



Unveiling Ecological Narratives: A Multimodal Analysis of Top Pakistani Pharmaceutical Companies' Web Pages

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ABSTRACT

The study aimed to investigate six Pakistani pharmaceutical companies' web pages through multimodal analysis. It attempted to sensitize various semiotic modes in designing websites that represent ecological discourses. Language and media play a crucial role in forming the ideology of the masses about the importance of ecological sustainability for human existence. The current study followed three different theoretical frameworks suggested by Kress and van Leeuwen's (2008) Multimodality Theory, van Leeuwen's (2008) Social Actor and Social Action Approach to Language Analysis, and Stibbe's (2015) Ecological Ideology of Erasure and Saliency in the shape of conceptualized analytical modal. The following conceptualized analytical model examined multiple semiotic modes from the perspective of ecolinguistics. For this purpose, a purposive sampling technique was employed in selecting websites, keeping the Drug Regulatory Authority of Pakistan's 2019 ranking in view. A total of six photos were selected, one from each website. The research showed that Pakistani pharmaceutical companies have used a variety of semiotic modes, including image, color contrast, huge, bold text size, and diverse pictures, to design their websites. The study's findings suggest that agencies largely use language erasure and saliency methods to create positive and ambivalent narratives while concealing themselves to shift responsibility for ecological destructions. The web page makes it simpler for consumers to consume the medicine without considering the environmental effects by removing the context and location of the medicine. To shed light on environmental pollution and sustainability in Pakistan, future research should delve into sophisticated models of statistical analysis, ecolinguistic ideas such as conviction, metaphor, and (re)framing, advanced methods of analysis, and amplifying the voices of marginalized populations often overlooked in previous studies.

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1. Introduction

According to a 2019 UK Authenticity Gap Report study, 53% of UK citizens were highly concerned that businesses address the most pressing environmental issues on their websites by creating a separate section and mentioning social welfare contributions (Hillard, 2019). Based on the survey results, the paper concluded that businesses must create a public dialogue on corporate social responsibility (CSR) on their operational websites to maintain their social identity and reputational brand value. This discourse should cover both social and environmental issues. One of the easiest ways to communicate specific ideals and reach a wider audience is to create business websites on ecological discourses. The current study aims to investigate and assess how Pakistani pharmaceutical companies use different semiotic modes on their corporate websites to communicate their positions on environmental justice.

For this purpose, multimodality has been employed in the study's data analysis process. Secondly, the study seeks to scrutinize how pharmaceutical corporations utilize linguistic techniques concerning salience and erasure to generate environmental narratives.

From a linguistic standpoint, ecolinguistics extends beyond mere descriptive analyses of language structures. It concerns how language usage reflects, reinforces, or challenges societal perceptions of environmental issues. As an interdisciplinary field, ecolinguistics incorporates insights from various linguistic theories, such as the role of discourse in shaping ideologies (Fairclough, Jessop, & Sayer, 2002), semiotics in understanding communication modes, and the social construction of reality through language (Barthes, 1979). The foundational concept of ecolinguistics acknowledges that language does not exist in isolation but is deeply embedded within social, cultural, and environmental contexts (Johnson, 1999). This perspective echoes the sentiment that language and the ecosystem are interconnected and influence each other symbiotically. Ecolinguistics not only studies how language describes the environment but also explores the extent to which it shapes our understanding and treatment of it. When analyzed through an ecolinguistic lens, linguistic expressions, terminology, and metaphors regarding the environment offer insights into societal values, attitudes, and relationships with nature. Moreover, the field delves into the communicative practices employed in environmental discourses, examining how language is used to advocate for sustainability, environmental justice, or even to obfuscate ecological issues (Stibbe, 2015). Ecolinguistics, therefore, is not limited to language study but extends to a critical analysis of how linguistic choices within communication shape environmental attitudes and policies. According to The International Ecolinguistics Association (2018), Ecolinguistics explores the role of language in the life-sustaining interactions of humans, other species, and the physical environment. The first aim is to develop linguistic theories which see humans not only as part of society, but also as part of the larger ecosystems that life depends on. The second aim is to show how linguistics can be used to address key ecological issues, from climate change and biodiversity loss to environmental justice. Stibbe (2015) further elaborates on ecolinguistics, emphasizing the role of language in constructing ecological narratives and its impact on shaping environmental ideologies. This discipline explores how language use, including linguistic expressions, metaphors, and terminologies related to the environment, reflects societal values and attitudes toward nature. Stibbe (2015) underscores that ecolinguistics does not solely focus on the descriptive aspects of language but also delves into how language usage influences our treatment of ecological concerns and environmental policies.

1.2. Context of the Research

Human language has consistently manifested as a historically and ideologically identifiable discourse. Over recent decades, the exponential growth in the pharmaceutical industry has led to the detection of various classes of pharmaceutical compounds, such as analgesics, antidepressants, antihypertensives, contraceptives, antibiotics, steroids, and hormones, in water bodies and wildlife (Kapoor, 2015). It is often known that nature is being used as a resource for human security and economic expansion (Stibbe, 2015). Numerous medications, medical equipment, and nutritional supplements have made life longer and better in the post-industrial civilization. Notably, there has not been a comprehensive analysis from an ecolinguistic perspective concerning the language and semiotic modes on pharmaceutical companies' web pages in Pakistan. To address this gap, this study has employed the multimodal analytical approach suggested by Van Leeuwen (2008). The focus is on unveiling the multiple semiotic modes employed in designing these web pages, hence portraying an ecological narrative. The research aims to provide essential insights into constructing ecological narratives, exploring how pharmaceutical companies utilize erasure and salience in their discourses.

According to O'Halloran and Smith (2012), the transformation of global businesses into electronic commerce and their reliance on advertisements to project identities and ideologies, chiefly through visual imagery, underscores the significance of multimodal analysis. This analytical method allows a comprehensive consideration of various semiotic resources, including image-text relations, page layout, framing, vectors, and visual production resources, actively shaping language and discourse (O'Halloran & Smith, 2012). The development of discursive discourses and their influence on society may be better understood by critically analyzing the descriptive words and pictures on these web pages from the ideological perspective of erasure and salience. On the other hand, according to González Peña, López

Zavala, and Cabral Ruelas (2021), growing life expectancy and health consciousness have led to changing demand patterns in the modern post-industrial culture, which has raised the need for pharmaceutical goods in emerging nations. This shift has prompted healthcare agencies and pharmaceutical companies to shift to electronic media for popularity and advancement. Particularly in the context of the COVID-19 pandemic, pharmaceutical agencies have strategically used digital marketing and compelling language on their web pages to engage their audiences (Nasution & Mono, 2022). Consequently, a critical investigation from an ecological perspective is imperative to understand how these companies construct their ecological ideologies to reach a wider audience.

Some research has shown results regarding the unethical marketing practices of drug promotion by Pakistani pharmaceutical companies. Pharmaceutical corporations often utilize financial prizes, false advertisements, ghostwriting, off-label, and international and local trips under the guise of scientific activity to promote their medications in an unethical manner (Parmar & Jalees, 2004). Pharma corporations provide the public with information about problems associated with "modern" lifestyles, such as stress and unhealthy eating habits, primarily hoping that people would consult their doctors for prescription drugs (Fernandez-Cobo, Holland, & Pogo, 2006). According to a study done in Nepal, physicians only prescribe medications that their medical representatives aggressively push. According to Bishnu and Ravi (2005), the pharmaceutical business utilizes conferences and seminars to amuse doctors who demand unethical travel, housing, and other benefits. Pharmaceutical firms promoted anti-diarrhea therapies in Pakistan in 1990 for US\$7.5 million, with almost 90% of the funds going towards the promotion of anti-diarrhea pharmaceuticals (Lexchin, 1992). Businesses that use pictures of women to advertise tranquilizers and antidepressants are not taking any action to go against the approved product labeling. Nonetheless, they are probably going to add to the well-known issue of women being prescribed psychiatric medications inappropriately (RAHEEM & TARIQ, 2010). This study sets the stage by outlining the significance of semiotic modes in website layouts and their role in shaping ecological discourse. It introduces the juxtaposition of ethical communication practices and potential linguistic strategies employed by pharmaceutical companies in Pakistan. In the USA, Phatak et al. (1998) observed a significant presence and aggressive promotional techniques by pharmacies, highlighting substantial investments in marketing, especially through electronic media. In Pakistan, research on pharmaceutical agencies is mostly conducted from a marketing standpoint (Parmar & Jalees, 2004). To address environmental policies, the current study, however, focuses on the textual and visual narratives that pharmaceutical corporations have created for their public websites. The study intends to visually and analytically examine pharmaceutical companies' perspectives, ideologies, and arguments towards ecologically responsible discourses using a conceptual framework based on multimodality and ecolinguistics.

