# Visual strategies of sustainability communication on corporate websites: A critical multimodal discourse analysis in the hospitality sector 

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#### Abstract

Anchored in the methodology of digital corporate communication, multimodal discourse analysis, legitimation and relevance theories, this research focuses on the contribution of images - photographs and logos- to sustainability meanings conveyed by websites to different stakeholders. The corpus analysis includes 330 images from the five most sustainable hotel chains according to the Sustainability Yearbook 2022. The images were downloaded manually from the English corporate websites and more specifically from websites with header and subheader related to sustainability. The research procedure was organized in three phases from a quantitative and qualitative perspective by answering the questions: "what do you see?", "what do the images evoke regarding sustainability issues?" and "how are visual elements utilized to convey the different dimensions of sustainability on websites?". The results obtained show that the hotel chains preferred photographs of people in order to elicit the people dimension and humanize their image. Photographs of nature depicting the planet dimension are, contrary to the author's expectations, only in the third position. With sustainability communication as a complex area of investigation, the aim of this paper is twofold. On the one hand, it aims at contributing to the studies of sustainability communication from a multimodal perspective. On the other hand, it hope to strengthen and further a methodological tool to critically analyse sustainability discourse as a multimodal digital discursive practice.


Keywords: multimodal analysis, sustainability communication, websites, hospitality sector.

## Resumen

## Estrategias visuales para la comunicación de la sostenibilidad en páginas web corporativas: análisis crítico del discurso multimodal en el sector hotelero

Tomando como marco de estudio la comunicación corporativa digital, el análisis del discurso multimodal y las teorías de legitimación y relevancia, este trabajo analiza cómo las cadenas hoteleras utilizan los recursos visuales para representar sus estrategias de sostenibilidad en sus sitios web. El análisis del corpus incluye 330 imágenes (fotografías y logos) de las cinco cadenas hoteleras más sostenibles según Sustainability Yearbook 2022. Estas imágenes se han descargado manualmente de los sitios web corporativos en inglés y, en concreto, de las secciones relacionadas con la sostenibilidad. El procedimiento de investigación, desde una perspectiva cuantitativa y cualitativa, responde a las siguientes preguntas: "¿qué ve el espectador?" (Q1), "¿qué representan las imágenes en relación con las cuatro dimensiones de sostenibilidad?" (Q2) y "¿cómo se utilizan dichos elementos visuales para transmitir las diferentes dimensiones de la sostenibilidad?" (Q3). Los resultados obtenidos muestran que las cadenas hoteleras prefieren fotografías de personas para evocar la dimensión humana; las fotografías de la naturaleza, que serían las más esperables, solo alcanzan el tercer lugar. Dado que la comunicación de la sostenibilidad es un área de investigación compleja, la contribución de este trabajo es doble: por un lado, pretende ser una aportación a los estudios de comunicación de la sostenibilidad desde una perspectiva multimodal; por otro, tiene como objetivo presentar una herramienta metodológica para analizar críticamente el discurso de la sostenibilidad como práctica discursiva digital multimodal.

Palabras clave: análisis multimodal, comunicación de la sostenibilidad, páginas web, sector hotelero.

## 1. Introduction

Since the term sustainability was coined in the 1980s, concern for environmental, social, and economic issues has continued to grow, not only among companies themselves, but also among stakeholders (Khan \& Sulaiman, 2021). Both groups have recognized the need to implement sustainability policies that benefit the environment and the communities in which businesses operate. Along with these specific sustainability policies, businesses have become aware of the need to communicate these strategies. The triple bottom line approach based on including social and environmental dimensions in addition to economic results (Elkington, 2007) requires a fourth element: communication (Mark-Herbert \& Von Schantz,
2007). As Sánchez-Chaparro et al. (2022) stated, "companies should not only 'be good' but also 'look good"'. Stakeholders need to know that companies are truly meeting their expectations, and, in turn, companies need to be heard by their stakeholders (Hrasky, 2012). A polyphonic communication approach is necessary in which all stakeholders are viewed as both recipients and senders (Jayanti, 2018). In the past, and in accordance with various laws and other motivations, sustainability communication was exclusively performed through reports (Raar, 2007; KPMG, 2008). However, over time, these reports have not only varied (annual reports, sustainability reports, integrated reports), but they have also been supplemented with other communication channels, especially in an online context (Pilař et al., 2019). While studies on reports are now abundant, research on how corporate websites effectively communicate sustainability is much less frequent, for three fundamental reasons. First, the architecture and design of the website complicate the process of analysis, especially considering that each website can organise its information as desired, and the content on sustainability on these websites does not necessarily follow recommendations or guidelines such as those provided by the Global Reporting Initiative (GRI) for sustainability reports. Second, unlike sustainability reports, not all corporate websites dedicate a particular space to informing users about sustainability issues. Third, because websites include less text than reports do, a larger part of the message about sustainability is carried multimodally through images, videos and other modes of communication, which makes it harder to apply language-based approaches to analysis. In view of these issues, this study approaches the communication of sustainability on corporate websites from a multimodal perspective, in order to explore the potential of images in enhancing the sustainability "message" of corporations and their role in the sustainability section of websites.

Specifically, this investigation focuses on the images used on the websites of the five hotel chains ranked as most sustainable according to the Sustainability Yearbook 2022 (S\&P Global, 2023). The hospitality sector offers a particularly interesting scenario to analyse images of sustainability communication through websites in two senses. On the one hand, while this sector is a key supplier in the tourism area, which makes an important contribution to many world economies, it receives a lot of pressure on sustainability issues from the host community because of their concern over potential long-term damage and pollution in the social and physical environments (Roxa et al. 2020). On the other hand, websites play a key role
in hotels' communication strategies, since many clients access them directly (Fernández-Vallejo, 2023), and customers' behaviour may be affected positively by the sustainability policies represented there (Martínez et al., 2019).

