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Social Praxis Of Multimodal Environmental Discourse: A Dialectical Ecolinguistic Analysis Of Print Media Cartoons

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Social Praxis Of Multimodal Environmental Discourse: A Dialectical Ecolinguistic Analysis Of Print Media Cartoons

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Abstract

The current study explores dimensions of the dialectical relationship between three domains of social praxis: ideological, sociological, and biological (Steffensen & Fill, 2014). The primary interest was to explore a mutually constitutive relationship among the three dimensions as conceptualized in the model of dialectical Ecolinguistics and hypothesized to be represented in the selected textual data. Cartoon strips from the most widely read Pakistani newspapers have been selected as data and treated as multimodal discourse. Visual narrativization, visual grammar, and the dialectical relationship between language and the three dimensions of life have been used for conceptual grounding. A guided close reading of the visuals has been conducted to trace strategic framing of and foregrounding in the stories as reflected in the visual grammatical constructions in the selected visuals/cartoon strips. The purpose was to find a conflation between the three dimensions of discourse production. Such collaborative functioning among ideological, social, and biological was substantiated by how all three factors influenced the meaning-making process. It was found that various processual aspects of meaning-making are contributed by the three factors in point, and any shift in any of them affects a shift in the other two, resulting in a shift in meaning at all stages of production and interpretation.

Keywords: Dialectical Ecolinguistics, visual grammar, environmental cartoons, media representation, Dawn Newspaper, Pakistan, ideological, sociological and biological implications, environmental advocacy.

INTRODUCTION

BACKGROUND

The relationship between language and environment places them in a situation where they have their imprint on each other through language users' cognitive functions (Stibbe, 2015) . Ecolinguistics investigates how languages are linked to their surroundings (Fill & Mühlhäusler, 2001) . It considers various dimensions of the nature and function of their relationship. The conceptual position occupied by the field is necessarily multidisciplinary. The complex relationship between environment and human discourse or language has been the primary interest of the field. This interest has been motivated by political awareness about environmental issues. Thus, realizing the importance of the environment for the survival of humanity has been the driving force behind this academic interest. Hence, the field has critical and political thought in its foundation.

Dialectical Ecolinguistics operates with the realization that dialectal engagement exists in the ideological, sociological, and biological contexts. ConceptualizationConceptualization of this interdependence among these essential aspects of human life at the individual and collective social levels provides the field with its point of departure. In the debate, language is conceived as an active and constitutive element of social activity that provides the site and tools for dialectical engagement. Linguistic behaviors are seen to be simultaneously productive as well as the product of social behavior (Steffensen & Fill, 2014) . This model highlights language's formative and constraining influence on social practices while examining how ethnoscapes are implicated in eco-social processes. This paper uses dialectical Ecolinguistics to examine cartoon strips in Pakistani English newspapers related to environmental issues. This study examines the projection of ecological issues in Dawn – the selected Pakistani English newspaper – using the lens of dialectical Ecolinguistics. This theoretical model conceives three dimensions (ideological, sociological, and biological) as mutually dependent for meaning-making within context/s (Steffensen & Fill, 2014).

This study taps into a rich source (cartoon strips) of communication used to convey content of broader social interest through multimodal discourse. Cartoons have generally been considered a tool of social satire and criticism, so they make suitable data to explore various ways of highlighting environmental issues. Although there is a lot of research literature on media representations of environmental issues, the analysis of cartoon strips from the perspective of dialectical Ecolinguistics exists as a gap. Cartoon strips, as a form of multimodal discourse, are hypothesized, in this study, to be embedded in the social praxis in the same way language is conceptualized to be embedded according to the model of dialectical Ecolinguistics. It provides the basis and the purpose of this study.

STATEMENT OF THE PROBLEM

Human language not only reflects the load of dialectical correlation among ideological, sociological, and biological dimensions of social praxis but also constitutes and, in turn, is constituted by the nature of relations among these factors (Steffensen & Fill, 2014) . Linguistic choices signify the nature and role of such relations in producing targeted meaning. It is a

combined and, at the same time, complex function of an interplay of language, ideology, society, and the environment. All these factors work indistinctively/inseparably together in effecting meaning. Multimodal discourse as a medium of human communication attains the same status as claimed by language in this interplay and is embedded similarly in the ideological, sociological, and biological. It can be treated like language in this regard to see how it behaves like the same in reflecting, constituting, and getting constituted by the realities of the three factors above. It makes it essential to analyze such discourse for insights into the characteristics of this relationship.