1.3. Statement of the Problem

Numerous studies and research projects have tackled a wide range of environmental problems, including pollution, global warming, overpopulation, depletion of natural resources, and dangers to global economic security. For example, Ramadan (2020) has emphasized the use of storytelling in promoting environmental awareness from an ecolinguistic viewpoint and expressed worry over the vanishing of the Nile in Egypt. Martin (2021) has discussed the discourse around climate change, which is based on the use of language that is socially created. He has also offered insights into how humans view their relationship with the environment and the possibility of perpetuating negative social realities. Numerous ecolinguists worldwide have brought attention to these difficulties, hence calling for worldwide attention to be given to the ecological challenges (Falco, 2018; Martin, 2021; Skogen, Helland, & Kaltenborn, 2018; Srivastava & Reddy, 2021; Yadav & Kaushik, 2012). Post-industrial cultures have recently seen an increase in ecocriticism of industrial waste material. Pharma companies in Pakistan work to improve sustainability, healthcare, and individual well-being. The examination of the ecological discourses produced by pharmaceutical firms in Pakistan and their implications for the environment and society have grown to be among the most significant issues facing our society. Six Pakistani pharmaceutical companies' official websites are thus chosen to examine the text-image relationship, different semiotic techniques applied to the web page design on ecological discourses, and the types of environmental narratives the companies have constructed through the use of salience and erasure in their corporate websites.

1.4. Research Objectives

The study aims to:

1. analyze different semiotic strategies used in the design of webpages that depict environmental discourses
2. scrutinize the language techniques pharmaceutical corporations employ in their discourses concerning salience and erasure

1.5. Research Questions

1. What kinds of semiotic modes are used in the designs of webpages that depict the environmental discourse?
2. How do pharmaceutical corporations in Pakistan employ language techniques concerning salience and erasure in their discourses?

1.6. Significance of the study

This study significantly enriches the ecolinguistic perspective when combined with multimodal analysis. It provides a meticulous approach to evaluating and comprehending Pakistan's ecolinguistic landscape, offering valuable insights for readers, members of the academic community, researchers, and scholars. Additionally, the study sheds light on how various semiotic modes, in conjunction with language elements, collectively convey diverse ecological discourses, offering a practical perspective on addressing emerging ecological challenges that impact the general public. It constitutes a substantial contribution to both undergraduate and graduate studies in the fields of environmental and English linguistics. The analysis presented in the study serves as a guide for language learners aspiring to conduct research in the burgeoning field of ecolinguistics. Given the limited research on ecolinguistics in Pakistan, which is a growing area of applied linguistics, this study assumes even greater significance. Moreover, it holds the potential to make a meaningful contribution to Pakistan's national endeavors aimed at addressing ecological issues and providing strategies to combat environmental degradation. This research is especially useful since it closes the knowledge gap about language features, including erasure and salience patterns, that are used by Pakistani pharmaceutical firms in their discourses to communicate environmental concerns on their websites. In conclusion, the study offers insightful findings and suggests ways in which Pakistan's biocultural diversity can be preserved through language instruction. It inspires a proactive approach toward fostering a sustainable coexistence with the environment, encouraging language learners and stakeholders to actively engage in the discourse surrounding ecological awareness and preservation.

2. Literature Review

The language ecology paradigm, originating from Sapir's work in 1912, signifies an early departure from mere linguistic descriptions, such as phonetics, grammar, and semantics. Sapir delved into how a language's physical environment mirrors geographical features like topography, climate shifts, global warming-induced security concerns, rainfall variations, biodiversity, and the economic underpinnings of human existence (Fill & Muhlhausler, 2006). Ecolinguists study how language is used to communicate environmental concerns, including loss of biodiversity, warming temperatures, and the myriad problems that face the environment and humanity as a whole. Okri (1996) insightfully conveyed that stories are the hidden source of morality; alter the narratives that people or countries adhere to, and you will alter both people and nations. Other scholars connect bundles of knowledge, beliefs, and behavioral patterns to narratives, encompassing emotions, situational contexts, factual and procedural knowledge, as well as structures of ideas or concepts that shape our comprehension of the world (Stibbe, 2015).

The study and description of language variations about the natural world, social phenomena, biodiversity, and the overall ecosystem that supports life are all encompassed within the metaphorical word "ecology." With climate change developing as a significant topic in ecolinguistics, it provides a thorough framework for analyzing and communicating environmental, socioeconomic, and biodiversity concerns within the linguistic domain (Haugen, 1972). The twenty-first century has seen increased scholarly attention to environmental concerns and challenges in popular media and literary discourse. According to Orr (1991), 'our sciences, social sciences, and humanities alike have been committed to extending and celebrating the human domination of nature for the past five hundred years.' Scholars engage

in critical examinations of diverse cases and themes, including international negotiations surrounding the ozone layer (Litfin, 1994), policies addressing acid rain (Hajer, 1995), and the rhetorical and linguistic dimensions inherent in environmental concepts (Dryzek, 2005; Myerson & Rydin, 2014). Numerous researchers investigate how corporations utilize communication strategies for 'greenwashing,' a term generally denoting deceptive advertising or partial disclosure of environmental information (Pratama, 2021). Studies also indicate that businesses and countries integrating environmental considerations into their everyday operations often experience enhanced success in terms of competitive advantages, economic growth, and innovation (Buttell & Ferreira, 2020; Mohammadi, Al-Fuqaha, Sorour, & Guizani, 2018; Singh et al., 2019; Škare & Golja, 2012).

Addressing environmental challenges and proposing potential solutions often sparks debate (Burningham, 1998; Feindt & Oels, 2005). According to Dryzek (2005), discourses harness various modes, values, assumptions, and judgments, utilizing language as a medium to discuss diverse events and issues. The examination of environmental discourses seeks to unveil the prevailing ideologies within pharmaceutical companies. Multimodal ecolinguistic analysis, drawing from ecological linguistics, semiotics, and social semiotics, forms the theoretical foundation. These frameworks underscore the interconnectedness of language, culture, and the environment, highlighting the pivotal role of multimodal communication in conveying ecological concepts. Scholars delve into notions such as eco-discourse, environmental rhetoric, and the semiotics of nature, aiming to comprehend how language and other modes shape beliefs and behaviors regarding the environment (Stibbe, 2015).

In a captivating study, Zuo (2019) undertook a profound analysis of Emily Dickinson's poem "The Grass" from an ecological standpoint, employing the framework of Systemic Functional Linguistics proposed by Halliday. The research illuminated how the poet's linguistic choices intricately aligned with the poem's meaning, offering profound insights into the realm of ecological linguistic studies. This work not only deepens our understanding of the intricate relationship between language and the environment but also serves as an inspiration for future explorations in the vibrant field of ecological linguistics. Steffensen and Fill (2014) embarked on an exploration into the genesis and evolution of ecological linguistics, envisioning it through four distinctive lenses: cognitive ecology, natural ecology, symbolic ecology, and sociocultural ecology. Their investigation delved deep into the interconnectedness of language and its ecological context. The paradigm of ecological linguistics was not merely theoretical; it was actively harnessed to scrutinize the responsible use of natural resources, empower marginalized communities, and cultivate harmonious coexistence among languages and cultures in diverse communities.

Using classic critical discourse analysis, Carvalho (2005) examined discursive strategies used in political speeches and British media to reframe public conceptions of climate change and the greenhouse effect. The major objective of the research was to identify power relations in speech and acquire an understanding of how the greenhouse effect is depicted as a public issue in different contexts. Similarly, Fernández-Vázquez and Sancho-Rodríguez (2020) carried out a visual analysis of the environmental websites of twenty large international corporations known to be the top producers of carbon dioxide worldwide. The research methodically classified and explained the photos on these websites using critical discourse analysis, ecolinguistics, and multimodal analysis. His research aimed to find the stories and beliefs propagated by these influential global entities.

In one of the studies conducted by Irfan, Shahzadi, Hussain, Naqvi, and Awan (2021), the ecological dimension or perspective of English language learning in Pakistan was explored. Using an analytical-qualitative approach, the research scrutinized publications spanning the last decade. The study generated a vocabulary list to investigate the usage of words in Pakistan within the realm of ecolinguistics. The analysis uncovered three key facets: the categorization of ecological words and their classes, the Pakistani linguistic viewpoint on ecological relationships, and the appropriateness of words aligned with ecology and its ecological applications. The findings indicated a discernible shift in attitudes toward English language learning in Pakistan, underscoring the importance of policies that advocate for integrating ecological perspectives into language education. Language acts as a bridge in our complex relationship with the world; it shapes our perception of it, affects how we engage with it, and

reflects the environmental realities that are all around us. This sums up the ecological dimension in ecolinguistics. The discourse explores our lexicon such as biodiversity and deforestation, our metaphors like forests as factories, and the stories we tell e.g. progress versus sustainability. Up to and including secret information such as the wisdom ingrained in indigenous languages and resource management techniques, each layer unveils social priorities, power relations, and other details. Language is more than just a tool; it's a rich tapestry that echoes the nuances of our relationship with the world, as the ecological dimension serves as a reminder (Müller, 2019).