Since sustainability communication is a complex and multifaceted area of investigation (Alibašić, 2017), the aim of this paper is twofold. On the one hand, it aims at contributing to the studies of sustainability communication from a multimodal perspective. On the other hand, it aims at strengthening and furthering a methodological tool to critically analyse sustainability discourse as a multimodal digital discursive practice (Chung \& Cho, 2018; Malavasi, 2018).

Considering this background, the following research questions are addressed:

RQ1: Which images are preferred by the hotel chains to represent sustainability?

RQ2: How are these images distributed according to the different sustainability dimensions?

RQ3: How do these images represent, evoke, or convey the different issues in sustainability?

In order to explore how the five hotel chains use images to communicate their sustainability policies, the analysis is organised in three steps. To answer Q1 and Q2 (phases 1 and 2), a content analysis of images is performed from a quantitative perspective (Weber, 1990). This method was used successfully for other sustainability studies (Sánchez-Chaparro et al., 2022). In these first phases and drawing on Barthes's theoretical conceptualisation (1977), two questions are investigated.
(1) What do you see? (RQ1)
(2) What do the images obtained in the previous step evoke regarding sustainability dimensions? (RQ2)

In the third step, which addresses RQ3, a qualitative analysis was performed by drawing on multimodal theoretical conceptualisations (Kress \& Van Leeuwen, 1996; Van Leeuwen, 2005). Since a qualitative analysis cannot account for every image, but necessarily has to focus on a limited number of images (Esposito, 2022), it was decided to explore this question by analysing
only the most representative images, according to the observed patterns for each dimension.

The remainder of the paper is as follows. Section 2 reviews the literature on sustainability communication, focusing on communication through images on websites. Then, the research phases, data and methods are explained (Section 3). This sets the framework to explain and discuss the empirical results (Section 4). The study concludes by considering the contributions to the literature on sustainability communication and multimodal methods, and by suggesting some avenues for further research (Section 5).

## 2. Sustainability communication on websites via images

The sustainability policies of a company are defined by its commitment to the three Ps (Planet, People, and Profit). In light of this "triple bottom line", an organization is considered sustainable if it is able to achieve the appropriate balance between economic performance and environmental and social concerns (Elkington, 2007; Ferro et al., 2019). These sustainable policies cannot be implemented without effective communication that shares their sustainable values with stakeholders (Gill et al., 2008; FernándezVázquez, 2021; Sánchez-Chaparro et al., 2022). In this study, I use the term sustainability communication when referring to all types of corporate messages about sustainability issues from a broader perspective. Sustainability communication thus includes discourse that exclusively concerns issues of environmental and social protection, social responsibility in relation to economic success (Ziemann, 2011), and also a fourth dimension, namely governance. Governance is conceptualised as the instruments and the organisational models oriented towards assessing and improving environmental, social, and economic performance, and includes policies and guidelines, rules or laws, norms, standards, awards, or monitoring, verification procedures and sustainability indexes (Confetto \& Covucci, 2021). Sustainability communication is a process of dialogue oriented to persuade others (Breeze, 2021; Fernández-Vallejo, 2023). However, at times, sustainability messages are viewed as a means to merely enhance a company's corporate image, which raises doubts about their sincerity. This phenomenon is commonly referred to as greenwashing in communication (Swestiana et al., 2022). On the other hand, in other
companies the very opposite can happen. A lack of sustainability communication (talk) can be perceived, in spite of the presence of sustainability practices (walk) (Wickert et al., 2016). Therefore, the objective of sustainability communication should be to narrow the gap between sustainability implementation and communication.

In this sense, the digital environment plays an important role, and the website is central in this. It is widely acknowledged that corporate websites play a crucial role in facilitating communication between companies and their stakeholders (Simões et al., 2005). They are an essential part of a company's overall communication strategy and serve to centralise the various available digital media channels (García-García et al., 2017). In fact, corporate websites are fundamental for companies of any size and are considered the primary promotional window. They provide stakeholders with comprehensive information about the company, including its sustainability activities (Kim \& Rader, 2010).

In fact, in recent decades, corporate websites have taken over from corporate reports to become the primary source of sustainability information for many companies (Lodhia, 2018). By using websites, companies can share their sustainability efforts with stakeholders through close, rapid, and open dialogue. Previous studies have shown that corporate websites have the potential to promote productive exchanges between companies and stakeholders regarding sustainability concerns (Biloslavo \& Trnav $\square$ evi $\square$, 2009; Confetto \& Covucci, 2021). These websites also enable companies to provide information tailored to the diverse informational needs of different stakeholder groups (Palazzo et al., 2020). This tool, in combination with social media, has transformed the sustainability communication model. Companies must now engage in a two-way dialogue with stakeholders, while involving them in their sustainability strategies to ensure that their needs and opinions are taken into account (Moyaert et al., 2021). This sustainability communication framework, based on stakeholder theory (Freeman, 2015), is designed to achieve legitimacy in the eyes of stakeholders and enable companies to build productive relationships with them (Fernández-Vallejo, 2023).

Prior literature has conducted research on the presentation of sustainability information on websites, with a particular focus on determining the factors that influence dissemination patterns, including industry sector, country of origin, profitability, size, and ownership (Iaia et al., 2019; Palazzo et al., 2020).

