Dominant ecological paradigm expressed through the concept of sustainability in Spanish-speaking digital rhetoric

Paradigma ecológico dominante expresado a través del concepto de sostenibilidad en la retórica digital de habla hispana

Paradigma ecológico dominante expresso através do conceito de sustentabilidade na retórica digital de língua espanhola.

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ABSTRACT | People's attitudes and behaviors towards nature have evolved over the course of modern history. For a long time, the dominant paradigm was that of humans as technocrats, leaders and administrators of nature (anthropocentric paradigm). Then the discussion about a new ecological paradigm began, in which nature no longer has only an instrumental value, but is given an intrinsic value (ecocentric paradigm). In recent years, scholars have postulated a reconciliation of the two extremes with the creation of the concept of sustainable development. The aim of this qualitative study is to investigate the extent to which this reconciliation can be seen in Spanish-speaking digital rhetoric by analyzing scientific articles, webpages, images, videos and tweets. This study provides a starting point to observe this type of controversy within digital conversations and the importance of the topics, actors and references related to this and other relevant trends. The results show that the dominant paradigm in digital content, i.e., related to the topic of sustainability, is the ecocentric paradigm. The study concludes that this apparent reconciliation with ecocentrism may be the result of systematic greenwashing rather than a truly sustainable practice.

KEYWORDS: sustainability; sustainable development; ecological paradigm; ecocentrism; anthropocentrism; nature; environment

RESUMEN | *Las actitudes y los comportamientos de las personas hacia la naturaleza han evolucionado a lo largo de la historia moderna. Durante mucho tiempo, el paradigma dominante fue el de los humanos como tecnócratas, líderes y administradores de la naturaleza (paradigma antropocéntrico). Posteriormente, comenzó la discusión sobre un nuevo paradigma ecológico, en el que la naturaleza deja de tener solo un valor instrumental y adquiere uno intrínseco (paradigma ecocéntrico). En años recientes, los académicos han postulado una reconciliación de ambos con la creación del concepto de desarrollo sostenible. Esta investigación cualitativa busca explorar en qué medida esta reconciliación es discernible en la retórica digital en español mediante el análisis de artículos científicos, páginas web, imágenes, videos y tuits. Este estudio proporciona un punto de partida para monitorear este tipo de controversias dentro de las conversaciones digitales y la importancia de los temas, actores y referencias relacionadas con esta y otras tendencias relevantes. Los resultados muestran que el paradigma dominante en el contenido digital relacionado con el tema de la sostenibilidad es el ecocéntrico. El estudio concluye que esta aparente reconciliación hacia lo ecocéntrico podría ser más un producto de un lavado de imagen sistemático (greenwashing) que una verdadera práctica sostenible.*

PALABRAS CLAVE: *sostenibilidad; desarrollo sostenible; paradigma ecológico; ecocentrismo; antropocentrismo; naturaleza; medio ambiente*

RESUMO | As atitudes e comportamentos das pessoas em relação à natureza evoluíram ao longo da história moderna. Por muito tempo, o paradigma dominante era o de seres humanos como tecnocratas, líderes e administradores da natureza (paradigma antropocêntrico). A discussão então começa sobre um novo paradigma ecológico, no qual a natureza deixa de ter apenas um valor instrumental e passa a ter um valor intrínseco (paradigma ecocêntrico). Nos últimos anos, estudiosos têm postulado uma reconciliação de ambos os extremos com a criação do conceito de desenvolvimento sustentável. O objetivo desta pesquisa qualitativa é explorar até que ponto essa reconciliação é discernível na retórica digital de língua espanhola, analisando artigos científicos, páginas da web, imagens, vídeos e tweets. Este estudo fornece um ponto de partida para monitorar esse tipo de controvérsia dentro das conversas digitais e a importância dos tópicos, atores e referências relacionadas a essa e outras tendências relevantes. Os resultados demonstram que o paradigma dominante no conteúdo digital, relacionado ao tema da sustentabilidade, é o paradigma ecocêntrico. O estudo conclui que essa aparente reconciliação em direção ao ecocentrismo poderia ser mais um produto de um greenwashing sistemático do que uma prática sustentável real.

PALAVRAS-CHAVE: Sustentabilidade; desenvolvimento sustentável; paradigma ecológico; ecocentrismo; antropocentrismo; natureza; ambiente

INTRODUCTION

In the Social Sciences, the concept of paradigm is equated with the concept of groupthink or its equivalent, i.e., mindset or mentality, as a set of ideas, methods and theories validated by a group of people and comprising a collection of behaviors and beliefs (Marquiegui, 1977). Paradigms emerge in response to specific problems in a particular social moment. This study examined the evolution of the dominant ecological paradigm through the concept of sustainability.