Although the ecological aspect of ecolinguistics acknowledges the intricate relationship between language, environment, and society, the study of ecological degradation or destruction presents a more somber perspective. The lens of ecolinguistics exposes how language itself shapes our understanding of the environmental challenges we face. Consider the battleground of climate change: a mere "global warming" paints a picture of gradual discomfort, while a potent "climate crisis" screams for immediate action. These seemingly small semantic shifts reveal deep political divides and can profoundly influence public perception. Similarly, in the Amazon, indigenous communities speak of the "empty forest," unveiling a hidden truth beneath the seemingly untouched canopy. Their language captures the subtle, insidious loss of biodiversity caused by human interventions; a reality often missed by less nuanced terminology. Finally, by analyzing how nature is framed as "natural capital" or market "resources," ecolinguistics exposes the dangers of commodification. These linguistic choices can perpetuate unsustainable exploitation, obscuring the intrinsic value of the environment and paving the way for its reckless treatment. In these examples, we see how ecolinguistics goes beyond mere description, using language as a scalpel to dissect the power dynamics and hidden narratives that fuel environmental destruction (Verschuere, 2023).

In conclusion, there have been not many studies in the field of ecolinguistics and multimodality integration. The study seeks to categorize the many forms of semiotic resources utilized in web page design and how firms' ideologies have been carried out via ecological discourse, particularly through the strategies of erasure and salience. The multimodal ecolinguistic analysis provides a useful framework for comprehending the intricate interactions of language, culture, and the environment. Language and multimodal communication in environmental situations can help academics better understand how ecological meanings are formed, negotiated, and altered. This information has practical applications in environmental communication, education, and policymaking since it allows for a better understanding of how language forms environmental attitudes, impacts behavior, and promotes sustainability. The active voice and inspiring tone convey the significance of these studies in contributing to a deeper understanding of environmental issues and fostering positive change in language use and discourse. While prior research in Pakistan has explored ecolinguistics in textbooks, magazines, and newspapers, this study stands out in its unique approach. It delves into the websites of the six Pakistani pharmaceutical companies through an ecolinguistic lens, employing multimodality as a powerful analytical tool. This innovative perspective aims to shed light on the environmental narratives embedded in the online presence of these companies, contributing to a deeper understanding of their ecological stance and fostering a more sustainable discourse.

Therefore, this study fills a knowledge vacuum by providing a thorough analysis of the language patterns of erasure and salience that Pakistani pharmaceutical businesses employ in their discourses to portray their environmental obligations on their websites. To contribute to the larger conversation on corporate environmental responsibility, this research is essential for illuminating the environmental communication strategies used by Pakistani pharmaceutical businesses using multiple semiotic modes. It is expected that the results educate the public, policymakers, and stakeholders, promoting a better comprehension of the relationship between business communication, and ecological, and societal well-being.

3. Research Methodology

This study employed a qualitative research approach to analyze and grasp web pages fully. The research critically examined word choice, persuasive strategies, imagery, color, typography, and layout within a conceptual framework, adhering to Van Leeuwen (2008) multimodal analytical methodology. The study specifically applied an ecolinguistic lens and concentrated on erasure and salience—as suggested by Stibbe (2015)—to analyze the

underlying meanings and ideologies on online sites. The study utilized many strategies to gather qualitative data, including screen captures of websites and text data extraction from Pakistani pharmaceutical agency websites. A representative sample was selected to overcome the difficulty of evaluating every website, with a particular emphasis on the six pharmaceutical businesses that were ranked by DRAP in 2019, and The Pakistan Business Council and The Consortium for Development Policy Research (Khan, 2020).

3.1. Method of Data Collection

In Pakistan, there are more than six hundred pharmaceutical companies in operation, encompassing private, semi-government, and government industries. The Drug Regulatory Authority of Pakistan (DRAP) provides a comprehensive list of registered pharmaceutical companies on the internet. This list, consisting of six hundred and twenty pharmaceutical companies, is available online and spans thirty-three pages. The study has focused on the six websites that meet the requirements outlined. A total of six images, one from each website, have been analyzed by the conceptual framework.

3.1.1. Selection criteria of the firm

According to a 2020 Pakistan Business Council report, instead of emphasizing innovation, the bulk of Pakistan's pharmaceutical business is focused on medication formulation. Its pharmaceutical products (HS30) are mostly tablets, liquids & and syrups, injections, capsules, tinctures, and ointments. The industry is a formulation one. The pharmaceutical business has a distorted market structure as well: the top 25 companies have 62.6 percent of the market share, the top 50 hold 80% of the market share, and the top 100 hold 97% of the share. The remaining 3% of the market is being contested by more than 650 small and medium-sized businesses. The market is considered oversaturated by the industry. There are ramifications for the industry's quality and technological standards as well as the sustainability of businesses that must operate on very tight margins. Companies argue that rather than managing a forward-thinking company, their primary goal is survival: they make money every day by creating a wider range of less lucrative items. They have little to no time for expert business management and planning because of their continual juggling of several product categories. These six firms, including both multinational and local companies, possess 46% of the industry's market share, and they are the companies that have concentrated on long-term business planning and consolidated their product offerings. For instance, GSK alone is responsible for 7% of industry income. In light of the enormous differences in size and expertise that result from these differences, most large companies use their Research and Development to create original medications that are protected by copyrights. Additionally, big businesses frequently adhere to "Good Manufacturing Practices" (GMPs), which set preconditions and guarantee the quality of the pharmaceuticals produced. In contrast, numerous smaller local businesses concentrate their operations on producing generic medications that are marketed as branded generics (using molecular names). Not only do these locally made, non-patent generic medications compete on price in Pakistan, but also on brand and reputation. Smaller businesses process raw materials or semi-finished items in bigger companies' production facilities. After that, these medications are repackaged and offered for sale under their proprietary names. In a similar vein, smaller businesses frequently collaborate with bigger businesses to place bulk orders for the importation of Active Pharmaceutical Ingredients (APIs) and save shipping expenses.

3.2. Theoretical and Conceptual Framework

Three different frameworks—Van Leeuwen (2008) Multimodality theory, Van Leeuwen (2008) Social Actor and Social Action approach to language analysis, and Stibbe's (2015) ecological ideology of Erasure and Salience—are used in this study to examine ecological discourses and their effects on broader audiences. As a theoretical tool, the Multimodality analysis put out by Van Leeuwen (2008) highlights several semiotic modes, including the materiality of things, the visuality of pictures, and written text. Together, these forms help to create unique symbolic ecological discourses. The conceptual framework critically analyses multimodal text from an ecolinguistic perspective by using patterns of erasure and salience.

3.2.1. Erasure and Salience

As discussed by Stibbe (2015) in 'Ecolinguistics: Language, Ecology, and the Stories We Live By,' the conceptual functioning of erasure occurs at two basic levels: analysis from a

higher level and another from a lower one. The study scrutinizes how erasure and salience function in the language used, examining the omission or distortion of crucial ecological information. Erasure operates at different levels, including completely excluding information (void), distorting facts (mask), or partially concealing details (trace). It sparks intrigue, invites interpretation, and even challenges norms. In contrast, salience emphasizes the vivid image of nature and points out excluded themes. It makes certain elements prominent, guiding the viewer's gaze and establishing importance. Think of a headline screaming for attention. The interplay between these forces is where the magic happens. Juxtaposing erased and salient elements creates tension, ambiguity, and layers of meaning, like a portrait with obscured eyes but expressive eyebrows. These concepts find application in various Pakistani contexts, from traditional miniatures to contemporary art, enriching our understanding of visual storytelling and its power to provoke and engage. By applying these frameworks, the study delves into how pharmaceutical companies utilize language in their web content, specifically focusing on erasure and salience in their ecological discourse.

3.3. Method of Data Analysis

This study embraced an ecocritical lens, using multimodal discourse analysis alongside the tenets of ecolinguistics, to scrutinize how corporations construct "green" narratives on their websites. Van Leeuwen (2008) framework guided the analysis of visual elements (color, composition, typography, etc.) as inseparable from verbal content in conveying a unified message. By delving into salience and erasure within word-image texts, the research unraveled the types of ecological discourses the corporation projects. Employing multimodal discourse analysis, the study investigated how the interplay between words and images across web pages shapes particular ecological narratives.

