentative strategies in these epideictic discourses.

Keywords: environmental sustainability; cartoons; cognition; argumentation; metaphor.

Resumo: Este estudo tem como objetivo investigar como a argumentação discursiva imagético-cognitiva de charges e cartuns é construída em discursos sobre sustentabilidade ambiental. Nosso objetivo é demonstrar como a argumentação pode ser entendida do ponto de vista cognitivo e como as metáforas podem fazer parte da argumentação desses tipos de discurso. O viés teórico de Lakoff (1987; 2006) é adotado para explicar a metáfora no plano cognitivo, como um processo natural da mente humana. Nas imagens dos gêneros estudados, a análise é realizada a partir da semiótica de Peirce para entender o funcionamento da imagem. A teoria de Perelman (1996) é usada para explicar a argumentação como uma forma de persuasão. Como caráter metodológico, um corpus linguístico é realizado a partir de discursos de charges e cartuns, publicados na mídia jornalística com o tema sustentabilidade ambiental. A análise do discurso é usada para entender a argumentação desse tipo de discurso. Observamos os discursos epideicticos como aqueles que apelam a valores socialmente compartilhados e como a sustentabilidade ambiental é conceitualizada e compreendida. Concluímos que metáforas visuais e metáforas conceituais atuam como estratégia argumentativa nesses discursos epideicticos.

Palavras-chave: sustentabilidade ambiental; cartuns; cognição; argumentação; metáfora.

Introduction

Environmental sustainability has been a concern and a strategic measure for the preservation and conservation of natural resources. After all, man has been extracting these resources without often being aware that they are not infinite. Power generation, for example, comprises one of the biggest concerns

regarding sustainability, as high consumption, coupled with the limited condition of natural resources, therefore requires higher energy production. Thus, the problem has a chain effect: higher consumption generates more spending, more need for energy production, more demand for natural resources, consequently, greater concern with sustainability.

Environmental issues were the subject of many discussions at the United Nations - UN conferences, drawing the attention of governments, organizations, the scientific community, the media, and civil society. Because charges³/cartoons seek to portray the reality of a social context in some way, charges/cartoons containing the theme Environmental sustainability have emphasized both the exploitation of natural resources the importance of preserving and conserving the environment for generations to come, ensuring that people in the future will have the basic conditions for survival and their well-being.

As Sakai (2011, p.3) points out, environmental issues in terms of climate change and in terms of sustainability are so serious that human survival itself will come into question if nothing is done and “the global climate changes dramatically and lose its pace”. According to the UN, in October 2018, the IPCC - Intergovernmental Panel on Climate Change published a special report on the impacts of global warming, affirming that, limiting global warming to 1.5 ° C would require rapid and profound changes by society.

Climate change is one of the biggest challenges of our time. Its impacts, ranging from food production to sea level rise - increasing the risk of catastrophic flooding - have destabilized societies and the environment in a global and unprecedented manner (UN, 2019).

Kulhman (2010) states that the concept of sustainability originated from silviculture and has the meaning of never exploring beyond what the forest produces in new growth. The concept is based on well-being, with a view to intergenerational equity, that is, caring for the environment beyond its intrinsic value for future generations.

³ Charge is known like cartoon. It's a type of illustration possibly animated. It has a critical and social humor about society. Generally, published in newspaper. In Brazil, the term is known with the Charge's name.

According to Giovannoni and Fabietti (2014), different discourses emerged associating the concept of sustainability with social responsibility, environmental management or business sustainability, which were previously treated separately. Thus, other concepts are correlated to sustainability. The media, in turn, seeks to portray the problems arising from weather and unsustainable conditions to reverse the picture from people's awareness. In this respect, there is no way to treat the aspects mentioned above separately.

According to Silva (2008), “charges”, amusing and dated drawings in a newspaper or magazine usually satirical or socially critical of current politics or events in the news, comprise a genre capable of acting as a social weapon, in the sense of unveiling hidden “truths”, as they aim to show what is behind the fact. In this sense, besides informing, they also expose a social critique. For this, they use discursive and imagistic linguistic strategies to support their argument. Much is discussed in the literature regarding the forms of argumentation on the linguistic-discursive level.

In the semiotic field, the argumentation through this modality is not often discussed. In other words, there is more discussion of the argumentation in terms of discourse than semiotics, although Nöth (1990), in his studies, had already advocated the function of semiotics in expanding the horizon of the verbal message in the narrower sense of a code-oriented dimension. persuasive communication. In this sense, it had already indicated the possibility of arguing with images. Furthermore, there are not many studies in cognitive terms that take metaphor as an argument. Thus, the objective of this study is to investigate how the imagetic-cognitive discursive argumentation of “charges” and cartoons is built under the character of sustainability. Our main goal is to investigate the use of the conceptual metaphor as argumentative bias in “charges” and cartoons under the theme of sustainable policies.