Other studies have investigated the distinctions between traditional methods of offline sustainability communication and the content available on websites (Breeze \& Fernández-Vallejo, 2020), or the differences between sustainability information presented on social media and that found on websites (Lodhia et al., 2020). Several researchers have focused on how corporations use websites as "greenwashing" (Swestiana et al., 2022). However, only a limited number of studies have analysed the usage of visual artefacts in communicating the sustainability messages in websites (Fernández-Vázquez, 2021).

In today's business environment, there is an increasing emphasis on visual content (Chong et al., 2019). Visual artefacts such as photographs, drawings, graphs, figures, and charts have become a ubiquitous means of communication through the different channels (Milanesi et al, 2022). Visual artefacts are frequently included in different forms of business discourse and particularly in sustainability genres because of their richness and appeal (Bogel, 2015). The utilization of images in sustainability communication can effectively enhance a company's reputation as a socially responsible entity, as explained by Gotsi and Wilson (2001). Visual artefacts are known to act as a persuasive communication tool and their inclusion in sustainable messages on corporate websites is deemed to have a substantial impact on the trust and perception of users, according to the research conducted, for example, by Chong et al. (2019). The dominance of images in the perceptual process of the viewer, as argued by Rämö (2011) and Chong et al. (2022), renders visual disclosures a powerful tool of influence, because images not only elicit experiences and ideas in ways that written words cannot achieve, but also have the capacity to elicit emotional responses from stakeholders (Milanesi et al., 2022). In this context, the use of images should be interpreted as a rhetorical tool that deliberately attempts to direct attention towards certain sustainability aspects rather than others in order to project the most positive corporate image (Chong et al., 2022).

The literature has raised concerns about how these visual artefacts work, specifically in the general and complicated area of multimodality investigation (Van Leeuwen, 2005). Several researchers propose studies focusing on the text-image relation and establishing different levels of relationship, namely, very little relation to text, close relation to text or going beyond the text (Marsh \& Domas White, 2003). Others analyse these images by drawing on the tradition of classical rhetoric (Bateman, 2014, pp. 120136), or by moving towards legitimation theory (Fernández-Vallejo, 2023),
and relevance and impression management (Forceville, 2020). Others bring methods and frameworks in order to understand the complex means of visual designs (Kress \& Van Leeuwen, 1996). Against this background, and rejecting the notion that a purely monomodal communication system exists, this article aims to provide an analytical framework that combines the quantitative and qualitative analysis of visual artefacts used to communicate sustainability in the websites.

## 3. Corpus and methods

In the context of broader research into sustainability communication and corporate digital communication, the present study aims to analyse how hotel chains visually represent sustainability on their corporate websites. With this objective in mind, the present investigation analyses the visual strategies of the top five hotel chains identified in the Sustainability Yearbook 2022: Hilton, Meliá, Nh, Minor, Asset World Corporation (AWC), and Intercontinental Hotel (IH) (Table 1). The Sustainability Yearbook page (S\&P Global, 2023), which is considered the most prestigious in terms of corporate sustainability assessment, presents a list of 700 companies selected among over 7,500 companies based on their S\&P Global ESG Scores. The sample chosen offers an understanding of how the leading sustainability chains shape their sustainability visual communication. The study is achieved in three distinct phases: data collection, codification, and visual interpretation (Figure 2).

| Distinction by Sustainability Yearbook 2022 | Company name | Headquarter location | Number of images |
| :---: | :---: | :---: | :---: | :---: |
| S\&P Global Gold Class | Hilton Worldwide Holdings Inc. | United States | 39 |
| S\&P Global Silver Class | Melia Hotels International, S.A. | Spain | 33 |
| S\&P Global Bronze Class | NH Hotel Group, S.A. | Spain | 105 |
| Sustainability Yearbook Member | Minor International Public Company Limited | Thailand | 20 |
| Sustainability Yearbook Member | Asset World Corp Public Company Limited | Thailand | 101 |
| Sustainability Yearbook Member | InterContinental Hotels Group PLC | United Kingdom | 32 |

Table 1. Five top hotels chains in Sustainability Yearbook 2022.

For the data collection, this investigation focuses on the corporate websites of the hotels listed in Table 1. In cases where a hotel chain had multiple websites, only the English-language corporate website was considered. More
specifically, the corpus of data for this paper consists of 330 images that were categorised into five sub corpora and were manually retrieved from the sections labelled "sustainability" or related terms such as "corporate responsibility", and so on (Appendix 1), as these sections are crucial in terms of sustainability communication for potential customers (Biloslavo \& Trnavčevič, 2009). Appendix 1 provides a summary of the headers observed on the corporate websites, including the number of websites analysed for each header. The researcher clicked or hovered over various buttons or images linked to the selected headers (see Figure 1), downloaded the images and counted them manually. Data collection occurred in January 2023. Videos, blogs, documents in pdfs, releases, financial graphs (figures, charts, diagrams) and numbers were excluded from the analysis, and repeated visual artefacts were counted as one image.


Fig. 1. Analysed section of corporate website

Following data collection, a visual content analysis was conducted (Weber, 1990) and each image was considered as a unit of analysis (Krippendorff, 2004). Following Bell (2001), content analysis is a systematic approach used to analyse visual or textual elements by classifying observable elements into distinct categories. For this categorisation, I adapted the method proposed by Chong et al. (2022) for image analysis by employing the "looking at" and "looking behind" strategies. In this vein, a three-step process was used to address sustainability-related images: coding of salient themes, classification regarding sustainability dimensions, and analysis (Fig. 2).