3.4. Multimodal Analytical Tools

Through a multimodal analytical lens, this study examines the conceptual workings of ecolinguistic erasure and salience patterns in the creation of discursive environmental narratives. The following tools provide the framework for this analysis:

3.4.1. Participants

There are two categories of players in visual grammar: representational and interactive. The individuals who are represented are the main characters and the focal point of the visual story. They can be people, animals, objects, or even abstract concepts brought to life through imagery. Think of them as the characters in a story, depicted through drawings, photographs, or other visual mediums. Interactive participants, on the other hand, are the hidden players, the ones who engage with the represented participants or even directly with the viewer. They might not always be physically present in the image, but their presence is felt through implied interactions or connections.

3.4.2. Distance

Van Leeuwen (2008) elaborate on the concept of distance, which pertains to the level of intimacy between participants and viewers. According to the theory of visual grammar from 2008, in a multimodal text, the mode of distance also plays a crucial role in determining the degree of closeness to the spectator. The theory suggests that participants positioned closer to the camera are more likely to convey a sense of physical intimacy with the viewer. However, the perception of distance can vary depending on how the participants are arranged in an image, ranging from being great, neutral, or at the level of simulated friendship (Noriega, 2012).

3.4.3. Angle and Gaze

The concept of angle and gaze in images involves the distinction between participants who engage with viewers and those who don't. The angle, whether horizontal or vertical, influences the viewer's perception. An oblique horizontal angle creates a sense of alienation, while a top-down vertical view may imply superiority and a bottom-up angle may suggest inferiority, affecting the viewer's perspective (Van Leeuwen, 2008).

3.4.4. Modality and Composition

Composition, or the arrangement of several modes on a page, is a reflection of cultural awareness. The 'given' information comes before the 'new' information in Western writing, usually going from left to right. The study explores compositional differences in Pakistani

culture, which writes from an Eastern perspective. In linguistics, 'modality' concerns the credibility of statements about the world, seen through verb use, tense, and language that indicates truth value. Low modalities, like 'story' or 'belief,' differ from high modalities such as 'fact' or 'truth' (Oakley, 2014).

3.4.5. Text-Image Relation

According to Van Leeuwen (2008), the relationship between text and image can be characterized by two main relationships: elaboration, which is the process of repeating or restating information to improve clarity. Extension is the process of adding new information connected to the content in a particular way. Extension and elaboration are further divided into two categories: the latter deals with complement, contrast, and similarity, while the former includes specification and explanation. As a conceptual tool, erasure directs attention not only to those explicitly depicted but also to individuals purposefully excluded or marginalized in the text. In the realm of environmental discourse, Stibbe (2015) delved into language representations that result in the erasure of human actors, achieved through linguistic strategies such as the nominalization of verb phrases (e.g., pollution and destruction). Establishing salience often involves foregrounding participants in the clause, accomplished through linguistic or visual representation that underscores a specific aspect of life as significant or deserving of attention. Unlike abstract and elusive superordinate nouns like mammal, animal, or creature, terms like bear, orangutan, and whale evoke vivid and specific imagery.

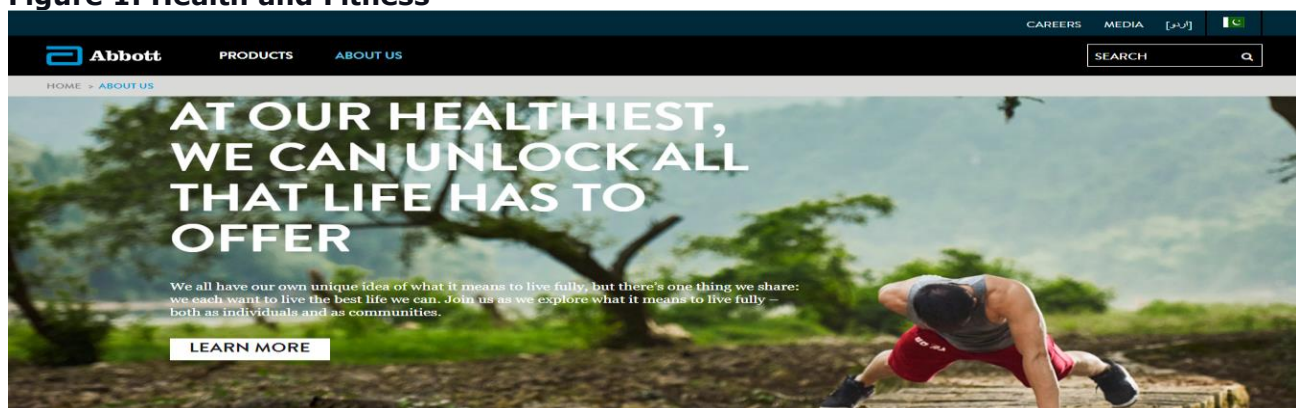
4. Analysis and Discussion

The selected images are analyzed in the light of the conceptual framework to find out the answers to the research questions.

4.1. Abbott

Visual grammar, as a tool for analyzing various semiotic resources and their embedded meanings in a multimodal text, delineates how participants and elements combine to create a more or less complex composition. In the examined image, the foreground features a man engaged in a physical task, serving as the dominant participant with kinetic movement portraying a narrative representation. The reader's attention is typically drawn to the symmetrical alignment against a largely unclear background, with the purposeful blurring of components such as trees, dirt, sky, and mountains to provide little realistic details in visual communication.

Figure 1: Health and Fitness



Note: A man is doing a workout, thus fueling his body and soul with the fresh air and sunshine. Taken from Abbott, n.d. Retrieved from <https://www.pk.abbott/>.

The analogous replication of reality in drawings, paintings, photos, and graphics is highlighted by Barthes (1979) and others, who also stress the significance of these representations in adding extra meaning to a text. An oblique line is established between the focused participant and the natural surroundings, establishing a clear distinction even when background components are also participants. The word 'presentational' is first used by Van Leeuwen (1990) to characterize the narrative process patterns. The man's exercise routine is depicted at the narrative level in the analyzed image, where vectors create transitivity patterns. The idea of exercise and fitness in our daily lives has been explained.

Abbott has established a norm of promoting and facilitating a healthy life for individuals or the community at large, yet this emphasis has resulted in the omission of nature and animals from the environmental discourse. The company exclusively focuses on enhancing human well-being and exploring viable ways for human fulfillment, neglecting any mention of the safeguarding of natural resources, the environment, plants, trees, or animals. There is a notable absence of acknowledgment regarding the significant harm caused by human activities that have led to severe environmental changes. Schleppegrell and Colombi (1997) specifically examined linguistic features, highlighting environmental issues stemming from human-induced alterations like pollution, habitat degradation, and the introduction of exotic species. She emphasized that these issues are often linguistically expressed as normalizations, which suppress the negative agency behind them. Notably, no specific grammatical forms are utilized, and no identified actor is attributed to causing major environmental problems. However, the visual representation in the image vividly reflects a profound reality. Saliency patterns serve to draw viewers' attention to the image's natural aspects while serving as a reminder of how nature and animals have been erased from the surrounding text. The way the mountains, dirt, sky, and trees are arranged graphically in the background draws attention to the environmental problems brought on by the waste material produced by the corporation. The background participants serve to redirect focus to the ecological concerns overlooked in the textual discourse. The image's vivid and concrete depiction effectively builds salience in the viewer's mind, emphasizing the importance of directing attention to this crucial aspect of life that concerns everyone.

The positioning of participants in an image depends on their proximity or distance from the camera. In Figure 1, the person standing in the foreground is a prominently featured participant, with proximity to the camera compared to the less distinctive participants in the background. This arrangement signifies the company's primary goal of emphasizing the individual in focus. In this context, the vectors create a realist image, enhancing the semiotic meanings of the subject and effectively conveying the company's message of promoting human health and fitness through their products. On the other hand, interactive players develop the interaction between the producer and the reader. These individuals are essential to the creation, interpretation, and showcasing of the photos. Abbott ((n.d.)) interacts with the public as a participatory participant. The business supports a positive ecological narrative by highlighting the interdependencies between humans, other living things, and the natural world as a social institution or actor. Their normative orientation is focused on protecting the systems that are essential to human existence and well-being as well as the survival of other living forms.