The term ecology (Haeckel, 1888) was coined more than 150 years ago and defined as the science of the relationship of the organism to the environment, encompassing all living conditions in the broadest sense. Nowadays, the term ecology refers to all aspects related to the different forms of life on our planet (e.g., flora, fauna, ecosystems and natural resources), as well as all interactions between environmental factors and the organisms that inhabit these ecosystems. For this study, the term ecological paradigm was defined as the set of ideas, behaviors, and beliefs about humans' relationship to their natural environment and their interactions with the life forms that inhabit it.

Sols-Lucia (2020), in his proposal for an integral ecology to address the environmental crisis, points out that the origin of the environmental catastrophe can be traced back to a misconception of what humans are, i.e., it has an anthropological root that locates the problem in people's misunderstanding of what the technoscientific paradigm represents. This has brought development, but also excesses in the transformation of the planet. Therefore, it is important to look for the cause and link it to a paradigm and mindset such as anthropocentrism. As Luhmann (2020) mentions, "a decision about what is a cause and who should be considered responsible cannot be avoided" (p. 25). For this author, one must start from the way in which systems observe themselves and not from an apparent ontology of causality, in order to avoid moralizing the cause of environmental problems in a dychomoty of good or evil, and to locate the environmental crisis in the communicative operations of the system; this works in its differentiation when the cause is centered on human progress, as would be the case in anthropocentrism or in the relationship between humans and living beings and the environment, as in ecocentrism.

People's attitudes and behavior towards nature have evolved over the course of modern history. For a long time, the paradigm of humans as technocrats, rulers and administrators of nature dominated. Under this paradigm, nature is seen as an instrument to satisfy human needs and comforts. In the 1970s, however, the environmental movement began to emerge as a social critique of the techno-industrial system (Anderson, 2012). At that time, a new ecological paradigm began

to be discussed as an alternative to the prevailing social paradigm (Dunlap et al., 2000). In contrast to the dominant paradigm, which held a more anthropocentric view, this new paradigm was endowed with a greater concern for the environment. This new, holistic and systemic vision, which views humans as part of the whole, permeates the current concept of sustainability and encompasses a wide range of possibilities. Political and social awareness also seems to be growing through events such as the Sustainable Development Summits, the UN 2030 Agenda and the Sustainable Development Goals.

The UN Commission on Sustainable Development defines sustainability or sustainable development as the ability of the human system to meet the needs of present generations without compromising the resources and opportunities for the growth and development of future generations (World Commission on Environment and Development, 1987). This concept has been transformed into the current definition, which has its origins in social and environmental systems, to achieve a new configuration that focuses on three points, namely social, environmental and economic (Organisation for Economic Co-operation and Development, 2008).

At present, the term sustainability encompasses issues such as social organization, behavioral norms, social and psychological wellbeing, natural resources, production, industry and the economy. These aspects have become evident in the agendas of developing countries, which have adopted various measures to improve the current environmental situation and, according to the (Organización Mundial de las Naciones Unidas, n.d.), want to promote the participatory involvement of all sectors of society.

According to Corral-Verdugo and Pinheiro (2004), interest and involvement in the future of the planet increases as environmental damage becomes more evident. In doing so, people become more aware of the consequences of human actions on the environment, which has led to the emergence of this new ecologically oriented vision related to conservationism.

Gudynas (2010) points out that certain characteristics of nature are independent of humans and will persist even when humans no longer exist. According to the author, plants and animals will continue their evolution and ecological coherence in a world without humans; there is value in this manifestation of life. This vision is called biocentric or ecocentric, which values all forms of life, human and non-human, as a whole, in contrast to the anthropocentric view, which views nature in terms of the benefits or value it can provide to humans.

A dichotomous dilemma can be observed here, which depends on the person telling the story. Alternatively, catastrophic consequences can be derived from human abuse and excessive domination of the planet's resources (Organización Mundial de las Naciones Unidas, n.d.; Sachs et al., 2019; Intergovernmental Panel on Climate Change, 2019); this idea forms the anthropocentric position of the ecological paradigm, in which the human is seen as the ruler over nature. Furthermore, in the wake of the green revolution, another discourse is emerging that points to a move away from the old schemes of domination and utilitarian thinking towards a new ecocentric paradigm that strives for better relations between humans and nature by viewing the latter as an ally and partner (Dunlap et al., 2000).

A number of theorists propose a possible alternative vision that sees a reconciliation and not just an opposition between two seemingly radical or extremist positions, namely between anthropocentric and ecocentric beings (Corral-Verdugo et al., 2008). This integrative vision could be consistent with the definition of sustainable development: a balance between human development and the protection of nature and the use and management of natural resources to ensure the well-being of present and future generations.