Imagery Argument

Semiotics, known as the doctrine of signs, has Greek origin Σημειωτικός *sēmeiōtikos*, Observer of the signs σημεῖον, *sēmeion*, “sign”. Semiotics is defined by Peirce (1977) as *doctrina signorum*, a kind of representation and knowledge with a logical extension in the territory of cognition and pragmatics that deal with

the issues of meaning and meaning production. "Semiotics is the discipline that studies the relationship between dialogue and message, and between sign and discourse" (Eco, 1980). The sign referred to in this study is the image of "charges" and cartoons. In these textual genres, the image builds an imagetic statement when they are constituted only by image. As highlighted by Silva (2008) in his studies on the intentionality of political cartoons/charges, the image can tell something by itself. Although it does not speak nor it has a linguistic element, it can bring visual information about the world.

In general, the "charge" cartoons, because they are dated, are linked to a news story, a social event that is criticized by the "chargista"/cartoonist for the feature. It is called cartoonist (in the Brazilian version) the subject who produces "charges" and cartoons and the cartoonist, the subject who produces cartoons. The "charge" is characterized as a dated genre that depends on a fact or event that has already occurred and "cartoon" to that genre similar to "charge", which does not have this dependence. In other words, the social or political criticism occurs without direct relation to a news story. In this sense there may be a theme such as sustainability, for example, without having a previous news about it.

When at an eminent level, charges/cartoons become self-sufficient in dialogism and information, in the epistemic mode of semantic-semiotic, recognition comes through signs. It is worth remembering that the sign starts from the conception of Saussure (2004) as a psychic entity of an acoustic image and a concept. For the author, the acoustic image corresponds to the verbal form archived in memory, and the concept to the meaning of the sign, in a more abstract way, comes closer to the reference. To differentiate, Saussure characterized the significant (acoustic image) and the meaning (mental concept to which he refers). In Nietzsche's (2007) conception, the concept concerns the image. They consist of original thoughts, that is, the surfaces of things concentrated in the mirror of the eye. From this perspective, it can be understood that thought occurs through images. In this sense, in the process of interpretation, the images of the object seen are compared to the images the mind makes.

Iconic signs as images exert a kind of representation through quali-signs or, specifically, what the eye or the brain chooses to see. Often, even containing only images, the reader can interpret the imagetic signs and reconstruct the

statement drawn by the “chargista”/cartoonist. To make this possible, “the possibility of resemblance follows a line of reasoning that involves parameters of intentionality, that is, so that the reader can follow the same path [...] as the producer of the charge. Peirce (1977) assumes the sign as a representation, being the content of the interpretation or mental interpreter. The sign represents something. In general, your object. For Peirce (1977) all thought is given by signs. In this perspective, the sign is a cognitive datum, that is, it generates in the mind another sign. The sign is distinguished from the object because it represents the first. Peirce (1977) still considers that everything that appears to consciousness occurs in gradations: firstness, secondness, and thirdness, translated by Pinto (1995) as: firstness, secondness, and third. Being the first what can be seen in an object, the second the perception about that object and the outsourcing of the representation of that object. In this area, there is only interpretation in the second stage and the production of meaning itself in the third. When it comes to “charges” and cartoons, it can be observed that they work with third parties, since they denote a representation of facts or themes. The mimicry of these images works with the visual similarity of the object in the outside world, as presented in Silva (2008). This mimesis somehow tries to imitate the real.

However, in doing so, the charge and cartoon genre ends up building another reality from a representation model. After all, it is not a faithful representation of reality, but a simulation surrounded by intentionalities, exaggerations, figures of speech and consistent with the creative condition of its producer. In this respect, these virtual images constitute a new reality. In an attempt to represent the world, humans already modify it by their beliefs and conceptions about the world (SILVA, 2008)

Because they are a simulacrum, they mix the real with the imagination and in this context, the argument is inserted to give voice not only to the “chargista”/cartoonist but also to society. Thus, these “realities” deal with denunciation, criticism and social representations, as they seek to portray in the ideology of the trait what one wants to show, under discussion by society. It would be naive to believe that there is only the opinion of the “chargista”/cartoonist. After all, their focus is on the news, that is, what is being currently discussed by society and what is controversial.

Like Baudrillard (1981), Couchot (1993) believes that these virtual images are ejected by the real. Virtuality in this sense builds a synthesized and artificial reality. In this context, the image goes beyond representation, it simulates the real. From this perspective, the images presented in “charges” and cartoons begin to interpret the world by becoming image objects and constitute fragments of a real from a comparison with this one. In doing so, however, they defend an idea and thereby use nonverbal argumentation, or they often interact with linguistic elements. For Parente (1999), every image implies a language that translates into possible worlds. In other words, the visual is the language form of the virtual image. The caricature and/or drawings made by the artist's trait reveal a block of arguments that support the ideology of the genre.

Because the sign represents the object, being, therefore, another sign, in this process a state of transcendence between sign and object is noted, a projection of the subject to an object or state of affairs. In this sense, as man projects his actions on the world, he develops an intention. In cognitive terms, whenever we think we have in mind some image, conception or representation, this serves as a sign.

For Peirce (2003), the sign represents its object giving rise to another sign, just as one thought entails another. In the trichotomy of signs, we can say that the first for the author corresponds to the sign itself, the second a sign for the interpreter and a third, a sign that brings connection with its object. The author himself assumes the impossibility of thinking without signs. In an attempt to represent the real in a different and iconic way, the "cartoonist"/cartoonist resorts to the construction of similarity of images and exaggeration with the intention of metaphorizing them.