Figure 2. Research design

Step 1 - Coding salient images
This level of analysis reflects the "looking at" approach (Chong et al., 2022) and addresses the question "what do you see?". In this, the researcher delineates the form of sign (signifier) while drawing on Barthes's semiotic theory that stems from Saussure's Theory of Semiotics (2011). For Barthes (1977), the sign is a combination of a signifier (the material part) and a signified (the meaning part, the mental representation). This "looking at" phase corresponds to what Barthes refers to as denotation, the first level of signification, and describes the literal or obvious meaning of the sign. Thus, the denotation of the visual image refers to what all people see irrespective of their culture, ideology or society.
Initially, two coders independently examined approximately $25 \%$ of the chosen images to identify common signifiers. They employed a template similar to that provided by Stepchenkova and Zhan (2013) to create six categories: (1) Nature Photographs, (2) Hotel Photographs, (3) People Photographs, (4) Objects Photographs, (5) Artistic Images, and (6) Logotypes (Table 2). Initially, the level of agreement was approximately 0.65 . Nevertheless, after a few rounds of comparative coding, all categories were clarified, refined, and outlined in a coding guidebook with pictorial examples. Cohen's kappa coefficient was used to measure reliability, which was greater than 0.9 (Cohen, 1960). Table 2 provides a description of images to
comprehend the coding process. This method was adapted from Milanesi et al. (2022). The number of images was quantified according to the main themes, then a relative measure of which images were preferred by the hotel chains to represent sustainability was obtained (Q1).

| Nature (N) | Photographs of beaches, landscape, plants, trees, animals or sea. If people or hotel are <br> present in the image but are not the focus (too small, hardly distinguishable, or on the <br> periphery of the picture), then they are coded. But if they are one of the foci, then they are <br> coded into their respective categories. |
| :--- | :--- |
| Hotel (H) | Photographs of hotels both from the inside and from the outside with minor human-related <br> elements. From the inside, this category includes halls, meeting rooms, restaurants, shops, <br> bathrooms, swimming pools, garages. From outside, the hotels are in contact with nature <br> (beaches, plants or mountains). If people or nature are present in the image but are not the <br> focus (too small, hardly distinguishable, or on the periphery of the picture), then these <br> photographs are coded. But if they are one of the foci, then these photographs are coded <br> into their respective categories. |
| People (P) | Photographs of steering committees, CEOs, employees, stakeholders, citizens in general, <br> indigenous people and children. They can be photographed full-body, half-body, or just <br> their hands or body, without showing their face. If hotel or nature are present in the image <br> but are not the focus (only the scenario), then these photographs are coded. But if they are <br> one of the foci, then these photographs are coded into their respective categories. |
| Objects (O) | Photographs of various types of objects (computers, calculators, crafts, solar panels, <br> chimneys, etc.), and in general, objects that do not fall into the aforementioned categories. |
| Artistic <br> (A) | images |
| Logotypes (L) | Drawings or composition of photographs where there is an artistic component. |

Table 2. Categories of image content

Step 2 - Classification regarding sustainability dimensions
In the second step, a quantitative analysis is performed to analyse how the images are distributed according to different dimensions (Q2). The images identified in step 1 were examined, classified, and counted according to Confetto and Covucci's taxonomy (2021). These authors developed a sustainability thematic taxonomy by performing a thematic content analysis of 300 websites from the corporate websites of the top ten sustainable brands selected in "The 2019 Globe Scan Sustain Ability Leaders Survey". In this phase, the initial classification was established based on the fourdimensional conceptual structure of sustainability: planet, people, profit, and governance. However, this taxonomy was modified by eliminating the profit dimension, which is not typically included in sustainability sections, and adding a "general" dimension. Each of these dimensions was then organised into other categories and these into other sub-groups (Table 3). The correspondence between the images and the sustainability dimension was determined through the written context (such as headers, sub-headers,
captions or adjacent texts), where the images appeared (see Figures 2, 3, 4). As depicted in Figure 2, this image is categorised under the dimension of "people", the category "society" and the subgroup of "communities", since it is below the sub-header "communities".

This level of analysis addressed the question of "what do the images represent, evoke, or convey regarding sustainability issues?" (Q2). The connotative analysis based on Barthes, which is interpretative and subjective, became, in this part, more objective through guidance from the textual discourse and the relationship between image and text (Marsh \& Domas White, 2003), which Barthes (1977, p. 40) referred to as the function of the linguistic message of "anchorage" (Bateman, 2014, p. 131). The number of images was expressed as a percentage of the total to measure the relative intensity on the total photographs in the visual disclosure strategy according to the different sustainability dimensions.

| Dimension | Description of visual images |
| :--- | :--- |
| General | The visual artefacts, whose discursive context is linked to sustainability in general without <br> specifying the other categories. |
| Planet | The visual artefact, whose discursive context is linked to environmental footprint (natural <br> resources and raw materials consumption, energy and renewable resources / co2 emission waste <br> and pollution, water scarcity), climate change (gas and emissions, global warming, <br> deforestation, transport), biodiversity (ecosystem preservation, animal welfare, sustainable <br> agriculture), green innovation (bio and eco technology, green chemistry, recycling and <br> upcycling, concept of green, green education, noise). |
| People | The visual artefact, whose discursive context is linked to labour practices (employment and <br> labour relations, occupational health and safety, training and education, diversity and equal <br> opportunities, risk of exclusion, care of disabled people), human rights (non-discrimination, <br> freedom of association and collective bargaining, child code ECPAT, indigenous rights, sexual <br> harassment), society (local communities, public health, city and urbanization, local culture and <br> heritage, education, corporate volunteering), product responsibility (customer, health and <br> safety, product and service sustainability features, marketing and communications practices, <br> customer privacy and protection, services for disabled people). |
| Governance | The visual artefact, whose discursive context is linked to management approach (strategy and <br> plans, objectives and initiatives, value chain management), ethics and integrity (anti- <br> competitive behaviour, company policies, anti-corruption and anti-bribery procedures), <br> stakeholder relationships (engagement activities, accounting and reporting, certification and <br> awards, data confidentiality), sustainability legislation (local laws and regulations, SDGs and <br> global initiatives, international directives and acts). |