RESEARCH QUESTIONS

1.   What structural patterns have been employed in the selected multimodal cartoon strips of the Daily Dawn?
2.   What type of dialectical interplay is reflected in the structural patterns of the selected cartoon strips of the Daily Dawn?
3.   How do the dialectical relations among the three dimensions of social praxis, i.e., ideological, sociological, and biological, operate to realize specific meaning regarding environmental issues?

SIGNIFICANCE OF THE STUDY

The findings of this research will enrich the literature on how certain ideologies can be shaped through various media modes and lead to contrasting views. The study offers a new perspective on the possibilities of an often-neglected form of media in academic research - cartoon strips - despite being such a potent means to tell or advocate political realities. As a case study examining visual media, this research adds to the academic considerations associated with the dialectical ecolinguistics analysis model for scholarly purposes. This method may motivate other projects in the discipline, and so begins an alternate approach and methods of linking language to ecology and society. Additionally, this study adds to the emerging body of knowledge on environmental communication in developing nations by concentrating on Pakistani media. It indicates how a nation burdened with severe environmental problems is addressed in its media, which could contribute to scholarly comprehension and practical interventions for promoting environmental awareness and policy-making.

LITERATURE REVIEW

As an academic discipline, Ecolinguistics has developed in both advancement and diversification. Over time, many attempts have been made for theoretical interventions and contributions, resulting in their advancement. At the same time, multiple new research perspectives have been introduced, thus adding to the diversity of the field. It borrows from ecology and attempts to reflect it on language (Steffensen & Fill, 2014) . Haugen's (1972) idea of seeing language within the social context while accounting, at the same time, for environmental factors is generally considered to have foundational significance in conceptualizing the relationship between language, society, and the environment. It led linguistic research, out of its exclusive focus on grammar, to think more about language in the broader ecology. Halliday (1990) pushes further by suggesting applications of linguistics to deal with environmental concerns. He

strengthened the link between language and environment by observing that language can affect how we see and experience the world. Alwin and Fill (1990s & early 2000s) have made very significant contributions in the direction undertaken in this study by 1) laying down pathways that separate Ecolinguistics from its related fields, 2) providing an adequate bio-linguistic approach highlighting the interdependency between linguistic and biological diversity.

Moreover, there is a wide range of debates within Ecolinguistics. It includes sustenance discourses to environmental policy studies; local and global discourses are studied. New sites and media of environmental discourses are discovered and studied. Multi- and trans-disciplinary interests have emerged within the field. It has led theorists and researchers to view the field from diverse perspectives (e.g., Haughenian, 1972; Halliday, 1990; Fill & Mühlhäusler, 2001). Based on this, the Haugenian tradition is mainly concerned with what it calls "the ecology of language," which means how human society interacts. In terms of language maintenance and shift, this perspective has been beneficial and most relevant to creating policies that balance linguistic assimilationism and pluralism.

On the other hand, the Hallidayan tradition focuses more on how language use can help with or alleviate environmental issues. This usually means using critical discourse analysis on environmental texts, examining how language defines environmental problems, and constraining or suggesting particular publics as responsible creators/solvers. Both regard language death and biodiversity extinction as their opponents. Researchers in this field propose that the loss of languages implies a culture and ecological knowledge encoded through these idioms. This acknowledgment is now fuelling pleas for language rehabilitation akin to biodiversity-saving exercises.

In dialectical linguistics, language is situated within its surrounding ecosystem by analyzing dialectic relations with the cognitive environment (i.e., genes) and social, biological, and physical environments. Scholars such as Jørgen Døør and Jòrgen Christian Bang (1993) articulate this view, stressing the dynamic quality of integration between complementarity and contingency for understanding these relationships. Language, thought, and material interaction—a dialectical approach. This perspective critiques static views of language and invites researchers to analyze the intertwined nature of language and ecological systems. This series of research trends now includes consideration of multiple levels by integrating disciplines and methodologies to investigate human language comprehensively. This interdisciplinary perspective demonstrates how language cannot be investigated entirely and can be decontextualized from the relevant social, cultural, and ecological environments. For example, researchers are now investigating how linguistic and social practices intersect and environmental behaviors and policies. It has resulted in research into how discourses of the environment are created and disseminated through different mediums, such as news articles, policy papers (Kinsella, 2002; Carvalho et al., 2016), or even cartoon strips (as is the case with this study). Relatedly, one trend is researching climate change communication from the lens of Ecolinguistics. These studies explore how language is used to present climate science to the public and ways in which it can constrain policy responses about global environmental issues.