The imagetic sign in these genres can still have similar qualities to the object producing analogous sensations. Thus, “charges” and cartoons work with many strategies that contribute to the argumentative construction. Usually, humor and language figures comprise the linguistic-discursive plane of the genre. At the imagetic level, images correspond to premises capable of constructing a discursive chain (SILVA, 2008, p.132).

The enunciative process of “charges” and cartoons is constituted by an argumentative orientation based on the genre's characteristics. In other words, it has the role of directing intentionalities through arguments aimed at exposing criticism. In general, the genre has a journalistic function of informing its audience. However, from the content of criticism, it is possible to observe that there is also an argumentative orientation to persuade the reader to act or to think in a certain way. With an imagery component associated with caricature, charges/cartoons images generally use humorous resources to ridicule politics, for example, when it comes to political themes

When it involves environmental issues in sustainable terms, what is most common is a kind of black humor or awareness, and a reflection about sustainability. In this respect, it is therefore necessary to identify well-differentiated moods. Often, it is not a matter of humor necessarily linked to laughter, as this is just one of the forms of humor manifestation as pointed out (PINTO, ZIRALDO, 2001). Lobo (1997) also believes that a slight smile can mean the concealment of pain, loss marks, and not necessarily something funny.

In cognitive terms, humor is a mental condition and may represent laughter and/or reflection. Raskin (1944), in his postulates, states that the perception of humor is the result of a deep semantic analysis. In this conception of humor, people laugh at the absurdity, the deformity, the unnaturalness of the facts, what is different or unexpected. The “chargista” and the cartoonist, therefore, present levels of laughability. In the case of those “charges” or cartoons whose themes have a harder semantic load, laughter is mental, “in the sense of promoting a critical reflection of the political facts represented by linguistic and imagetic discourses” (SILVA, 2008, p.102). The argument in these genres is constructed, therefore, with the function of making one believe.

Hofmann (2016) supports the idea of a reflexive argumentation. “For him, arguments can be represented in speech or in writing, in thoughts, images and reflection will only be possible if somehow these arguments follow a mental model” (SILVA; SHITSUKA, 2019, forthcoming).

For Hoffmann (2016), arguments can be used to stimulate reflection and not just try to convince someone or to win a debate, for example, in which there

is a set of contrary arguments. For the author, the arguments also have the function of promoting an idea, or of stimulating reflection both to understand the other's points of view and to recognize their points of view. “It's like reading a book for entertainment while unwilling to learn something about the world” (HOFFMAN, 2016, p.368)

In the “charge” presented below, we can observe that the arguments are constituted in an imagetic and linguistic way focused on the theme of sustainability as a reflexive condition, in line with Hoffman's (2016) line of reasoning. The “charge” directs the arguments to an intentionality to make someone think, to make someone believe that man is himself responsible for the climate change that is happening worldwide, for example, the global warming. According to the Ministry of Environment (2019), the average global surface temperature has risen and still tends to rise.

Currently, average global surface temperatures are at their highest in at least five centuries. The global average surface temperature has increased by about 0.74 ° C over the last hundred years. If this warming is not significantly affected by specific environmental policies, scientists expect to observe a very unusual climate during this century, which may, for example, present an average increase in the global temperature from 2°C to 5.8 ° C, according to the 4th Report. Intergovernmental Panel on Climate Change (IPCC) 2007 (MINISTRY OF THE ENVIRONMENT, 2019)

In this context, the “charge” we selected exposes a series of cut trees to represent deforestation. The absence of uncut trees in the “charge” leads the reader to identify as a large number of man-made deforestation and as a consequence the increase in heat, represented in the sun images in the background of the “charge's” imagery. This is associated with the representation of a man lying in supine position, with an exhausted countenance, perspiring (by the representation of the sweat drops on his head) and with his mouth open. Thus, the set of images reflect the author's doxa of trying to reproduce through imagery and linguistic arguments the consequences of deforestation: excessive heat and harm to humans, confirmed by the images and the verbal text: “how hot ... I can't find a shadow...”.

In this statement, the second sentence is the argument of the first, because the fact that it is too hot is due to the lack of a shadow. And absence of shade implies increased heat, because SHADOW IS FRESH. From this point of view it can be observed that when interpreting the enunciation exposed by the cartoon one has to resort to developments that translate into conceptual metaphors, but also SHADOW IS NOT GLOBAL WARMING/SHADOW IS SUSTAINABILITY. After all, the argument consists of a series of arguments and is recognized by the context. Thus, the argumentative orientation of this cartoon is constructed through arguments that lead to a reflection on the role of making the population aware of environmental sustainability as a warning, that is, if nothing is done and deforestation does not cease, there will be consequences that are detrimental to the environment itself and to humankind.

Semiotically, the sun, sweat and tiredness represented in the cartoon as heat are actually symbols that refer to certain concepts. We must remember that the term *Doxa* means opinion, reputation, what we say about things or people (CHARAUDEAU AND MAINGUENEAU, 2012, p. 1761). The *doxa* reveals the common sense shared socially, a set of social representations. Cognitively, the process of interpreting “charges” and cartoons involves the perception of imagetic-linguistic signs, their comparison with the reality and states of affairs of the world from discursive memory, and the recognition of elements and argumentative strategies.