Table 3. Visual artefacts according to sustainability categories. Source: Adapted from Confetto and Covucci's taxonomy (2021)

## Hotels with a heart

Hotels with a Heart is an initiative that aims to ensure that children and young people who suffer from a serious illness and have to go to hospilal far from their home can be accompanied by their closest family at this difficult time.
do dis, NH Hotel Group provides the lamilies with rooms at holels close to the hospital free of charge. With this goal, and in close collaboration with local NGOs and foundations, the Company provides free accommodation close to hospitals in several cities at national and international level to families with limited resources, so that they can accompany their loved ones


Figure 2. Classification of images according to the sustainability sub-header


Figure 3. Classification of images according to the sustainability caption


Figure 4. Classification of images according to the adjacent textual information

Step 3 - Analysis and interpretation
To achieve a comprehensive understanding of how visual elements are utilised to convey the different dimensions of sustainability on websites (Q3), a qualitative analysis was conducted, which combined the outcomes of step 2 (images content) and step 3 (images according to the four dimensions). More specifically, each dimension (general, people, planet and governance) was explained on the basis of the most frequent images, by describing their main characteristics, and how they represent abstract concepts and processes of sustainability. This approach assists in elucidating the role of connotation in sign function, as posited by Barthes (1977). This phase involves a critical examination by decoding the images drawing on the theoretical framework of multimodal discourse analysis, developed by Kress and Van Leeuwen (1996), and the methodology proposed by Chong et al. (2019) for analysing the photographs that represent aspects of CSR.

Although Chong et al. (2019) proposed two categories for his study: specific, photographs related to CSR issues, and non-specific, not related to CSR
issues, in this paper, four categories of images are distinguished: specific, non-specific, non-specific-sustainability and non-specific-hotel (Table 4). The researcher contends that it is imperative to take into account not only a single criterion, i.e., sustainability issues as suggested by Chong et al., but also a second criterion, namely, the hotel, which bears the responsibility for implementing sustainable strategies. In fact, each kind of these images directs the reader's attention, influences their judgement, and guides their interpretation of sustainability issues in a different way, by requiring greater effort from the viewer, and more support from the text, when these two criteria are not depicted.

It is important to note that, due to the substantial number of images identified, a systematic analysis of the four dimensions according to each visual image within a taxonomic framework was beyond the scope of this paper. Instead, a more inductive and qualitative approach was employed, as in other previous multimodal studies (Phillips \& Hausbeck, 2000; Mars \& Domas White, 2003; Esposito, 2022). This approach is based on a philosophy that prioritises contextualisation at the intersection of multimodal discourse theorisation (Martinec \& Salway, 2005), sustainability communication (Villarino \& Font, 2015), digital corporate communication (Camilleri, 2021), legitimation theory (Suchman, 1995) and relevance theory (Forceville, 2020), without one ousting or displacing the other.

| Images related to: |  | Categorisation of images | Examples |
| :---: | :---: | :---: | :---: |
| Hotel | Sustainability |  |  |
| X | X | "Specific" photographs ( S ): <br> Photographic images that depict both sustainable issues and the hotel. |  |
| X | 0 | "Non-Specific-Sustainability" (NSS) Photographic images that depict the hotel but do not address sustainability issues. |  |
| 0 | X | "Non-Specific-Hotel" (NSH) photographs with images that have no discernible link to the hotel but yes to sustainability issues |  |
| 0 | 0 | "Non-Specific" (NSS) <br> photographs with images that have no discernible link to either sustainability or the hotel |  |

Table 4. Categorisation of images

## 4. Results and discussion

This section presents the findings of the study in a systematic manner, addressing the research questions posed earlier, and following the steps described in the previous section.

## Step 1 - Coding salient images

As illustrated in Figure 5, the prominent images that emerged from the data analysis show that images of people are the preferred images in the sustainability sections of the websites, accounting for $34 \%$ of all visual resources, with a clear desire to humanise the image of the hotel as a space of people (staff) for people (guests). After the images of people, those of hotels and logos appear with the same percentage $(23 \%)$. However, what is striking is that images of nature are not very present, with only $2.6 \%$ of images. This is particularly interesting because we are dealing with a sector that has been frequently accused of environmental pollution (Passafaro, 2020). Therefore, according to the legitimation theory proposed by (Suchman, 1995), I expected to see a greater presence of such images (as documented in the literature). Research has found that once the accusations and blame against a sector increase, so do the corresponding rhetorical strategies (Breeze, 2012).


Figure 5. Coding salient images

Step 2 - Classification regarding sustainability dimension
The results indicate varying behaviours concerning the use of visual artefacts in relation to sustainability matters (Figure 6). The primary finding suggests that the people dimension exhibits the highest proportion of images $(40.2 \%)$. This result aligns with the previous findings (step 1), where people
were the most dominant image category. Within this category (Figure 7), images associated with society, particularly corporate volunteering and local communities, were most prevalent ( $83.2 \%$ ), compared to labour practices (11.2\%) or product responsibility (4.7\%).

The second dimension in terms of images is governance (Figure 8), which has two significant features. Firstly, sustainability legislation is prominent (48.7\%), followed by the stakeholder relationship ( $40 \%$ ). Secondly, most of the logos are located in this dimension (Figure 9), accounting for $76 \%$ of the total number of visual artefacts, compared to people ( $20 \%$ ) and planet (3.8\%).