Due to their huge popularity, digital media has become fundamental to social communication and have had an important impact on changing public attitudes and behaviors in relation to key societal debates, such as the issue of sustainability. The global Internet population will reach 4.54 billion by 2020, representing 59% of the world's population (Fernández, 2019). Digital media users instantly share information on the web, becoming creators of content that is constantly accessible via search engines such as Google. This accumulation of information is attractive for different areas such as politics, marketing and even scientific research, as it provides information to understand social behaviors.

Several scientific studies have been conducted using digital content such as webpages, scientific articles, videos, images and tweets. Hammar and colleagues (2018) analyzed images and texts on Instagram to identify trends in fashion. Sued-Palmeiro (2018) used this type of content to study urban photographs and identify users' perceptions of cities, which could serve as a basis for other sociocultural studies. Valerio-Ureña and Rogers (2019) examined webpages and images on energy saving. Abbar and colleagues (2016) used a taxonomy of climate change to classify a considerable number of relevant tweets related to the UN conferences on climate change. Similarly, Ballestar and colleagues (2020) studied the different contexts and areas of knowledge in which the concept of sustainability was used on Twitter, as well as the sentiments these conversations evoked among social network users. Another study on attitudes towards sustainable shopping (Zafar et al., 2021)

found that social network use and online browsing influence attitudes towards sustainable shopping and the pursuit of environmental responsibility. In summary, this branch of research shows the influence of digital platforms on people's decisions and behavior.

Research through digital content enables the use of hyperlinks, tags, search engine results, archived webpages and other digital objects for social and cultural research (Rogers, 2009). For Rogers (2015), digital methods are techniques that utilize data available on the Internet for studies on social and cultural phenomena. Some of the most commonly used data include webpages, uniform resource locators, hyperlinks, tags, likes, tweets, content managers, blogs, social networking sites, search engines, and directories. In general, digital methods consider the organization of data through the exploration of native digital destinations and are analyzed using various techniques to better understand the organization of the web (Gillian, 2016).

Due to the relevance of such content, it is important to study digital rhetoric, as it allows us to locate the information produced in different domains and try to identify, at this first moment, the predominant ones, according to their semantic predominance in the domains studied, which is what has been sought in this paper. It should be noted that, according to Greimas and Courtés (1990), rhetoric is about persuasive speech. Therefore, in this new digital rhetoric, it is important to first classify which environmental paradigm (ecocentric or anthropocentric) it is associated with, and which is more dominant.

Given this situation, the aim of this study is to identify the dominant ecological paradigm expressed through the concept of sustainability in Spanish-speaking digital rhetoric. To this end, we conducted a qualitative study and analyzed scientific articles, webpages, images, videos and tweets and formulated the following question: What is the dominant ecological paradigm in digital rhetoric? Achieving this objective is important because it allows the acquisition of knowledge about certain characteristics of messages about sustainability that circulate on digital platforms such as Twitter, YouTube or Google for Spanish-speaking users. In addition, this study provides a starting point for observing trends in the conversation about sustainability and the relative importance of different topics, actors and reference sources related to this macro-concept. There are certain contradictions or little congruence in the discourse on the statements and actions needed to address this issue. With this controversy in mind, the analysis of this phenomenon and their possible causes were taken into account when pursuing this research.

MATERIALS AND METHODS

Given this interest in analyzing the content of digital rhetoric on the concept of sustainability, the study used five types of digital content accessible to anyone with Internet access, namely scientific articles, images, webpages, videos and tweets. The study, which was qualitative and descriptive in nature, used content analysis to categorize and classify the types of content according to the dominant ecological paradigm.

Considering the relationship that can exist between the anthropocentric (human-centered) and the ecocentric (nature-centered) paradigms, we worked with a scale in which content can not only fluctuate between the two extremes, but also find three other intermediate positions, namely interparadigmatic with an ecocentric approach, interparadigmatic, and interparadigmatic with an anthropocentric approach. The ecocentric and anthropocentric approaches begin with an explanation of the problem that emphasizes the environmental crisis and the importance of humans.

The aim of the research was to analyze the type of information that Spanish-speaking digital media users consume when searching for the term sustainability. For this reason, we only analyzed the first results of searches for articles, webpages, images and videos, as these are the ones that people typically consult. We worked with a sample of 200 scientific articles, 100 webpages and 100 YouTube videos; we also analyzed 824 units (all coming from Google) and 600 tweets.