Figure 1. Global warming and sustainability cartoon.⁴

Source: <http://www.arionaurocartuns.com.br>

⁴ What a heat ... I can't find a shadow!

For Amossy (2018), shared knowledge and social representations form the basis of all argumentation. The author advocates that “Doxa” is widely used in this type of discourse. Doxa was used by Greek rhetoricians as a tool for forming arguments through common opinions. “What ancient rhetoric calls *topoi* or places, nowadays it is studied by different disciplines that address the verbal constructions of common knowledge, from the *topoi* of integrated pragmatics, to the stereotype in its varying meanings” (AMOSSY, 2018 p. 71).

Amossy (2018) also points out that doxa is the space of the plausible, the probable, the possible. In these spaces, the propositions assert the facts through the likelihood created in and by the discourse. Anchored in a set of opinions, or unskilled knowledge, the doxa is therefore capable of rhetorically reproducing certain structures in force through interdiscourse. The argumentative analysis of doxa conceives it as rooted and unconsciously traversing the ignorant subject, as it is deeply immersed in this argument.

In a discursive perspective, the doxa would correspond to the social discourse - or interdiscourse - that conjugates the particular logico-discursive forms, the *topoi*, or places of argumentation through which grouped arguments can be taken in the form of the preferable places (PERELMAN, 2005).

Regarding the tendency to appear, in the discourses of “charges” and cartoons, a rhetorical- epideictic in order to promote awareness through an exaltation of nature, the “charges” and cartoons which work with the theme of sustainability, work with the purpose of criticize what man has done to harm nature.

Conceptual metaphors as strategies of critical humor, sustainability and social criticism

Much has been discussed about metaphor outside of artistic composition. In the field of Cognitive Linguistics, metaphor is seen as something mental, conceptual. For Lakoff (2006), it is recognized as the way thoughts are constituted, the mental domain that forms a conceptual system. Gibbs Jr (1999) points out that the orientation of metaphor in contemporary times is to understand it as it is created, understood and applied. Metaphor as a conceptual system

includes abstract concepts drawn from a system of mental interpretation. For Cacciari (1998), metaphors are used to conceptualize and are part of our cognitive activity. For the author, the literature has considered that metaphor has a function of describing something new by reference to something simulating, but the scope of metaphorical expressions goes beyond that. They are often used to express ideas that literal language cannot express (ORTONY, 1980). Others, like Beck (1987) and Cacciari (1998) consider metaphors as bridges, connecting abstract entities.

Silva (2018) recalls that current language, also seen as natural, is surrounded by metaphors and metonymies, which are understood by Cognitive Linguistics as purely conceptual phenomena or cognitive models. The main difference between metaphors and metonymies would be their the number of domains. While metaphor involves two distinct cognitive domains directed by one source and target, metonymy takes place within the same domain from one reference, highlighting another category (LAKOFF, 1987, CROFT 1993 and DIRVEN, 2003).

Lakoff (2006) affirms that metaphor involves domains of daily experience, which implies that it is related to the way the world is viewed and perceived by the subject. For this reason, metaphor cannot be seen as something merely linguistic, but as cognitive, relative to the form of perception of the world. It describes the way we think and it plays a central role in speech. (CACCIARI, 1998). In Reddy's (1998) conception, the metaphor is part of the mental system and the way we interpret it depends on how we see and experience the world.

However, there is not just one kind of metaphor that fits system "A is B". It goes far beyond that. In the studies by Gibbs Jr (1999), the author defends the idea that researchers should recognize the metaphor as an extremely diverse mental category surrounded by different models of presentation or manifestation.

"Researchers need to be aware of the diversity of metaphorical forms and recognize that a theoretical explanation specific to one aspect of metaphor may not apply to other forms of metaphorical language" (GIBBS JR., 1999, p.31). These differences are due to the complex relationships between various terms, according to the author. This means that when there is a semantic relationship

between various terms converging on a block of meaning, for example, we have a complex metaphor of type xyz, such as "Language is the mirror of the mind." In this case, language, mirror and mind are related to each other in the metaphorical field, where the subject has to establish some projection on the source domain yz (mirror of the mind) from a target domain "language" to interpret the whole block of meaning.

In argumentative terms, the reader has yet to understand why language is the mirror of the mind. It is very likely in this case that he will come to the conclusion that language transfigures a way of reflecting what is going on in the mind, hence the term 'mirror'. Within the scope of literature, as the author confirms, there are a variety of complex maps, from which the reader must select the one that best makes sense for his poetic interpretation.

In the context of "charges" and cartoons, as image is also a factor in the interpretation process, the metaphors present in them correspond to even more complex systems. After all, by the exaggeration of the "chargista"/cartoonist's trait, the reader has the double work of establishing semantic relations with both linguistic-discursive and semiotic elements. Often, with the intention of creating critical humor, conceptual imagery metaphors are constituted in these contexts to represent through images the discourse that is described in them. Although it does not contain linguistic elements, they enunciate logical-semantic and argumentative relations on the theme that focuses the discourse.