The third dimension is the planet dimension (24.2\%), where the environmental footprint receives the most attention. Specifically, subcategories such as energy and renewable resources, CO 2 emission, waste and pollution, and water scarcity are depicted mostly through hotel photographs. Lastly, as expected, the general dimension of sustainability is depicted by only $2.9 \%$ of the images.


Figure 6. Images according to the four sustainability dimensions

Figure 7. Images according to "People" dimension



Figure 8. Images according to "governance" subgroups

Step 3 - Analysis and interpretation
This section is organised according to the four main categories proposed in the previous step.

General category. In the five websites, the first part of the sustainability section is basically occupied by non-specific sustainability (NSS) images. These consist of photographs of CEOs of the organisation (Figures 10 and 11) and images of hotel buildings (Figures 12 and 13). The CEOs are captured in a similar manner, utilising two significant semiotic resources. Firstly, they are depicted frontally with a direct gaze at the viewer, positioning themselves as attention-grabbing figures. Secondly, they are attired in black suits with white shirts and notably without a tie. These particular choices in gaze and dress emphasise the proximity between the CEOs and the viewer, fostering a sense of community and identification while avoiding any sense of superiority on the part of the CEOs (Van Leeuwen, 2005). In contrast, the images of the hotels do not adhere to a consistent pattern, showcasing the buildings from various perspectives such as the store, hall, or a bird's eye view. Nonetheless, all these images aim to communicate grandeur and elegance, and to entice the viewer to stay in these establishments. In sum, the hotels as corporate organisations are depicted either from a human perspective, with their CEOs as the main figure, or from an architectural perspective. In both cases, it could be said that we are witnessing two instances of visual metonymy. This strategy means using one entity to refer to another that is related to it (Lakoff \& Johnson, 1980, p. 36). In this particular case, part-for-whole (Gibbs, 1994, p. 322), since is impossible to represent all the members of a hotel chain in visual images or all the hotels of a hotel chain, this visual representation is necessarily metonymic (Feng, 2017). As Guijarro (2013) notes, these metonymies are frequently used to highlight some aspect of the message and direct the viewer's attention. In this particular case, these images are strategically placed at the beginning of the sustainability section to convince the viewer of the credibility and trustworthiness of the following sections and their messages. This placement is not accidental, as the primary goal of these images is to confer authority on the other sections, by way of an appeal to what is known as ethos in classical rhetoric (Kallendorf \& Kallendorf, 1985). By depicting the person or hotel responsible for the discourse, these images enhance the ethos and encourage trust in corporate organisations, which is crucial to legitimising sustainability policies (Jayanti, 2018). As sustainability reports usually begin with a letter from the CEO (Breeze \& Fernández-Vallejo, 2020;

Fernández-Vallejo, 2023), these sustainability pages are typically headed by images that inspire trustworthiness and are directly supported by the chains' representation (Khan \& Sulaiman, 2021).


Figure 10. CEO of Melíá

Figure 12. Hall of AWC



Figure 11. CEO of Hilton


Figure 13. Bird's-eye view of IHG

Planet category. In reference to this category, two features merit discussion. Firstly, the category is limited in terms of images (only $24.2 \%$ ), underscored by its heightened susceptibility to environmental issues, as previously noted in step 2 . Secondly, the nature of the images disseminated within this section is noteworthy, as explicated in the following paragraphs.

The quantitative analysis of visual artefacts related to the "planet category" revealed that the majority of companies used images of various indoor areas of their hotels. These images represent particularly the subcategories of environmental footprint and green innovation. Specifically, the strategies related to environmental footprint (water scarcity, energy and renewable resources, and waste pollution) were depicted through images of kitchen, bathrooms, swimming pools (see Figures 14-15); bedrooms, bars, or restaurants, where the common feature is artificial lighting (see Figure 16). This finding is somewhat surprising, since all of these images are classified as "non-specific sustainability" (NSS), and they lack any explicit reference to sustainable elements. Therefore, in all these images, it is up to the visitor to assume, after reading the narratives, that the lights used in these hotels are renewable, water consumption is reduced, or that these buildings (halls, rooms, all buildings) utilise bio- or eco-technology. In this case, taking a relevance-theoretic approach (Forceville, 2020), the verbal communication has a crucial impact upon the viewers' inferential process to communicate
the sustainability message. The viewer would tend to assume that these aspects of the hotels are sustainable from an environmental point of view (Mars, 2021), although no actual evidence is presented to confirm that this is the case.

In terms of climate change and biodiversity, the situation is different and the visuals employed are typically particularised (specific images). Visitors encounter depictions of garages equipped with electric car charging ports, electric cars situated within garages (Figure 17), or hotel structures enveloped by natural surroundings (Figure 18). In such instances, the images themselves evoke messages of sustainability by providing visual evidence.


Figure 14. Photograph related to waste


Figure 15. Photograph related to water scarcity


Figure 16. Photograph related to energy and renewable resources


Figure 17. Photograph related to climate change


Figure 18. Photograph related to biodiversity

People category. In this category, two distinct types of visual artefacts can be identified. Firstly, images depicting sensitivity towards labour practices, human rights, or society, and secondly, food-related images that illustrate product responsibility. As anticipated, photos focus on hotel employees in their workplace environments, such as restaurants, halls, or offices. These photographs have been classified as specific photographs, for which the viewer is not required to engage their imagination, but only to observe (Mars, 2021).