Visual articulation, interaction angle, spatial placements given to different social actors in interaction, and producers' nonverbal communication all contribute to the presentation and understanding of social meanings in pictures. Literary theory has looked at this aspect of representation in great detail as a way to facilitate communication transitions (Genette, 1972). Interestingly, the individual is doing cardiovascular workouts rather than looking directly at the audience. The producers' choice of interaction angle conveys a feeling of appreciation in Figure 1. Even yet, the participant's gaze does ask the audience to do something, even when they are not establishing direct eye contact. The participant's body language communicates attributes associated with well-being, such as strength, robust health, chivalry, and accomplishment. The creators hope to convey to their unnamed audience through these volunteers that affluence does equate to good health. According to Belting (1990), there is a devotional function to the implied reciprocity between the observer and the person shown in the picture. The participants deliberately avoided direct eye contact with the trees, birds, mountains, and surrounding flora, or blocked them out. One may see that the picture appears to be erasing the natural environment. Only a portion of the ecosystem—which essentially organizes society—is depicted; the man working out is given more attention. In visual communication, the portrayed participant's angle is on a vertical axis, arranged from top to bottom and closer to the camera, suggesting dominance. In the meantime, nature is a less prominent component of the composition since it is positioned on a horizontal axis in the backdrop.

In line with social semiotic theory, the concept of absolute truth or untruth is deemed unattainable solely through representations. Truth is a construct formed by semiosis, including the values and belief systems common to a particular culture or social group, according to the social semiotic approach. After analyzing the given number, the corporation states, "AT OUR

HEALTHIEST, WE CAN UNLOCK ALL THAT LIFE HAS TO OFFER." However, according to Van Leeuwen (2008), the usage of terms like "we," "our," and "us" denotes values related to the topic, which leads to poor modality. The audience members or readers make judgments based on the relevant information that is provided to them as members of the community. In contrast to providing objective facts, the company's language choices, including "AT OUR," "WE CAN," and "TO OFFER," emphasize reliability and assurance. In the context of reaching the healthiest existence, the words "AT OUR HEALTHIEST, WE CAN UNLOCK" and "LIFE HAS TO OFFER" provide a somewhat distorted image of reality, substituting the collective "WE" and "US" for the environment on which life depends. This example shows how modality is more interpersonal than ideational, delivering shared truths that draw listeners or readers in while keeping them apart from other claims. As demonstrated by the given sentence, it functions to establish an imagined collective "we," stating what "we" as a group decides to hold to be true and what "we" choose to disassociate ourselves from. However, the brilliant resolution, which is in line with naturalism, makes the modality high in terms of composition and color saturation. But the background is blurry, so nature is only faintly represented. In the meanwhile, the person is the active participant, represented with the explicit color resolution in the forefront.

4.2. Bayer

Figure 2: Cultivation

This Is Bayer / Agriculture / Consumer Health / Pharmaceuticals / Products / Community Impact / Stories / Media

On a farm, the challenges can mount quickly.

Weeds, crop disease, and pests are just the beginning. Today, climate change, declining natural resources, and supply chain issues are making the job even more complex.

And farmers are serving a world that needs them more than ever — a world where 800 million people still face hunger every day. At this pivotal moment we need breakthrough technologies for a smarter approach. We need entirely new systems that optimize our inputs and outcomes.

Note: The trucks are plowing the land and making it ready for planting crops. Adapted from Bayer, n.d. Retrieved from <https://www.bayer.com/en/pk/pakistan-home>.

Following Van Leeuwen (2008) elucidation, every semiotic act entails two distinct participant categories: interactive participants and represented participants. Assessing the participant criteria within the provided image, the interactive participant is the company itself, while the represented participants are the two objects depicted in the image. The interactive participants function as the creators of this visual representation, constructing their ecological discourse through both written text and graphical elements. On the other hand, the represented participants adopt a narrative form, as the two trucks are portrayed in motion, and engaged in the process of cultivating the soil. Additionally, the image serves as a representation of technology in action. Van Leeuwen (2008) previously explored the graphic representation of various items, including guns, weapons, axes, baskets, and knives in one of their studies. In this context, they highlighted the significance of technology, illustrating how it can convey power differentials. Drawing parallels, the current image features technology in use, with the trucks symbolizing modern agricultural practices. Analogously, Kress and Leeuwen's examination of British-Aborigine relations, where the British have deemed the actors and the Aborigines the goals, can be applied here. The farmers, as actors, utilize advanced technology represented by the trucks to cultivate the land, establishing a transactional relationship.

To articulate this visually depicted narrative linguistically, one can formulate expressions such as 'The farmers are actively cultivating the land' or 'The farmers employ trucks for land cultivation.' Consequently, the image seamlessly transitions from a visual representation to a linguistic form, creating transactional relations in a parallel manner. The image is divided into two distinct sections: one housing the written text, and the other presenting the pictorial representation. Notably, the frame for the visual depiction is relatively small, taking on a circular dimension and captured from a diagonal angle. Drawing from Van Leeuwen (2008)

insights, the size and shape of objects play a crucial role in conveying certain relationships, much like the social distance among humans. The authors propose the existence of three significant distances, each corresponding to our everyday experiences with objects and the environment. Essentially, the size of the frame in the given image can offer insights into the social relations between the viewer and the depicted objects, buildings, and landscapes. In the aforementioned figure 2, the spatial relationship between the objects and the environment is characterized by a considerable distance. Despite the presence of two objects, an imperceptible barrier appears to exist between the viewer and the depicted scene. The composition of the image is portrait-oriented within the landscape, featuring trucks prominently in the foreground. This positioning enhances the perception of distance between the viewer and the objects, contributing to the overall visual narrative.

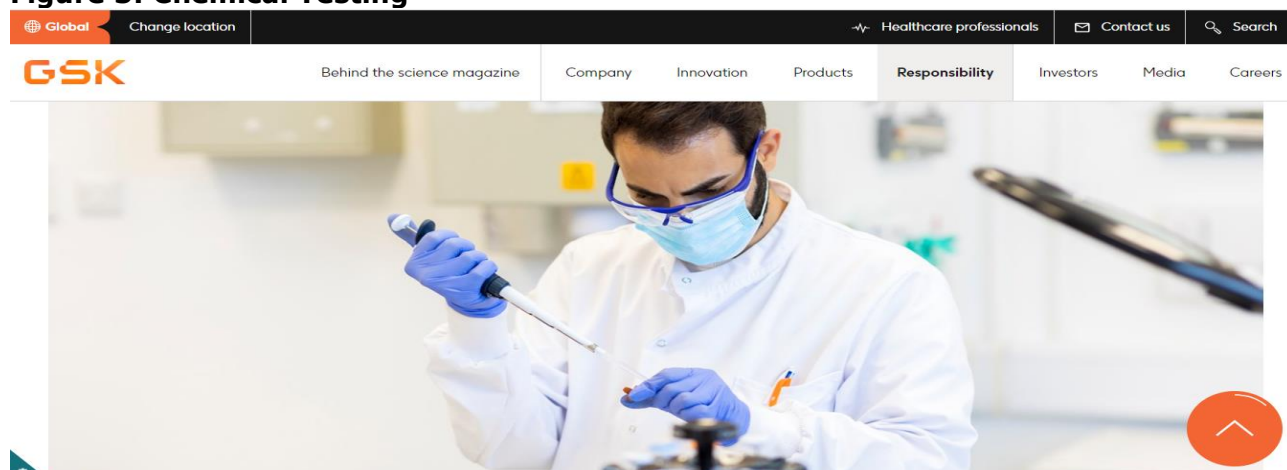
The image is titled 'On a farm, the challenges can mount quickly,' serving as an invitation from the interactive participants to viewers, urging them to address crop diseases. In accordance with Macy and Johnstone (2012) perspective, contemporary life narratives often intertwine with business and economic growth. In the context of the image, Bayer has brought attention to the pressing issue of climate change, asserting that it, along with the depletion of natural resources and supply chain challenges, poses significant global challenges. The narrative emphasizes farmers contending with various pests, crop diseases, and unproductive land. Bayer contends that smart technology is the key to enhancing living standards, advocating for a new system in the twenty-first century to optimize productivity effectively. As noted by Stibbe (2015), terms such as technologies, resources, stock, services, and agri-business all fall within economic frames. However, Bayer employs the trace technique to convey a powerful discourse, highlighting major human challenges with terms like '800 million people,' 'hunger,' 'farmer,' and 'world.' In contrast, the text minimally acknowledges the impact on plants, animals, natural resources, and other species, leaving a faint trace rather than providing a vivid image. The agency strategically shapes the discourse to underscore human-centric issues within the broader context of economic and technological solutions.