In Figure 2, we observe that the theme of the cartoon concerns the pollution of river waters, represented imagetically by the images of garbage being released through the sewer pipe into the waters of a river. The shackle image represents this scene, as well as the dark color of the water gushing from this shackle. From that point on the concepts POLLUTION IS DESTRUCTION OF A FISH HABITAT; WATER POLLUTION IS THE LOSS OF FISH, can be obtained from certain developments: fish do not survive in polluted water; fish need oxygen, pollution lowers the oxygen in the waters of a river. Analyzing the image of fish running from polluted water, we can observe a metonymic process if we consider the inversion (fish running from water instead of immersing in water). The desperation marked by the expression of the fishes evidences the idea of

lack of sustainability and makes the reader reflect on sustainable policies, as well as on the way man has been destroying the fauna and flora.



Figure 2. River Pollution

Source: <http://www.arionauocartuns.com.br>

Multimodality is discussed in the following cartoon, Figure 3, as a critique of environmental sustainability. The “multimodality” paratext leads the reader to reflect on the changes in the planet's climate in terms of physical states, since it is not expected that where there are penguins, as in the North and South Poles there will be a different state or modes of water: ice, liquid and steam. This can be observed by the representation of these states in the cartoon image, in which there is a penguin cooking in a hot water, represented by the drawing of a smoke trail.

In this context, the semiotics of producing a cartoon with these characteristics of humanization or personification of the penguin reveal an intentionality to make a criticism based on a simulacrum, in which the scenario consists of the representation of a constructed reality. Moreover, it is a way of trying to represent the real through object symbols and make the reader move. Indeed, in an attempt to expose an epididical discourse aimed at raising awareness of environmental sustainability in terms of global warming, the cartoon in figure 3 shows an awareness of the environmental problem, both by linguistic statements and by semiotics of images. At the level of the statement, this is done by the use of the condition connective “if not”.

The penguin character is presented as a thinking being who shows some frustration that this is not the natural condition of his habitat. In the statement "It would be better for the planet to cool, if not (sic) ...", we can confirm this frustration by the usage of the term "cool", which contradicts what is expected to happen under the current climatic conditions of the planet. In this sense, the global climate is expected to cool, otherwise the earth will heat up more and more and all living things will suffer drastic consequences.

Geeraerts (2016) supports the idea of a social semiotics, in which language can be seen as a multimodal aspect, able to manifest representations and understand social representations that are oriented at multimodal levels.



Figure 3. Multimodality⁵

Source: <http://3.op.blospot.com>

Forceville (2009) states that there is a distinction between multimodal and monomodal metaphors. He states that, unlike multimodal, monomodal metaphors in which the target domain and source are represented in different modes can be described by the five senses: visual, sound, olfactory, tactical or taste mode. In this respect, the author claims that sometimes one mode or another may predominate in the context in which the metaphor is inserted.

In “charges” and cartoons it is more common to explore the visual mode with greater intensity, according to the genre’s own characteristic of working with

⁵ Multimodality / It is good for the planet to cool, if not ...

caricature and the imagetic representation of social themes. Multimodality can occur in audiovisual cartoons that include sound and image. For this author, multimodal metaphors have the source and target domain represented exclusively or predominantly in different modes. Other modes can be considered as mental representations from the imagination of what is being explicit in the cartoons. The author further considers that nonverbal, that is, typically imagetic metaphors act in more than one way simultaneously.

Visual metaphors differ from verbal metaphors in the possibility of reversibility between source and target domains. In fact, by interpreting imagery metaphors, the reader can start from the source up to the target and vice versa, as well as construct a verbal representation of the image. In the case of figure 3, for example, even if we did not have the verbal text anchored on the theme of environmental sustainability, by the statement “It would be better for the planet to cool, if not (sic) ...”, or even the “multimodality” paratext, it would be possible, by reference, to interpret the cartoon. After all, the reader can make inferences about the penguin's face and the relationship with cooking in a seemingly warm lake, as perceived by the smoke trail image and the setting of a polar environment. In this sense, the metaphorical component becomes a critical humor strategy aimed at raising the awareness of the global warming problem.

The metaphor present in this cartoon refers to a conceptualization: “THE POLAR ENVIRONMENT IS AN OVEN”, this conceptualization could be characterized as developments that could be constructed from the image. The verbal text in this case complements the imagery. As Bartsch (2002) recalls, metaphors involve semantic similarities for each perspective, while metonymies converge perspectives into similarities.

In the case of figure 3, the semantic similarity happens between heat for cooking and food caused by global warming/room temperature. Thus, a virtual reality is constructed from the image of a cooking penguin is a critique of man-made global warming, which is causing habitat to change. The multimodality referred to in the cartoon is really about the changes in the environment that may occur, even if portrayed in a fictional and humorous way.