These images often portray cooks, waiters or administrative workers in professional settings (see Figure 19), working or posing for the photo. The majority of these individuals fall within the youthful demographic of 20 to 30 years of age, outfitted in professional attire and depicted as cheerful, thereby presenting the hotel from an upbeat and appealing perspective. The personnel are positioned at the centre of the frame, predominantly portrayed in a frontal manner, gazing directly at the viewer (Van Leeuwen, 2005), thereby enabling the viewer to envisage themselves as a guest being attended to by these optimistic staff members. This type of characterisation emphasises the existence of a contented workforce who receives appropriate treatment from their superiors in terms of their rights, training, salaries. However, the lack of attention paid to diversity, minorities or gender-balanced composition in the selection of employees is noteworthy, without apparent harmony between the text and the images. This sets this sector apart from others, such as the banking sector (Igboanugo et al., 2022). It is only in Figure 20 that a potential concern for minority representation can be observed.

With regards to the subthemes of human rights and society, three distinct types of representation can be observed. Firstly, there are depictions of employees involved in altruistic activities organised by hotels (Figure 21). These images feature employees dressed in non-professional attire, and not always situated within the hotel environment, conveying an informal atmosphere. Secondly, there are images of children who are the recipients of these activities (Figure 22). In both cases, adults and children are portrayed in close-up face-to-face shots (Van Leeuwen, 2005), suggesting a higher level of engagement with the audience and promoting greater trust and authenticity (Mars, 2021), as the viewer is able to associate faces with both the actors and recipients of the actions being performed (Figs. 21-22). Furthermore, the viewer encounters pictures featuring objects (Figure 23) or hotel spaces (Figure 24), which serve as reminders of how hotels contribute to communities. In terms of Marsh and Domas White's taxonomy (2003) these images document the texts. They enhance trust by showcasing the final outcomes of these activities and by using a powerful strategy of legitimation and credibility (Suchman, 1995). Finally, upon examination of the product responsibility sections, various food items are showcased in a close-up view (Van Leeuwen, 2005), positioned above tables or counters without precise spatial identification (Figures 25). They also compel the visitor to envision the hotel as a manager of products of local communities, showcased in an exceptional array of vivid colours. In summary, this category is characterized by the
prevalence of non-specific sustainability images, which require the viewer to imagine the inferred sustainability concept being conveyed (Forceville, 2020).

Firstly, the images of people (in rhetorical terms, metonymy of employees), according to Feng (2017) serve as a reminder to clients or potential customers of the type of staff they can expect to encounter. In fact, they will find optimistic employees who will readily attend to clients' needs, because they are well-cared for and trained by the hotel. Additionally, through these images of people, the hotels provide tangible evidence that the hotel is taking into account the needs of vulnerable communities, not merely in abstract terms but through concrete examples such as pictures of employees, products and recipients. Therefore, these images create a positive image of hotels to influence the trust and perception of stakeholders. Clearly, the use of these images is a powerful tool for pursuit of legitimation (Breeze, 2012; Fernández-Vallejo, 2023).


Figure 19. Photograph related to labour practices


Figure 21. Photograph related to human rights and communities


Figure 23. Photograph related to communities


Figure 20. Photograph related to labour practices


Figure 22. Photograph related to communities


Figure 24. Photograph related to communities


Figure 25. Photograph related to product responsibility

Governance category. In this section, the viewer can meet with four different types of picture. Firstly, "non-specific" pictures (as shown in Figure 26), which lack sustainability and hotel-related issues, but possess a strong metaphorical component. All of these images depict cut-out photographs with a focus on hands (handshake, hands together, hands grabbing a tree). In order to comprehend their sustainability implications, it is necessary to consider them metaphorically. These metaphors represent the source domain both verbally and pictorially (Bateman, 2014, p. 181), and in conjunction, they assist in suggesting the target domain, which, in this case, is the governance category (Lakoff \& Johnson, 1980). For example, in Figure 26, governance could be interpreted as a participatory process at all levels of organisation.

Secondly, the research showcases "non-specific hotel" images (as exemplified in Figure 27), in which the presence of a green natural element is highlighted. Interestingly, this element is not used to represent environmental concerns but rather governance issues, which are even more abstract. Therefore, to convey this concept, a more recognisable element such as natural elements, evoked by the colour green, is employed. As previously explained, governance issues refer to a set of principles, strategies, and guidelines aimed at managing the other three components of the Triple Bottom Line (Elkington, 2007). In this instance, a shared background where the colour green evokes the sustainability element is essential for the sustainability message to be conveyed (Forceville, 2020; Sossini et al., 2022).

On the opposite site, we find non-specific sustainability pictures, with images of hotels (Figure 28) or people (Figure 29). These images remind us of the ethos, the responsibility of hotels (understood as building or as organisation of people) by leading sustainability with an ethical, upright, international, national and local legal approach according to legitimation theory. With regards to the depiction of people, it is noteworthy that they are shown engaging in actions.

Finally, logos, which represent $24 \%$ of the total, are primarily utilised to identify sustainability awards (Figure 30) or agreements (Figure 31) of hotels. According to Hrasky (2012), logo-symbols are discourses that exhibit characteristics of demonstrative and deliberative genres. In this case, logos serve as a deliberative genre by aiming to elicit a positive attitude towards the presented award or institution among the targeted audience (Llorente-

Barroso \& García-García, 2015). Therefore, these logos are another tool for legitimising the sustainability policies of hotel chains. It is important to remember that the use of these logos signifies that these activities are not individual or isolated actions, but rather belong to a common, national or global framework where sustainability issues are important (Marchese et al., 2018). In this case, legitimacy is defined, from a different perspective, in relational terms. The value of the chains' proposals increases as the law or award becomes more widely known and shared (Schleifer, 2019).