It is important to note that our aim was not to analyze digital rhetoric in its entirety. Instead, we want to examine the type of information people consume when searching for the term online. Therefore, it is justified to analyze a sample of 200 units per domain for articles and 100 for webpages and videos. When browsing, people only click on the first few pages of the results returned by a search engine, this was considered in the research analysis. In the literature on digital methods, there is no consensus on the ideal sample size for studies, as the content of the media varies greatly (Spaiser, 2021). Therefore, the current sample size is considered sufficient for the use of digital data as a large volume is not necessary as a small sample of digital data can be equally interesting (Kim et al., 2018).

These media were chosen over others, such as Facebook and Instagram, which are restricted by privacy and particular preferences, despite being highly relevant platforms. This study aims to analyze discourses that are accessible to the public.

In order to determine the ecological paradigm of each content, the study used a classification that weights the different concepts per unit. For this purpose, the instruments of the revised New Ecological Paradigm Scale (Dunlap et al., 2000)

and the new Human Interdependence Paradigm Scale (Corral-Verdugo et al., 2008) were used as a basic reference.

The concepts of ecocentrism and anthropocentrism derived from these scales served as basic criteria for the classification of content. However, we also included other concepts observed in the available literature that describe the different paradigms. Examples of the concepts used for the ecocentric paradigm were environmental damage, problems, crisis, limits, talk of nature as an intrinsic value, criticism of capitalism and consumerism, ecological awareness, social and environmental justice, the positive impact of nature and, in general, the concept of sustainability as a top priority over values such as economic. For the anthropocentric paradigm, we used concepts such as instrumental approach to nature or natural resources, exploitation, measurement, scrutiny of natural resources, weak or superficial concepts of sustainability, growth with a focus on economy and productivity, separation between humans and nature, and the use of nature as a good. Finally, for the interparadigm, we examined concepts such as stability, integration, cooperation, participation, collaboration, resilience, paradigm shift and flexibility.

To increase the reliability of the classification process, two independent reviewers performed the classification. If the results did not agree, the case was discussed between the two reviewers and a joint decision was made as to which category the content should be classified in.

To analyze the scientific articles, we derived 100 articles each from Elsevier and Redalyc. We started with a simple search in the search engine of the respective database, adapted the search values to the Spanish language and added the word sustainability to the search. The search was limited to the results of the articles and omitted introductions, reviews and other documents. We analyzed the content of each article and looked for matches of the defined words or concepts to identify each paradigm. In this way, we obtained the dominant ecological paradigm (anthropocentric, ecocentric, interparadigm, interparadigm with ecocentric approach, or interparadigm with anthropocentric approach). In the sample used, 40%, 29%, 18% and 13% of the articles were from the humanities, economics, tourism and trade, engineering and natural sciences, and architecture and urbanism, respectively.

To analyze the webpages and images, a simple query was performed in the Google search engine. To avoid activating the search engine's algorithm, which correlates content from previous searches, we performed the query in incognito mode and cleared the computer's cache and history. The language was restricted to Latin American Spanish and the search was limited to the word sustainability. We considered the first

100 results of the webpages and all image content (n=824). The sample of webpages was classified according to the type of content originator: (A) education and media (33%), (B) government (7%), (C) non-governmental organizations (NGOs) (6%), and (D) companies or businesses (54%). Conversely, the sample of images was downloaded using a Google Chrome extension called Get Them All. Once downloaded, they were analyzed and classified into three categories, namely ecocentric, interparadigmatic, and anthropocentric. We only used these categories because the lack of discourse limits the ability to determine the dominant paradigm. The results show that the images categorized as ecocentric alluded to elements of nature and the care or love of nature. The images categorized as anthropocentric implied only humans without interacting with nature, while the images categorized as interparadigmatic showed interactions or partnerships between humans and nature.

To analyze the videos, we examined the dominant ecological paradigm in the rhetoric of the videos published on YouTube, which were also accessed via an incognito page in Google Chrome. The term sustainability was used in the search, and only the first 100 videos with a length of 4–10 minutes and with more than 1000 views were selected. We chose this platform because, unlike other less popular alternatives such as Vimeo and Metacafe, it is widely used on the Internet. The sample by content creator was as follows: education and media (52%), government (10%), NGOs (5%) and individuals or YouTubers (24%).

Finally, to examine the tweets, we analyzed the discourse of 600 tweets randomly selected from a database of 136,227 tweets containing the word sustainability and published in 2020. The data was collected using the API for Academic Research Version 2.0. To avoid temporal bias, 50 tweets were selected for each month of the year. These tweets were categorized according to the dominant ecological paradigm present in the discourse of the respective tweet. In some tweets, the link to the original source or article appeared, which was usually a company or news site. These links were accessed to determine the dominant ecological paradigm in the discourse of the referenced source. We did not include re-tweets to avoid repetition of information. If the tweet did not contain a link and the information was insufficient to determine the paradigm, the tweet was deleted and the next entry in the list was selected. The sample included 52%, 26%, 10% and 6% of tweets from media, companies, NGOs, educational institutions and government agencies, respectively.