Metaphors involve the crossing of perspectives that select similarities (identical characteristics) and differences under each of the chosen perspectives; metonymies involve a cross between perspectives directed to contiguous parts of situations and objects (BARTSCH, 2002, p.1)

In figure 4, we can see that the critique is constructed in an imaginary way, because the charge presents only an image and the criticism refers to deforestation. In this case, the reader can confirm this hypothesis by interpreting the image of a man with the rope around his neck and tied to a tree. This link between his neck and the tree allows the reader to formulate an enunciative scene that "if the tree is felled by the ax, its weight will automatically suspend the rope and hang the man of the scene." Thus, the imagetic argument is all built around the theme of environmental sustainability versus the practice of deforestation. The awareness raised from the perspective of the epideictical discourse can be translated from the reading that, to cut trees is to kill itself, that is, an imaginary conceptual metaphor that to cut trees is like putting a rope around one own's neck. The rhetorical- epideictical scene that underpins awareness functions as a strategy for spreading the need for a sustainable world.

In this case, what the author argues in terms of argument is that by deforesting man harms himself. After all, trees play an important role for the planet such as: temperature control, pollution control, Co2 absorption, oxygen production, scenic beauty, quality of life, maintenance of water resources, blood pressure control in animals, conservation of water and soil, erosion control, maintenance of biodiversity and gene flow of species of fauna and flora, as well as various timber and non-timber materials. According to Mascaró (2002), trees promote a milder climate. They constitute a thermal source absorbing the heat of the environment.



Figure 4. Leoni's cartoon
Source: <https://www.chargeonline>

In the case of “charges”, because they are historically contextualized. They have news linked to them, there is a contextualization. To interpret them, the reader must be guided by the news. She needs to understand the fact reported and compare with the charge. In terms of discursive memory, it is very common for the reader to remember the fact to which the charge is linked. In this way she can recognize the semantic similarities between the linguistic and imagetic components of both genres.

In figures 5 and 6, it is possible to observe that both depict the controversy about deforestation of the Amazon rainforest in Brazil. News reports indicate that deforestation of the Amazon rainforest is occurring at various points, and Brazilian authorities have not acted to prevent such conduct. Discussions and revolts around the world have been raised against this stance, which goes against sustainable policies at home and abroad.

In figure 5, the world is represented in imaginary terms as an icon, that is, it has a physical resemblance to its object. In this case, the image of a terrestrial globe with arms and legs fleeing is referenced by the planet Earth itself, represented by the terrestrial globe. The arms and legs in this image refer to a form of personification to represent the life of the planet and everything in it. The mouth with the tongue sticking out along with the upper and lower limbs expresses some despair that we are running away for this reason. When we still observe the fire represented by the flame and smoke drawing on the image map

of planet Earth, we find that the whole set points to a semantic configuration of a cry for help.

In sustainable terms, it is known that the practice of deforestation is a form of aggression to the environment, since, according to the Ministry of the Environment (2019), causes several environmental and social problems such as loss of biodiversity, increase of greenhouse gases greenhouse effect, which is harmful to humanity, as well as the shrinking of wildlife territories. Action plans for the control and preservation of the Amazon have been launched to curb the increase in deforestation. In 2015, Brazil set a target to reduce emissions from the forestry sector, to achieve zero illegal deforestation by 2030 and to promote sustainable forest management.

We must remember that the Amazon is the largest rainforest in the world, famous for its rich biodiversity. Thus, the planet's desperation to escape because one of its parts is on fire is to semiotically represent the warning cry to humanity about what is being done in the Amazon.



Figure 5. Zé Passilva's charge
Source: AUTO_zedassilva_diariocatarine
nse.25.08



Figure 6. Atorres's charge
Source: AUTO_atorres_diario do
para_25.08

In figure 6, we can see the meaning of the green color on the Brazilian flag. It is well known that when Brazil gained independence in 1822, the symbolism was re-signified and since then its colors symbolize the following: White: the desire for peace; Blue: the Brazilian sky and rivers; Yellow: Brazil's natural riches; Green: the richness of the flora and fauna of the country.

Moreover, the motto “order and progress” is based on August Comte's Positivism, which supported the idea of "love as a principle and order as the basis; progress as the goal", and need for the nation to foster respect and intellectual and moral investment as a means to obtain social wealth. In this case, we find that the “chargista”/cartoonist intentionally represented the image of the fire flames on the green symbol to indicate the fact that the richness of fauna and flora, symbolically represented by the green color, is being destroyed by the fires that are consuming the forests of the Amazon. This fact, consequently is affecting the wealth of the country, symbolically represented by the yellow color, which is also on fire, and eventually also reaching the "order and progress", as well as the federative states.

The drops in the blue part still allude to tears, as a reference for the dissatisfaction of the Brazilian population with the destruction of Brazil's natural heritage. Indeed, the images of “chargista” and cartoons indicate arguments about what goes on in society and how it exposes its beliefs through social representations. In the case of figure 6, we can read from the images the concept that BRAZIL IS IN FLAMES. And the flame in this case is the metonymic representation of the forest fires.

Still with the context of the forest fires that occurred in the Amazon region, the “charge” of figure 7 is built around the social representation of this fact. The term “Emoji” means image that conveys the idea of a word.