Figure 26. Photograph related to governance


Figure 28. Photograph related to governance


Sustainability Award Silver Class 2019

Figure 30. Logo related to awards


Figure 27. Photograph related to governance


Figure 29. Photograph related to governance


Figure 31. Logo related to agreements

## 5. Conclusions

This paper examines the use of visual artefacts depicting sustainability information by the most sustainable hotel chains on their websites. The findings demonstrate a clear inclination towards photographs of people, specifically images featuring the "people dimension". This indicates that hotel chains have a desire to humanise their image as an organisation, which has two consequences from a sustainability communication perspective. On the one hand, these images are used as a visual strategy to assure the credibility (ethos) of the hotel chains' people dimension policies and, in
general, of all their dimensions. Since viewers can see the people who implement and receive these policies, there is no need for them to doubt the authenticity of the communication. These images serve as examples and strengthen the accompanying text. On the other hand, these types of images, featuring a recurring motif of expressions of happiness and contentment, could be deemed a powerful visual rhetoric device for legitimation, as stakeholders tend to perceive them as representations of reality. However, it is striking that these images do not address D\&I and equity themes, despite their presence in the written discourse. Regarding most photographs of hotels that depict the planet or governance dimension, they do not have a visual representation of sustainability. Therefore, the communicative behaviour is different than with previous photographs: viewers must assume that the photographed hotel has a correct sustainability policy as the written discourse states. In addition, the findings show that relatively few natural photographs $(4.2 \%)$ are devoted to environmental performance, which is striking because this sector has received many accusations, primarily related to the planet dimension. Furthermore, logos, which represent the second most frequently used visual artefact $(24.2 \%)$, work as a tool to legitimise sustainability strategies but, in this case, from a relational perspective.

The present study offers a comprehensive analysis of the visual artefacts employed for sustainability communication in websites, an area that has been largely overlooked in previous research. By adapting Confetto and Covucis's taxonomy (2021) regarding sustainability content, and applying the theoretical multimodal framework developed by Kress and Van Leeuwen (1996), we have been able to identify the dominant themes and understand how these themes evoke sustainability messages. This study contributes to the multimodal sustainability literature and provides a systematic approach for categorising and analysing visual artefacts in the websites and other contexts. The research findings are also valuable for web designers and those responsible for corporate communications.

The present study has several limitations, which offer potential avenues for future research. One important limitation is that, despite the efforts to minimise subjective judgments in the analysis, visual artefacts can have elusive meanings and complete elimination of subjectivity may not be possible. Additionally, the study is limited to only five hotel chains, making it imperative to replicate the study using data from other hotel chains to examine the similarities and differences in results. Besides, it may also be valuable to conduct a more extensive analysis of other corporate disclosures,
such as sustainability reports or social media publications, to further analyse similarities or differences in results.

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## Appendix 1. Websites, web pages, headers and subheaders of sustainability

| COMPANY NAME | Company' URL | Sustainability sections | Number of web pages |
| :---: | :---: | :---: | :---: |
| Hilton Worldwide Holdings Inc. | https://www.hilton.com/en/corporate/ | labout us/corporate responsibility | 27 |
|  | htpp://esg.hilton.com/ | Home | 1 |
|  | https://hiltonglobalfoundation.hilton.com/ | Our Approach | 2 |
|  |  | 2030 Goals | 3 |
|  |  | Environmental | 5 |
|  |  | Social | 5 |
|  |  | Governance | 6 |
|  |  | Our Reporting | 5 |
| Melia Hotels International, S.A. | https://www.meliahotelsinternational.com/en | https://www.meliahotelsinternational.com/en/our-company/reputation-sustainability | 4 |
|  |  | Corporate responsibility | 1 |
|  |  | Environmental commitment | 1 |
|  |  | Social commitment | 1 |
|  |  | Reputation | 1 |
| NH Hotel Group, S.A. | https://www.nh-hoteles.es/corporate/ | https://www.r.h-hoteles.es/corporate/compania-responsable-y-sostenible | 21 |
|  |  | Our Commitment | 1 |
|  |  | Employees | 4 |
|  |  | Sustainability | 7 |
|  |  | Communities | 4 |
|  |  | Ethics and Responsible Value Chain | 2 |
|  |  | Csr Annual Reports | 1 |
|  |  | Alliances and Recognitions | 2 |
| Minor International Public Company Limited | htps://www.minor.com/en | https://www.minor.com/en/sustainability | 6 |
|  |  | At a glance | 1 |
|  |  | Chairman's Message | 1 |
|  |  | Sustainability Goals \&Performance | 1 |
|  |  | Sustainability Strategy | 1 |
|  |  | Sustainability Reports | 1 |
|  |  | Sustainability Highlights | 1 |
| Asset World Corp Public Company Limited | htps://www.assetworldcorp-th.com/en/home | https://www.assetworldcorp-th.com/en/sustainability | 12 |
|  |  | Our Approach and Policy | 1 |
|  |  | Policies | 1 |
|  |  | Stakeholder Engagement | 1 |
|  |  | Materiality | 1 |
|  |  | Managing Governance | 1 |
|  |  | Caring for the Environment | 1 |
|  |  | Creating Inclusive Society | 1 |
|  |  | Asset World Foundation for Charity | 1 |
|  |  | The Gallery | 1 |
|  |  | Social Activities | 1 |
|  |  | Sustainability Report | 1 |
|  |  | External Recognitions | 1 |
| InterContinental Hotels Group PLC | htps://www.ihgplc.com/en/ | https://www.ihgplc.com/en/responsible-business | 9 |
|  |  | Journey to Tomorrow | 1 |
|  |  | Our people | 1 |
|  |  | Communities | 1 |
|  |  | Carbon and Energy | 1 |
|  |  | Waste | 1 |
|  |  | Water | 1 |
|  |  | Responsible Procurement | 1 |
|  |  | Reporting Policies and Position Statements | 1 |
|  |  | Case Studies | 1 |