RESULTS

To facilitate the reading of the results, we present the predominant paradigm found for each content type.

Dominant paradigm in scientific articles

Three types of analyses of the scientific articles were conducted in the study, namely, the general outcome, the dominant ecological paradigm in the scientific articles based on the time period in which they were published, and the dominant paradigm in the scientific articles based on the field of knowledge in which they were produced.

In general, the discourse of scientific articles (when analyzed without considering the fields of knowledge from which they originate) tends to emphasize the current environmental crisis, the scarcity and exploitation of resources, and the need to change old (human-centered) patterns of behavior towards more environmentally balanced behaviors. Issues such as climate change, social justice, equality, ethical positions, social welfare, and culture are also recurring themes.

Figure 1 shows the general classification of the dominant paradigm observed in the scientific articles and in the Elsevier and Redalyc databases. The general results of the scientific articles did not consider the database, the date of publication or the fields of knowledge from which they originated. Obviously, the classification in which the majority of articles fall is interparadigm (38%), followed by ecocentric (25%) and ecocentric interparadigm (21%). In other words, when the paradigms are grouped according to their predominant tendency, the ecocentric paradigm predominates (46%). In the same figure, the second column shows the results of the articles in the Elsevier database. The study found that the predominant paradigm is the interparadigm paradigm (39%), followed by the ecocentric paradigm (24%) and the ecocentric interparadigm (16%). In other words, there is also a tendency towards the ecocentric paradigm (40%). Finally, the third column shows the classification of the articles in the Redalyc database. The study found that the predominant paradigm is the interparadigmatic paradigm (40%), followed by an ecocentric paradigm (25%), an ecocentric interparadigm (23%), an anthropocentric interparadigm (9%) and an anthropocentric paradigm (3%). From these results, we conclude that there is also a tendency towards the ecocentric paradigm (48%).
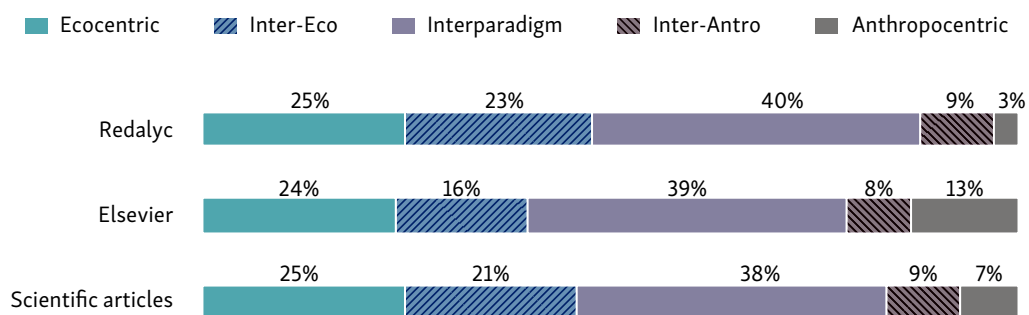

Figure 1. General result of the dominant ecological paradigm

Source: Own elaboration.

Period	Ecocentric	InterEco	Eco bias	Interparadigm	Inter-Antro	Anthropocentric	Antro bias	Ecocentric	Inter-Eco
Before 2010 (46)	24%	22%	46%	43%	2%	9%	11%	24%	22%
After 2010 (100)	26%	20%	46%	35%	14%	5%	19%	26%	20%

Table 1. Dominant paradigm of scientific articles

Source: Own elaboration.

Considering the time of publication, table 1 indicates that the positions of the scientists experienced a very slight increase towards a more ecocentric position (from 24% to 26%) and a slight decrease in the case of the anthropocentric paradigm (from 9% to 5%). In the case of the interparadigmatic paradigm, the study observed a significant decline in the number of articles published after 2010 (from 43% to 35%). The anthropocentric interparadigm also recorded a significant increase (from 2% to 14%).

The analysis of the predominant paradigm in the scientific articles depending on the field of knowledge shows that the ecocentric discourse dominates in the humanities and engineering sciences, while the interparadigmatic discourse prevails in architecture and economics (table 2).

Area	Ecocentric	InterEco	Eco bias	Inter	Antro-Inter	Anthropocentric	Antro bias
Humanities	39%	27%	66%	24%	6%	4%	10%
Architecture	10%	0%	10%	75%	10%	5%	15%
Business	9%	23%	32%	37%	20%	9%	29%
Engineering	35%	15%	50%	42%	4%	4%	8%

Table 2. Dominant paradigm of scientific articles by area of knowledge

Source: Own elaboration.