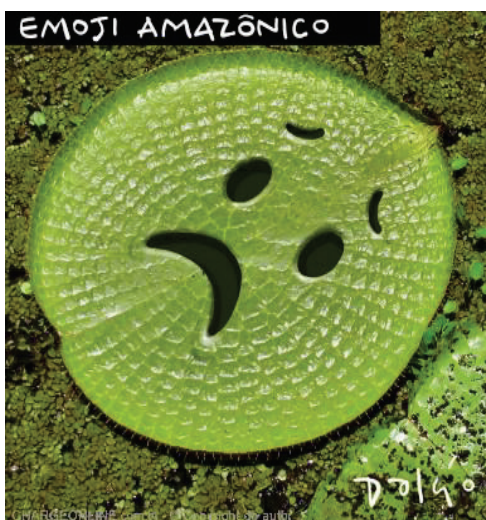


Figure 7. Emoji
Source: dalcio_Correio popular 25.08

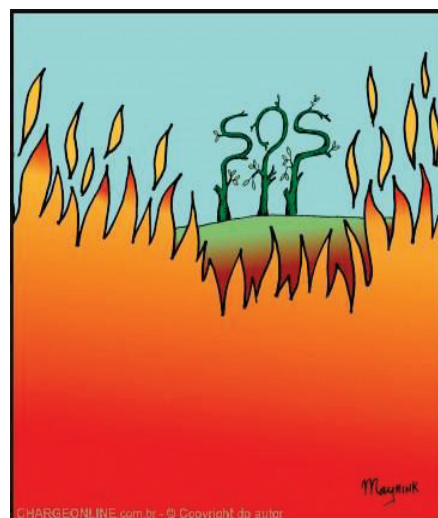


Figure 8. SOS
Source: mayrink_a charge online 25.08

As in pictograms, the emoji has the role of being represented by an image what would be meant by using words. Thus, the representation of disappointment is portrayed in the embodiment of the plant "vitória-régia" in this “charge” as a visual metaphor. It is worth remembering that the vitória-régia is recognized as a symbol of the Amazon, in a metonymic construction which, when a person is faced with the image of the water-lily, she will automatically remember the Amazon.

Typically, the water lily is one of the largest aquatic plants in the world and a symbol of the Amazon rainforest, as it is abundant in this area. It is also the theme of one of the most popular legends of the Amazon. Thus, the “chargista”/cartoonist personifies the water-lily with an expression of sadness through the representation, above all, of the arched mouth down and the eyebrows also directed downwards to indicate an expression of disappointment, or even a sense of helplessness. Returning to the context of the “charge”, the reader makes a cognitive comparison process between the news that circulates in the media and the representation that the “chargista”/cartoonist makes from the image of the stroke.

In Figure 8, the same distress-oriented sense effect is represented by the meaning of the term SOS, which means “save our soul”. It is a universal code of distress. The contour of tree trunks and leaves forming the term SOS leads to the argument that the Amazon rainforest calls for help. In this case, the reader only understands that this is the Amazon rainforest by the extra-sensitive context to the “charge”, that is, it has been known from the news about the burnings that occurred there. Semiotically, the term SOS acts as an index by pointing to the referring forest in flames.

In figure 9, sustainability is discussed as regards climate change. On one side of the cartoon, a sunny scenario with unexpected precipitation, and on the other side, a dark cloud of gases emitted by factories alluding to air pollution emitted by toxic gases. In the lower right corner of the same cartoon, cut tree trunks represent a depiction of deforestation, an action also caused by man, also meaning a semiotic index, pointing to the referent climate change in a split and semantic correlation between crazy climate, forest pollution, which was caused

by business and deforestation. In this respect, the reader should be able to draw this correlation through referencing in cognitive terms.

The visual metaphor, in this case, is shaped by the interconnection between the facts around environmental sustainability. Thus, the reader may exude certain concepts that: POLLUTION IS SMOKE due to the gases emitted into the atmosphere, as well as CUT TREE IS CRAZY CLIMATE, since the argument comes from the justification. In other words, the reader understands that the crazy weather is caused by direct pollution caused by gases emitted into the atmosphere and indirect by deforestation, as trees represent a significant part of the planet's air purification. In these conditions of pollution and damage to nature, man has as a consequence, that is, in response to these conditions climate change.

The weather goes crazy because it starts not responding in the same way as before. Figure 10 supports the same idea that industries have a share of the blame for gas emissions and water pollution from rivers and seas. The black humor shown in this cartoon is revealed by the sarcastic countenance of industry drawing, as a personification from the industry's countenance, arm and hand in the cartoon. The stick pointing to a blackboard alludes to teaching, indicating as if the industry were teaching or passing on the image to Brazil that they support sustainability, but this information becomes ironic when we correlate it with the sarcastic countenance. The map of Brazil with legs, arms and sitting in a chair in front of a blackboard leads the reader to have the effect of meaning that it is a student. Thus, the reader is cognitively shaping the interpretation of the cartoon. In the conceptual context, it is possible to observe that the “chargista”/cartoonist defends the idea that sustainability, as propagated by the industry, is a scam.