The image is captured from a slightly elevated, oblique angle, a perspective that, according to linguists, conveys a sense of superiority and elevation when combined with a frontal orientation of representative participants on the horizontal plane. Conversely, a high-oblique angle tends to reduce the element of engagement or attachment. The nuances of modality and composition are contingent upon how a specific social group defines reality. In the realm of visual representation, the naturalism of objects, color presentation, angle, rendering tonality, and differentiations all contribute to elucidating modality or reality. In linguistic terms, reality transcends the mere visual appearance of things. Ferdinand de Saussure conceptualized reality through signs, symbols, semiotic resources, abstraction, signified, and signifiers. Ecolinguists, on the other hand, frame and reframe reality as a narrative that shapes our lived experiences. Stories have been described as collections of information, convictions, and behavioral patterns by a variety of ecolinguists (Fillmore & Baker, 2009). Wehling and Lakoff (2012) assert that tales function as the conceptual frameworks that help us make sense of the world. Raymond et al. (2013) draws attention to a number of problems with economic interpretations of nature, highlighting how these interpretations have the power to maintain the status quo, minimize the intrinsic worth of species, and ignore important moral and ethical obligations that people have to nature. Similar to this, Stibbe (2015) explores the idea that nature is a resource or commodity, igniting this notion with terms like capital, stocks, resources, commodities, and assets. The exhibited image presents a naturalistic reality, with a high modality rate due to the participants' representation, arrangement, and color saturation.

The image showcases trucks cultivating land for crop production, conveying an ecological discourse that emphasizes the role of agriculture and food production in sustaining life. The image is divided into two sections, one containing written ecological text complementing and explaining the pictorial representation of trucks and land cultivation. The background color chosen is blue, a hue found in both the sky and the sea. Colors hold psychological significance, and blue, in particular, signifies duty and serenity. It evokes inner peace, and a quest for truth, and encourages sincerity and imaginative thinking. Blue is associated with creativity, compassion, and self-esteem, fostering ambition, determination, and broad perspectives. Notably, various well-known brands, such as Internet Explorer, Skype, Intel, Blu-ray, WordPress, Twitter, Facebook, and Tumblr, utilize blue in their advertising strategies (Dixon, 2017).

4.3. Glaxosimthkline

Figure 3: Chemical Testing



Note: A doctor in a white coat, wearing gloves and a mask mixes chemicals in a glass tube. From GlaxoSmithKline, 2001. Retrieved from <https://pk.gsk.com/en-pk/home/>.

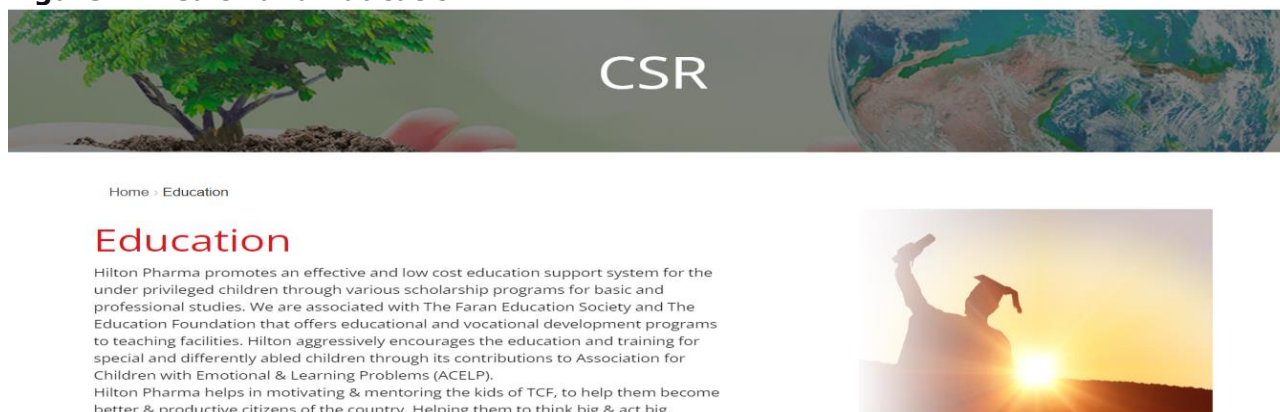
The words "Material and Waste" in the Responsibility section do not specifically address the ecological footprint or the effect on the environment that results from the production or disposal of materials and waste. This absence might make waste management and environmental sustainability seem less urgent. The resource requirements for producing materials are not covered in detail, nor are any possible depletion issues brought up in the course of the text. This omission hides the relationship between the use of resources and their effects on the environment. The picture of a chemist working in biochemistry shows a sophisticated and scientific response to environmental problems. The aforementioned graphic aid suggests that experts from many domains may contribute to the discovery of environmentally sustainable solutions. The image's laboratory environment emphasizes how important innovation and research are to solving material waste and looking into eco-friendly substitutes. Highlighting how important science and technology are to environmental stewardship is the main goal, and the social actor's prominent position highlights their contribution. The focus on the scientist doing a chemical experiment positions them as the key agents interacting with the lab environment. This reflects an anthropocentric perspective, where humans are seen as the primary actors in shaping and understanding the ecological system. The scientist's pure white attire creates a stark contrast with the background, highlighting their presence and emphasizing their role as a controlled and separate entity within the lab's controlled environment. This reinforces the separation between humans and the natural world, potentially representing a clinical and detached approach to scientific inquiry. The act of experimentation implies intervention and manipulation of natural elements. This raises questions about the relationship between humans and the non-human, and the potential consequences of scientific interventions on ecological systems. The all-white background creates a sterile and artificial environment, further distancing the lab from the natural world. This visual choice emphasizes the constructed nature of the scientific setting and potentially suggests a desire for control over the elements being studied.

The strong lighting adds to the clinical and sterile atmosphere, highlighting the scientist's actions and potentially symbolizing the search for clarity and knowledge through scientific investigation. However, it could also represent a lack of shadows and hidden aspects, suggesting a potentially narrow or limited perspective on the ecological system. The focus on a single human figure and their isolated action suggests a clear narrative and control over the visual elements. This reinforces the anthropocentric perspective and potentially downplays the complexity and interconnectedness of the ecological system. The careful arrangement of elements within the frame contributes to the controlled and ordered atmosphere. This again emphasizes the human role in shaping and interpreting the scientific environment; however, the absence of non-human elements in the image raises questions about how the scientist's actions might impact the wider ecological system. The picture's representative subject, noteworthy for being completely absent from both the text and the image, acts as a reminder of laboratory testing. It is important to understand that a variety of companies and research organizations frequently use animals in their lab tests and studies for objectives including

toxicity evaluation, medicine development, and scientific investigation. Animals suffer intrusive operations, confinement, and possible damage in the name of scientific advancement or product safety. In this framework, animals are seen as commodities that serve human-centric innovations and consumer goods.

Furthermore, within the dynamic environment of pharmaceutical laboratories, the amalgamation of chemicals holds immense potential for diverse outcomes. This potential arises primarily from the reactive or hazardous nature inherent in certain compounds. Combining chemicals can set off complex reactions that result in the generation of heat, the emission of dangerous gases, or the formation of unwanted byproducts. These reactions may pose significant risks, ranging from the possibility of flames and explosions to the generation of caustic or poisonous materials. Yet, amidst these challenges, there exists an inspiring narrative of innovation and safety precautions. The very process of chemical mixing, while potentially hazardous, underscores the need for meticulous attention and adherence to safety protocols. It is a reminder of the responsibility borne by laboratory professionals to navigate through complexities and harness the power of chemical reactions for positive outcomes. Moreover, the act of chemical mixing prompts the release of volatile molecules into the air, adding a layer of complexity. This air-borne release necessitates a careful approach, highlighting the importance of safeguarding lab workers from potential exposure through inhalation. The specific properties and relative toxicity of the compounds involved determine whether this exposure irritates the respiratory tract, lung injury, or systemic effects.

4.4. Hilton Pharma Figure 4: Health and Education



Note: A fresh graduate boy is celebrating his convocation day. Taken by Hilton Pharma, n.d. Retrieved from <https://hiltonpharma.com/>.

The use of accessible language in the message resonates with a broad audience, establishing trust by positioning the pharmaceutical company as a dedicated advocate for education. The focus on "effective and low-cost education," "scholarship programs," and "educational and vocational development programs" demonstrates the company's commitment to excellence. The picture of a youthful graduate clutching their degree with pride serves as a powerful representation of academic success and achievement. This visual reinforcement aligns with the narrative that education catalyzes personal growth and societal advancement, subtly suggesting the company's endorsement of individual educational journeys. The warm tones of the sunset background evoke feelings of hope and optimism, symbolizing the transition from education to a more promising future. It also adds a vibrant backdrop to the graduate's celebration, potentially symbolizing both optimism for the future and the ephemeral nature of time. However, it also serves as a reminder of the broader natural world beyond individual achievement. The use of bright colors in the foreground further accentuates the celebratory mood and highlights the graduate's success. This contributes to an optimistic and anthropocentric perspective on education's role in personal advancement. The central placement of the graduate and the careful arrangement of other elements in the foreground suggest a structured and controlled narrative. This reinforces the focus on individual achievement and aligns with a traditional view of education as a linear path to success. This introduces an emotional dimension to the message, accentuating the idea that education opens doors to new opportunities. The company's support for education is not just a commitment on paper but a belief in the transformative power of learning, adding depth to the conveyed message of empowerment and potential.