Some ecolinguistic or dialectical analyses have investigated how cartoons display environmental issues, cultural identities, and social critiques (Lehr & McQuarrie, 1990; *Miller-Lane What Nature Suffers to Groe*). The extant literature can be categorized into studies that examine eco-themes in cartoons alone and studies that consider the use of cartoons within media discourse. For instance, in Ivchenko (2021), animated cartoons have been scrutinized, exposing and mocking deep-seated ideologies established within ecological discourse. The research concludes that cartoons are a powerful medium to reveal environmental concerns and foster sustainable human-environment interactions. By conducting an ecocritical reading of contemporary visual narratives — in modern cartoons and graphic novels—Bealer (2014) points out that such stories do the work not only as living fonts for environmental imaginations but also, importantly, prove just how deep the ontological currents beneath their surface representations. Ali (2020) and Sharif et al. (2018) have researched cartoons in the press concerning climate change and environmental issues. The studies indicate the increasing interest in environmental issues in Pakistani media, but some sides are lacking. These demand more widespread and scientifically correct reporting. Although the existing studies offer valuable information, there is a literature gap on using dialectical Ecolinguistics to construct commentary in cartoon strips of Pakistani English-language newspapers. In trying to fill this gap, the primary objective of this study is to provide a global analysis of environmental issues through cartoons.

RESEARCH METHODOLOGY

INTRODUCTION

This is a qualitative study involving the analysis of multimodal texts. The visual and verbal parts of the texts in this study are seen as integrated at the transmodal level. Visual discourse analysis is especially relevant to this paper since cartoon strips (comprising written text and image as situated modes) are multimodal, necessitating an inclusive understanding. Analysis has been made to study the cartoons as a source of multimodal communications. The visual and verbal parts of the selected multimodal texts have been analyzed following the model of dialectical Ecolinguistics to provide an in-depth look at how meaning is produced and transmitted along three dimensions of social praxis within the selected comic strips.

THEORETICAL FRAMEWORK

The study draws on Kress and Leeuwen's (2006) visual grammar and Lindo and Bundsgaard's (2000) dialectical ecolinguistic theory for theoretical and analytical purposes. These frameworks supply robust strategies for examining the cartoons and their dialectic interrelations from a multimodal perspective.

VISUAL GRAMMAR

The structural configuration of visual language assemblages, using its elements and structure, positions the participants kinetically in space modally (Kress & Van Leeuwen, 2006). This framework offers a way to analyze the meaning-making integrated into the visual aspects of comic strips. Key aspects include:
1.   Elements and Structure
2.   Position of participants

3. Modality
4. Composition

DIALECTAL HIERARCHY MODEL

Lindo and Bundsgaard (2000) propose a dialectical model of inner-outer relationships in language. This study framework helps us understand how each part of social praxis dimensions works in the production and reception process by analyzing and analyzing environmental discourse representation on cartoon strips. The theory characterizes social praxis in terms of three related dimensions:

Ideological: An individual or a community doctrine, paradigm, state of mind, or cognitive attitude. It includes how issues are framed and understood in different cultural and social contexts.

Sociological: The language that people employ to name themselves, claim protection, and boost various types of power (e.g., lifeworld or system). This dimension focuses on how environmental discourse reproduces and constitutes social power relations.

Biological: This domain explores language as a representation of and interfacing mechanism with the physical world, principally within environmental processes and phenomena.

STUDY TYPE, DATA COLLECTION AND ANALYSES

Purposive sampling was used to collect ten cartoon strips from the Dawn newspaper (2018-2020); hence, it is a qualitative and descriptive research work. The data analysis adopted visual discourse analysis, which applies the Visual Grammar (Kress & van Leeuwen, 2006) framework and a dialectical ecolinguistics approach. It allows us to systematically address various aspects of the cartoon strips' visual and verbal materials and their relationships with each other and society/ecology.

There are six stages of the analysis process:

1. Visual grammar to identify structural elements of each cartoon strip
2. Biological, sociological, and ideological relations in the text
3. Considering the cartoon within its broader social and environmental relations outside of the text
4. Bringing together the analysis of how these three dimensions interrelate in environmental message framing and construction.

DATA ANALYSIS

CARTOON 1: WATER POLLUTION (10–01–2018)

VISUAL GRAMMAR ANALYSIS

Elements and structure: A girl, a plastic trash can full of unpurified water, the tap.

Position: High tap, a woman is interactively depressed and subordinate.

Modality: The above text, "53000 children die of diarrhoea caused by contaminated water every year", carries the truth

Composition: The water contamination problem is reflected in the framing, with the tap prominent

DIALECTIC HIERARCHY ANALYSIS

Ideological: This cartoon warns against water contamination to create social awareness about the problem.