Figure 9. The weather⁶

Source: <http://mateusbrandodesouza.blogspot.com.br/2012/07/o-clima-esta-louco.html> 15/12/2012



Figure 10. Sustainability⁷

Source: <http://latuffcartoons.wordpress.com/>

Methodology

We adopted from a qualitative research of cognitive orientation multimodal analysis, the theoretical bias of Lakoff (1987; 2006) to explain the metaphor on the cognitive plane, the Grady's (1997) postulates about the complexity of metaphors will also be relevant to explain why some metaphors are more difficult to interpret. In the imagery part of the genres under study, the analysis was performed from Peirce's semiotics to understand the functioning of the image. In the argumentative scope, Perelman's theory (1996) was used to explain the author's conception of argumentation as a form of persuasion and to evaluate the common values of the audience and the speaker, to the type of speech directed to the collective. For the composition of the corpus, we selected “chargista” and cartoons published on the web that contained the sustainability theme in order to analyze sustainable discourse from the perspective of cognition. We also chose to check cartoons and cartoons with a larger amount of nonverbal text so that we could analyze the behavior of argumentation by image, preferably containing visual or imagery metaphors.

⁶ The weather is crazy! Yes, the weather...!

⁷ Sustainability

Results and discussions

From the analysis of the “chargista” and cartoons selected for this study it is possible to observe that in fact the cartoons are linked to a news while the “charge” is timeless, that is, does not depend on a specific news. The imagetic component of both (charge and cartoon) act as representations of what happens socially, from signs. Social criticism expressed as thematic content in both textual genres reveals social representations that how society views sustainability: sometimes as an emerging need, sometimes as everyone's responsibility. Through the use of black humor the “chargista”/cartoonist portrays through freedom of the line the criticism that man is the destroyer of natural resources and is already suffering the consequences of this, such as climate change, air pollution and among others. The visual metaphors presented in these genres point to a linguistic-cognitive way of informing and orienting the reader to social criticism through concepts. In this respect, conceptual metaphors act as strategies for the transposition of concepts at the multimodal level using critical humor. Criticism is also visual, as it is built around a visual metaphor supported by an imagetic argument. From the main hypothesis that conceptual metaphors can act as part of the argumentation of speeches on environmental sustainability, it was possible to highlight some relevant theoretical points of this research. Bullets try to pointing the discoverability this research. These bullet points try to capture the novel results of the research:

“Charge is different to Cartoon. “Charge” depends of a news, a context. Cartoon is universal. Cartoon is not dependent of news.

Charges and cartoons are genres that involving verbal and nonverbal texts. So linguistic and imagetic aspects will be analyzed in an argumentative dimension of cognition.

The argumentation can be understood from the cognitive point of view and metaphors can be part of the argumentative game.

The metaphor is a natural process of the human mind, that is, a form of thought. Some metaphors are more difficult to interpret.

In the argumentation of “charges” and cartoons on the theme of sustainability, the epididical discourses as those that appeal to socially shared

values, that is, how environmental sustainability is conceptualized and understood

Environmental sustainability has been a concern and a strategic measure for the preservation and conservation of natural resources.

Charges and cartoons comprise a genre capable of acting as a social weapon, in the sense of unveiling hidden “truths”, as they aim to show what is behind the fact.

There is more discussion of argumentation in terms of discourse than semiotics. So, we show the possibility of an argument with images.

Thought occurs through images. In this sense, in the process of interpretation, the images of the object seen are compared with the images the mind makes.

Charge and cartoon genre ends up building another reality from a representation model. It is not a faithful representation of reality, but a simulation surrounded by intentionalities, exaggerations, figures of speech and consistent with the creative condition of its producer. They are a simulacrum

When it involves environmental issues in sustainable terms, what is most common is a kind of black humor or awareness and reflection about sustainability.

Humor is a mental condition and may represent laughter and/or reflection.

Cartoon argues that man is himself responsible for the climate change that is happening worldwide.

Metaphor cannot be seen as something merely linguistics, but cognitive, relative to the form of perception of the world.

The metaphors present in them correspond to even more complex systems.

In “charges” and cartoons it is more common to explore the visual mode with greater intensity. Multimodality can occur in audiovisual cartoons that include sound and image.

Visual metaphors differ from verbal metaphors in the possibility of reversibility between source and target domains

Conclusion

From the analysis and results found, it was possible to conclude that the multimodal metaphors present in “charges” and cartoons actually act as argumentative strategies. Because many of these genres contain only images, they make the whole argumentative game in most of these visual metaphors. Thus, it was possible to identify how they constitute themselves as imagetic signs and how the metaphor can manifest itself only through images.

In this article, it was also possible to understand that, from the sustainability theme, the epideictical discourse prevails. After all, the “chargista”/cartoonist makes the discourse on the defense of sustainability and how companies convey the idea that they are sustainable and are working for the protection and preservation of the environment. From this point of view we can see that all argumentative strategies are constituted for this purpose, both by the irony of how man has destroyed nature and the black humor in provoking a reflection on the reader by the sarcasm and visual appeal of how nature has sense all these forms of destruction.

In terms of conceptual metaphor, we still need to analyze and verify the way it is constructed in semiotic and linguistic-discursive terms, as well as from cognitive developments, to see if it is possible to arrive at concepts, that is, conceptual metaphors.

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