Dominant webpage paradigm

Figure 2 shows the results of the analysis to determine the predominant ecological paradigm on the webpages. The study showed that 46% tended towards the ecocentric paradigm, with 11% belonging to the ecocentric paradigm and 35% to the inter-ecocentric paradigm. The situation is similar with 27% in the interparadigmatic paradigm, 22% in the anthropocentric paradigm and 5% in the inter-anthropocentric paradigm.

	Ecocentric	Inter-Eco	Interparadigm	Inter-Antro	Anthropocentric
Webpages	11%	35%	27%	5%	22%

Figure 2. General result of the dominant ecological paradigm in webpages

Source: Own elaboration.

Table 3 shows the results of the pages according to the content creators; these actors can belong to the education sector, government, media, NGOs and companies. Corporate and educational webpages form the majority, taking a more inter-paradigmatic stance and avoiding more extreme positions.

Paradigm	Education	Government	Media	NGO	Companies	Total
Ecocentric	4	2	1	0	3	10
Ecocentric interparadigm	10	1	0	4	20	35
Interparadigm	8	3	1	1	14	27
Anthropocentric interparadigm	6	0	1	1	15	23
Anthropocentric	2	1	0	0	2	5
Total	30	7	3	6	54	100

Table 3. Discourse present in webpages on sustainability according to the content creator.

Source: Own elaboration.

Dominant ecological paradigm in images

Figure 3 shows the results of the analysis to identify the dominant ecological paradigm in the images. The ecocentric paradigm is dominant (52%), followed by the interparadigmatic paradigm (37%) and the anthropocentric paradigm (11%). As mentioned in the Materials and methods section, only three categories were considered in the study, namely the ecocentric, the interparadigmatic and the anthropocentric, as no discourse in the images could be considered for the analysis.

| | Ecocentric | Interparadigm | Anthropocentric |

| Images | 52% | 37% | 11% |

Figure 3. General outcome of the dominant ecological paradigm in images

Source: Own elaboration.

Dominant ecological paradigm in videos

Figure 4 shows the result of the analysis to identify the dominant ecological paradigm in YouTube videos. The tendency is towards the ecocentric paradigm (50%), which is composed of the ecocentric interparadigm (15%) and interecocentric (35%). There is a similar tendency towards the anthropocentric paradigm (26%), which combines the anthropocentric interparadigm (19%) and anthropocentric (7%) paradigms; finally, the interparadigm reaches 24%.

| | Ecocentric | Inter-Eco | Interparadigm | Inter-Antro | Anthropocentric |

| YouTube | 15% | 35% | 24% | 19% | 7% |

Figure 4. General result of the dominant ecological paradigm in YouTube videos

Source: Own elaboration.

Dominant ecological paradigm in tweets

The results of the analysis of the discourse in the 600 tweets showed that 44% corresponded to the combination of ecocentric and ecocentric interparadigm postures, 40% showed an interparadigmatic posture, and only 16% led to the combination of anthropocentric and anthropocentric interparadigm (figure 5).

| | Ecocentric | Inter-Eco | Interparadigm | Inter-Antro | Anthropocentric |

| Tweets | 16% | 28% | 40% | 10% | 6% |

Figure 5. Overall result of the dominant ecological paradigm in tweets

Source: Own elaboration.

Comparison of the general results of the five analyzed contents

After comparing the results of the five contents (figure 6), the study finds a general tendency towards ecocentricity. In general, the digital content examined is mainly ecocentric, followed by interparadigmatic and anthropocentric. One exception is the videos, where the proportion of anthropocentric content is slightly higher than that of interparadigmatic content.

When analyzing the discourse of scientific articles without considering the fields of knowledge from which they were written, the study found that the focus is usually on the current environmental crisis, the scarcity and exploitation of resources and the need to change old (human-centered) patterns of behavior to behaviors that are more in tune with the environment. Issues such as climate change, social justice, equality, ethical position, social wellbeing and culture are also recurring themes.