One the other hand, the symbolic image of a hand holding a tree within a globe presents a more ecocentric perspective. It emphasizes the interconnectedness between humans and nature, highlighting the responsibility we have for the planet. The use of dull colors in the top image contrasts with the vibrancy of the foreground, potentially suggesting a more subdued and contemplative approach to the relationship between humans and the environment. The lower modality of the top image compared to the foreground might imply a less direct or immediate connection between the symbolic representation and the individual's achievement. This invites viewers to think more broadly about the wider implications of education in the context of environmental sustainability. Nevertheless, the webpage portrays a somewhat idealized connection between the pharmaceutical company and education. While it emphasizes the positive aspects of the company's engagement, it overlooks crucial issues, particularly the hidden costs. The webpage neglects to acknowledge the environmental and social repercussions linked to pharmaceutical production and consumption, including water pollution, deforestation, and worker exploitation. This omission creates an incomplete representation of the impact of the company's activities on education, as these costs can indirectly impede access to quality education, particularly in underserved communities.

Furthermore, the webpage is silent on the pharmaceutical company's role in the global education crisis. For instance, some of the company's products may be financially out of reach for children in developing countries, potentially acting as a barrier to their educational access. Additionally, the company might have been involved in practices contributing to the proliferation of illiteracy or other educational challenges. The webpage, by not addressing these aspects, leaves a gap in understanding the broader implications of the company's influence on education, making it imperative to consider the potential hindrances it poses to educational equity on a global scale. By acknowledging these issues and outlining the company's efforts to address them, the web page could present a more balanced and transparent picture of its involvement in education. This would build trust with its audience and demonstrate a genuine commitment to supporting positive change through education. Overall, the web page successfully captures the inspiring and optimistic potential of education. However, addressing the missing information and potential contradictions would strengthen its message and create a more nuanced and credible representation of the company's role in education.

4.5. National Institute of Health

Figure 5: Covid-19



Note: An image of tiny and deadly corona virus. National Institute of Health, 1965. Retrieved from <https://www.nih.org.pk/>.

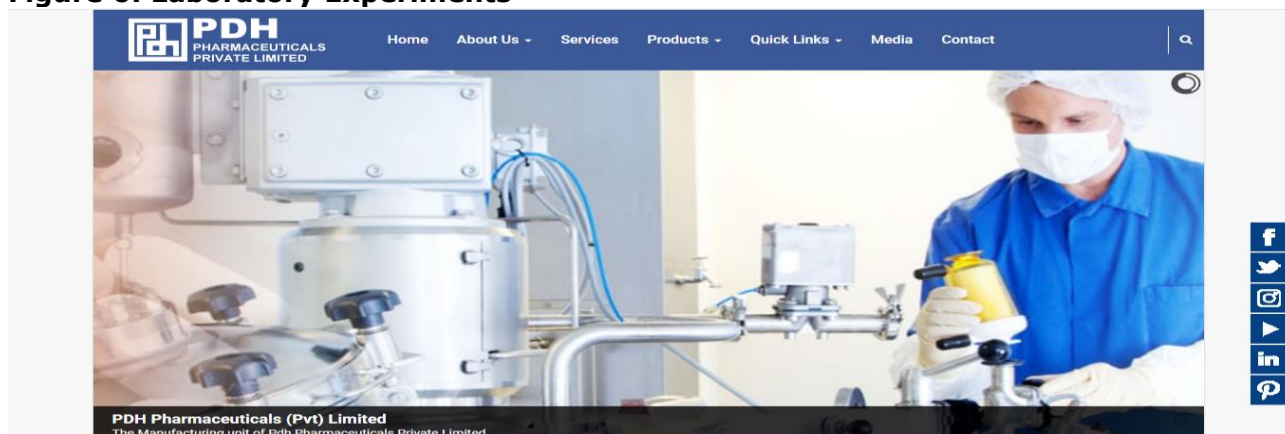
The material provided by the pharmaceutical business explores the history and spread of COVID-19, highlighting its effects on humans and animals, such as cats, bats, and camels. Although specifics are not stated clearly, it probably discusses the virus's zoonotic origin and how animals may spread it to people. The above graphic, which shows a virus, is a visual depiction of the COVID-19 pandemic. The virus is a small, contagious organism that may infect humans and animals. The central focus on a close-up image of a coronavirus, likely in blue, creates a sense of immediacy and threat. The color blue can evoke feelings of coldness, sterility, and isolation, further amplifying the image's potential to represent danger and disease. This graphic component highlights the necessity of creating a vaccine and supports the text's statement about the threat presented by COVID-19. The significance of animals like cats, bats, and camels in the spread and consequences of the virus appears to be acknowledged.

However, it is crucial to recognize potential oversights in the ecological narrative. The high modality and brightness of the image draw attention to the virus, magnifying its presence and potentially contributing to a sense of fear or anxiety. It emphasizes the virus as the central element of the message, potentially overshadowing other aspects of the ecological picture. The close-up lens further contributes to the sense of threat by bringing the viewer face-to-face with the virus. This perspective emphasizes the virus's potential impact on human health, placing humans at the center of the narrative. The text's exclusive focus on humans reinforces the anthropocentric perspective presented by the image. This potentially overshadows the broader ecological context of the pandemic, such as the impact on other species or the role of environmental factors in virus transmission and spread. The focus on zoonotic diseases and the role of specific animals may inadvertently overlook broader ecological dimensions. These dimensions include the overall ecological factors contributing to zoonotic diseases, the impact of human activities on wildlife habitats, and the significance of biodiversity conservation. It's important to note that the text and image while addressing the human-animal aspect of the pandemic, may not adequately capture the comprehensive environmental impact of COVID-19.

None of the pandemic's environmental effects are discussed in the text, including the pollution that is produced when personal protective equipment (PPE) is manufactured or when medical waste is disposed of properly. The pandemic's environmental effects, like as deforestation brought on by the harvesting of lumber for PPE manufacturing or water contamination from medical waste, are not well represented by the prevalent image. Different forms of communication, such as word and visual, highlight how important it is to produce a COVID-19 vaccine. The picture of the virus emphasizes the important message that a vaccine is necessary to stop the pandemic, while the wording highlights the company's commitment to finding a safe and effective vaccination. Beyond the effects on the environment, moral issues are involved. For example, the fabrication of PPE frequently uses dangerous chemicals, which can be harmful to the environment and public health. Medical waste that is not properly disposed of might endanger wildlife and further taint water sources. Given the possible negative effects these actions may have on the environment and public health, it is crucial to take these ethical factors into account when choosing how to dispose of medical waste and how to utilise personal protective equipment.

4.6. P.D.H Laboratories

Figure 6: Laboratory Experiments



Note: A scientist in a blue coat works with big machines inside a lab. The image is taken from P.D.H Laboratories. Retrieved from <https://pdhlabs.com/>.

The semiotic elements incorporated into the webpage design, including the company logo, the image of the lab assistant, and depictions of machinery, collectively contribute to an ecolinguistic omission regarding the environmental consequences of the pharmaceutical industry. The logo, characterized by white against a bluish-white backdrop, projects a visually appealing image that conveys notions of cleanliness and purity. However, it remains silent on any aspects related to the environmental footprint of the pharmaceutical sector. In a similar vein, the portrayal of the lab assistant, adorned in a blue lab coat and a white mask, reinforces the themes of cleanliness and purity, evoking an environment of sterility. The central focus on the man in a blue lab coat and head cap working amidst machinery suggests a high level of activity and engagement with scientific investigation. This reinforces the anthropocentric perspective of science as a human-driven enterprise aimed at understanding and potentially

manipulating the natural world. Yet, this representation, while emphasizing the meticulousness of the laboratory setting, fails to address the associated chemical waste and pharmaceutical pollution generated by the expansive machinery. The centrality of the scientist, the clear organization of the lab equipment, and the well-lit environment contribute to a sense of control and order. This visual narrative aligns with the traditional view of science as a process of uncovering objective truths about the natural world. The blue background could evoke different interpretations depending on its shade and tone. A light blue might symbolize sterility and cleanliness, further emphasizing the controlled nature of the lab environment. A deeper blue could represent the vastness and complexity of the natural world surrounding the scientific inquiry. This visual narrative subtly hints at the potentially detrimental impacts of these industries on the environment and natural habitats.