We also found that the key concepts in the humanities discourse are much more aligned with an ecocentric posture. In this case, the study found that the word nature, the Earth, or our planet is used to refer to the environment in which we live, as opposed to other, more anthropocentric terms that refer to the same events or phenomena, such as natural resources, natural environment or environment, green spaces, flora and fauna. This concept is interesting because it considers the planet as a living organism and as an entity and not just as a physical environment. In other words, the holistic, ecological and social aspects play an important role in this discourse.
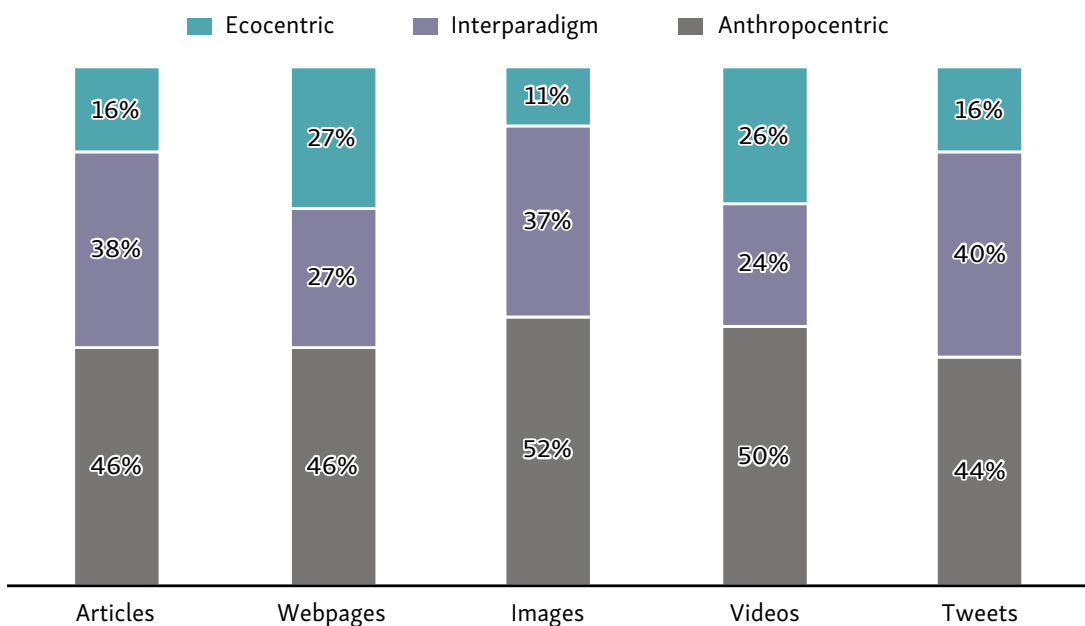

Figure 6. General result of the dominant ecological paradigm in all contents

Source: Own elaboration.

DISCUSSION

Digital rhetoric illustrates that companies launch campaigns based on a concept known as greenwashing. This is a form of marketing in which a company promotes itself in an exaggerated or highly accentuated way in favor of the environment because it is eager to show its concern and commitment to the environment (Cruger, 2024). The term is often used to launder unethical behavior and show strong environmental awareness. Zhang and colleagues (2018) suggest that companies (including the government) should promote substantive environmental initiatives rather than just the appearance of greenwashing to leave a positive opinion with the public. Wang and colleagues (2020) point out that negative information about a brand's greenwashing spreads easily, especially on the Internet, so companies go to great lengths to avoid this kind of negative publicity for their brands. This phenomenon is clearly expressed by brands via social networks and other digital media, which is reflected in the use of hashtags that allude to the concept of corporate social responsibility and socially responsible companies.

In the contents whose creators are companies, although they talk about sustainability, the environmental aspect is given special importance, for example, in choosing the design and color themes, usually are green and ecologically accentuated. With this kind of ideal, it seems that they place a higher value on nature than on the economy and social issues. However, the reality is different, as companies will always prioritize the economy, and therefore the imbalance is presented first. These videos mention the measures they have taken in the interests of sustainability. The concept of greenwashing can be reiterated here and how it is used in corporate speeches, with the challenge of environmental protection prevailing. Wang and colleagues (2020) point out that negative information about brand greenwashing is easy to spread, especially on the Internet, bringing this issue to the forefront of public discourse, so companies will do everything they can to avoid this kind of negative publicity for their brands, which can mean significant losses.

Issues that matter to the environment, such as climate change, the planet and eco-friendly products or materials (#ecofriendly), are mentioned more frequently in the results. Climate change is of increasing importance to societies around the world and a cause for discussion and dialog in key forums at a global level. As explained earlier, Moore (2017) points out that it is not humanity, as the Anthropocene claims, but a small part of it that is the main cause, which is why it is also referred to as the Capitalocene. Considering this approach, it is justified that companies are now more interested in showing their sustainable processes and that they comply with environmental standards, as they bear the responsibility when reporting on how much they pollute and leave an ecological footprint, as they are responsible for most environmental damage (Griffin, 2017).

In areas such as education, industry and government, the aim is to leave these footprints and reaffirm society's commitment to acting more sustainably by alluding to the Sustainable Development Goals and the 2030 Agenda. These initiatives guide the digital rhetoric around the concept of sustainability. The results of the study revealed how the constant repetition of sustainability rhetoric is intertwined with the definition of sustainable development and thus the goals defined by the UN (Washington, 2015).

The expression of the whole ideology of sustainability should perhaps be realized through other methods. Otherwise, people might fall into the dynamic of saying without doing, which is very common when discussing this topic. As Aragón (2020) suggests, the imaginary of sustainability, while hopeful, is based on an ideal of transforming reality, where utopia and ideology collide, which can simply lead nowhere. The most logical way to realize the ideology of sustainability would be the proven fact of being sustainable, i.e. practicing sustainability in daily life on a collective level.

The results led to the conclusion that the interparadigm has gained strength in scientific discourse through the concept of sustainability and sustainable development by integrating the systems of thought oriented towards nature and human beings. This idea coincides with that of Bechtel and colleagues (1999, 2006) and Corral-Verdugo and colleagues (2008), who mention this possible interdependence or reconciliation between the ecocentric and anthropocentric paradigms. According to these authors, this reconciliation permeates the contemporary world with a compatibility between the ecocentric and anthropocentric paradigms in certain cultures such as the Japanese, Mexican and Brazilian (Corral-Verdugo & Armendáriz, 2000). In this way, it contradicts the common notion that both systems of thought are antagonistic and opposed when it comes to integration. The results clearly indicate that this interdependence is more pronounced in the practical disciplines such as engineering and architecture and tends to be more ecocentric in the humanities such as education and ethics.

This premise is fulfilled in the case of the five contents analyzed in this study. In the discourse of saying, the ecocentric position dominates, while the discourse of doing reflects that one cannot be fully ecocentric due to the inclusion of other variables such as human well-being, economics, equality and diversity. The lack of priority of the human factor in this whole equation is unavoidable. The paradigm of sustainability is a complex paradigm, composed not only of economic and social variables, but also of environmental variables. Its implementation is therefore an extremely complicated and profound task and, above all, slow, as it entails structural changes that must be implemented gradually. Over time, this idea can become a reality.

CONCLUSIONS

The aim of this study was to identify and explain the dominant ecological paradigm expressed through the concept of sustainability in Spanish-speaking digital rhetoric. The study asked the following question: What is the dominant ecological paradigm in digital rhetoric? The results helped to conclude that the digital rhetoric on the concept of sustainability may be far removed from the environment-related Sustainable Development Goals: clean water and sanitation, affordable and clean energy, sustainable cities and communities, responsible production and consumption, climate and livelihood measures, and terrestrial ecosystems. Looking at the indicators of these goals in Spanish-speaking countries and the assessments carried out in Latin America, the majority of indicators related to these goals are far from the desirable level (Barleta et al., 2022).

According to Rodríguez and Govea (2006), the political and ideological challenges of sustainability represent a call for awareness-raising that urges the pursuit of knowledge in all areas of action. They emphasize that the time is ripe for a genuine embrace and understanding of the ideology of sustainability.

According to Barkin and colleagues (2012), building a new social paradigm means breaking down a homogenous path to sustainability. It is about an openness to diversity that breaks the hegemony of a unitary logic and goes beyond a strategy of inclusion and participation of alternative visions and different rationalities. From the micro to the macro level, the task of achieving the goals for a truly sustainable world continues. Thus, in every country and in every society, every community, every family nucleus and every individual within it, a change in mentalities and structures is taking place that is slowly but steadily progressing.

An in-depth examination of studies on digital rhetoric online, especially on social media, such as the findings of Ballestar and colleagues (2020) and Simionescu and colleagues (2020), is important because they can complement current research. This is because the information on these platforms has a great impact on the behavior of today's society. However, examining the notion of sustainability and its connection to policy and the specific situation of each country was beyond the scope of the study. Nevertheless, this is a very interesting line of development for future research.

In mentioning the concept of sustainability in digital rhetoric, the study found an apparent dichotomy in terms of what needs to be done to achieve sustainability. There are contradictions or little congruence in the discourse on utterances and solutions to this problem. The analysis of the possible causes, or at least the attempt to explain this phenomenon, as well as the concerns around it were genuine motivations for this work.

This research contributes to the knowledge of certain characteristics of messages about sustainability that circulate on digital platforms such as Twitter, YouTube and Google for Spanish-speaking users. In addition, this target group has not yet been considered in similar research in this study. Therefore, it provides a starting point for observing this type of controversy within digital conversations and the importance of the topics, actors and references related to this and other relevant trends.

Digital rhetoric nurtures the personality of each individual and shapes future behaviors. It has thus become an indispensable part of the lives of modern people who now populate the world and are always on the lookout for the latest information on the most important topics and controversies.

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