The images of the imposing machines suggest power and sophistication within the pharmaceutical industry, but they conspicuously omit any depiction of environmental impacts such as pollution or waste. The lab assistant, adorned in the symbolic blue lab coat, a white mask, and tied-up hair, becomes the archetypal representation of a pharmaceutical industry worker, associated with professionalism and scientific expertise. However, this portrayal exclusively focuses on the human element and does not convey direct information about the industry's environmental impact, including aspects like energy consumption, waste generation, and potential pollution. In essence, the overarching environmental narrative crafted by these semiotic elements reflects a form of ecolinguistic omission. The webpage neglects to acknowledge or mention the environmental repercussions of the pharmaceutical industry, presenting it instead as pristine, pure, and formidable. This form of ecolinguistic omission may have adverse effects, potentially leading individuals to believe that the pharmaceutical industry is environmentally benign and hindering efforts to hold the industry accountable for its ecological impacts.

5. Discussion

Considering the aforementioned data and available literature, it is evident that agencies have predominantly employed linguistic tactics involving both erasure and salience. This strategic use of language allows them to craft narratives that are advantageous and, at times, ambiguous, ultimately shielding themselves from accountability for ecological degradation. The discourses crafted by these companies predominantly depict animals, plants, forests, and water as commodities, positioning them primarily in the service of human needs. Previous studies in the field of ecolinguistics and multimodality have primarily focused on analyzing ecological discourses in print media, television commercials, or environmental campaigns. While these studies have provided valuable insights, they often neglect the visual and multimodal aspects of meaning-making. This research fills this gap by focusing on the specific context of corporate websites, where visual elements play a significant role in conveying information and shaping perceptions. Additionally, previous research has not specifically investigated how pharmaceutical companies utilize ecolinguistic strategies. This study aims to bridge the existing gap by offering a specific analysis of how these corporations manipulate ecological discourses to align with their interests. Notably, Figures 3 and 6 illustrate a notable disconnect between the pharmaceutical industry and crucial environmental concerns such as waste management and chemical pollution. Integrating insights into the cultural context surrounding Pakistani pharmaceutical companies can significantly enrich our understanding of their environmental narratives and communication strategies. Pakistani society often emphasizes collective welfare and community over individual gain. This translates into environmental narratives that highlight the broader societal benefits of sustainable practices, such as improved public health or protecting shared resources. Companies have framed their environmental efforts as contributions to the community and national pride. Water scarcity and pollution are significant challenges in Pakistan. Companies have addressed these concerns by showcasing their water conservation efforts and responsible waste management practices. This demonstrates their commitment to addressing local environmental issues while also aligning with national concerns. Moreover, the family unit plays a crucial role in Pakistani life. Companies have tailored their narratives to resonate with families, emphasizing how their environmental practices ensure a healthy future for generations to come. This has involved using family-oriented imagery or testimonials, emphasizing the impact on children's health and education. According to Stibbe (2015), it is feasible to identify salient patterns that vividly and concretely depict a particular aspect of life by examining a variety of language properties, such as focus,

liveliness, degrees of abstraction, transitivity, and metaphor. If these patterns are common, they may increase the prominence of a particular region in the thoughts of a small group of individuals or, more broadly, in the minds of many people within a culture. Saliency patterns play a crucial role in shaping public perception and can contribute to both the erasure and greenwashing of environmental information, depending on how they are employed.

In the following study, it has been scrutinized that environmental issues, often complex and long-term, easily got overshadowed by more immediate or emotionally charged topics such as providing better health to the people. Secondly, powerful economic and political interests have deliberately amplified the saliency of issues that undermine environmental concerns. For example, promoting short-term economic gains or downplaying the severity of climate change have pushed environmental issues out of the spotlight. Likewise, companies have deliberately drawn attention away from negative environmental impacts by promoting unrelated positive aspects of their operations. This misdirected saliency has distracted from the actual environmental issues and deflects criticism. Lastly, corporations have manipulated saliency patterns to make their environmental initiatives appear more prominent than they actually are. This involves highlighting minor actions and using greenwashing buzzwords. For example, although their products are harmful to the environment, firms have utilized green, blue, and white logos, spoken about sustainability and improved health, and shown images of trees, plants, and cultivated soil. They have neglected the larger issues they create, like throwing chemicals into rivers, in favor of concentrating on a small improvement they achieved, like using less plastic or eco-friendly packaging. Ecolinguistic strategies equip pharmaceutical companies with the tools to craft authentic and persuasive narratives around their environmental initiatives. Picture compelling stories that resonate with different cultural groups, using imagery and language that speaks directly to their concerns and aspirations. This targeted outreach ensures that information about sustainability efforts reaches the intended audience, not just lost in a sea of generic corporate messaging. Building trust, however, requires transparency and accountability. Companies must open their doors, sharing data and progress updates in culturally appropriate ways. This fosters a sense of partnership, where communities are not just informed but actively involved in the journey towards a greener future. Hence, corporations have manipulated information through linguistic strategies like omission, trace, and masking to present a distorted picture of their environmental policies. They purposefully exclude important changes or problems brought about by human activity, ignoring the effects on other species, such as birds, plants, animals, and trees. The text highlights the company's endeavors, but they don't specifically address the wider ecological effects of pharmaceutical manufacture, such as resource consumption, waste disposal, and possible effects on biodiversity and ecosystems. Disparities between the textual content and visual representations are revealed using a saliency pattern analysis, which raises the possibility of concealment or greenwashing.

6. Conclusion

In conclusion, the study sheds light on how pharmaceutical companies employ various semiotic modes to construct environmental narratives. The narratives on Pakistani pharmaceutical companies' web pages present a complex blend of ambivalence and purported benefits, revolving around themes of healthy lifestyles, environmental depletion, deforestation, reliance on natural resources, and contributions to developing nations. However, these ecological discourses, while emphasizing health and societal advancements, inadvertently deter individuals from contemplating the environmental consequences of their choices. The web pages strategically employ ecolinguistic erasure, removing the contextual backdrop of medicine consumption and thus fostering a disconnect between individuals and the environmental impact of pharmaceutical practices. This risks fostering increased medicine consumption without due consideration for environmental repercussions, leading to heightened environmental degradation. This study delves into the intricate world of ecological narratives by employing multimodal analytical tools and Stibbe (2015) ideologies of erasure and saliency, focusing on the web pages of top pharmaceutical companies in Pakistan. The exploration has revealed compelling insights into the semiotic strategies adopted by these industries, aligning with (Van Leeuwen, 2008) theoretical framework for analyzing multimodal communication.

One of the pivotal findings of this research underscores the pervasive use of multiple semiotic modes in the design and communication strategies of pharmaceutical companies' web pages. This observation not only reinforces Kress and Leeuwen's theoretical propositions but

also adds a nuanced layer to our understanding of how industries, particularly in the Pakistani context, leverage diverse modes for conveying ecological narratives. Moreover, the identification and analysis of erasure as a rhetorical tool in constructing both beneficial and ambivalent discourses provide a deeper comprehension of the intricate interplay between language and visual elements in shaping corporate environmental communication. The study contributes significantly to the existing literature, particularly from an ecolinguistics perspective, by offering a comprehensive examination of the multimodal nature of ecological narratives in a specific cultural context. It is recommended to adopt a more comprehensive ecolinguistic approach—one that investigates a wider discourse on the environmental impact of the pharmaceutical industry. This approach could encompass detailed discussions on sustainable manufacturing practices, initiatives aimed at reducing waste, responsible disposal of pharmaceutical products, and continuous efforts to mitigate environmental harm throughout the entire product life cycle. Furthermore, incorporating visuals that explicitly showcase or symbolize the ecological aspects associated with the pharmaceutical industry would ensure a more inclusive understanding of the company's environmental endeavors in Pakistan. By embracing such a comprehensive approach, pharmaceutical companies can play a pivotal role in cultivating collective awareness regarding the intricate interplay between health, medicine, and the environment. This, in turn, encourages responsible choices that not only prioritize individual well-being but also contribute to the preservation of our shared planet. It unveils a nuanced and potentially deceptive ecological narrative woven by Pakistani pharmaceutical companies. This groundbreaking work paves the way for further research and, more importantly, fosters a more critical and informed public discourse on corporate environmental responsibility in the Pakistani context.

6.1. Recommendations

To enhance future research, the following recommendations are proposed:

1. Apply advanced analytical techniques and ecolinguistic theories to uncover deeper insights within the research data.
2. Adopt a cross-cultural perspective to analyze the influence of cultural factors on outcomes across different groups or settings.
3. Explore emerging data collection methods such as augmented realities, connected devices, or analytics for social networks for potentially novel perspectives.
4. To confirm findings and evaluate the generalizability of findings, replicate studies in various contexts or with different populations.
5. Focus on marginalized populations to broaden understanding and enrich existing research by investigating understudied groups.

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