Social: How pollution affects social life, reflecting the affected segment of society.

Biological: VisualizingVisualizing contaminated water and what it does to the human body

This cartoon puts together ideological, sociological, and biological dimensions. It highlights the problem of water contamination in Pakistan, with health concerns previously highlighted by scientists regarding the poor quality of potable waters. Social discrimination within the functional structure of social interaction has been made the subject of criticism. The differential access to resources is the subject of criticism here. The social condition causes biological conditions sustained and challenged through language by promotion or the otherwise of relevant ideologies. It illustrates the urgency and intimacy of water pollution, distilling a macro-level environmental problem into personal practice.

CARTOON 2: POLLUTION IS PLASTIC (07-06-2018)

VISUAL GRAMMAR ANALYSIS

Elements: Sun, desert cacti, plastic bottle, planet Earth dressed as human
Position of participants: Sun dominant, Earth subordinate
Modality: World is choking on plastic: UN Text – The problem of global dimension
Composition: The plastic bottle is placed strategically in the foreground, signifying what it represents.
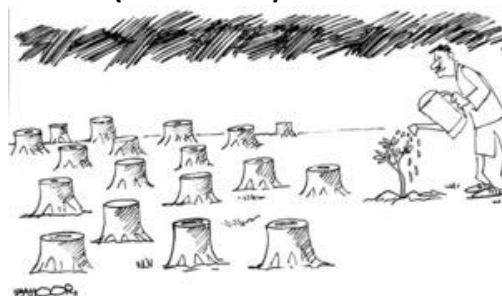
DIALECTICAL HIERARCHY ANALYSIS

Ideological: Suggests the inevitability of climate chaos and that if it reaches us.
Sociological: It examines how plastic pollution impacts society and bio-systems globally.
Biological: Human Earth with a body blamed for plastic pollution

The ideological and biological aspects of environmental issues such as plastic pollution are unified. Culturally, we have been conditioned to utilize and purchase plastic routinely in society due to societal values and industry-driven practices that advocate for the heavy use of plastics with a disposable mentality, placing more weight on convenience or economic gain than on the environment. Such a mindset serves to invisiblize plastic, placing it deep within general consumer culture as an everyday life afterthought. This kind of ideology has biological consequences. These norms breed plastic waste, which invades ecosystems and creates microplastics that can seep into the air we breathe, as well as water supplies and food chains. These particles penetrate thousands of types of ecosystems around the world, entering into humans and animals in this way. Over time, they accumulate in quantities to cause anything from hormonal disruptions to organ failures. Therefore, indirectly but quite effectively, our attitudes and behaviors are responsible citizens of the world, bedeviling life on Earth by infiltrating its very patterns to express themselves biologically.

CARTOON 3: DEFORESTATION (27-02-2020)

VISUAL GRAMMAR ANALYSIS

Elements and structure: Trees, Tree trunks (both of high quality), newly planted tree including its pot and water pot,), human character

Position of participants: Clear-cut trees dominant, seed tree sub-dominant.

Modality: The logic of the cut trees and new planting suggests that there is some daily contrast visible to show deforestation efforts

Composition: Staged cut trees in a way they refer to deforestation

DIALECTICAL HIERARCHICAL ANALYSIS

Ideological: Much information will be provided on why deforestation occurred and the attempts to reforest areas.

Sociological: Demonstrates the broad social impact of deforestation and reforestation efforts.

Biological: Forest destruction as seen in a physical sense and the difficulties of re-planting

The ideological and sociological considerations regarding deforestation or reforestation are inextricably mixed up. Our society has frequently favored fast growth, dollars, and cents — even progress plonked down in the middle of nature — ahead of preservation. This thinking, reinforced through policy choices and development narratives, has led to unsustainable short-term benefits — clearing forests for agriculture or building infrastructure without considering environmental impacts. Such values shape our common perspectives on the forest—as a resource of exploitation rather than a life ecosystem. Such an ideological view can lead to and justify deforestation as a part-and-parcel commodity in societal development. These beliefs have a significant sociological impact. When forests are cleared, the critical basic needs that serve as lifelines for local communities — clean water sources, traditional foods and medicines, and time-honored culture and routines tied to these ecosystems — become compromised or lost. Communities displaced by deforestation suffer social disruption, economic dislocation, and changes in traditional lifestyles that drive new cycles of poverty and environmental destruction. Such a sociological cycle perpetuates the perception of forests as existential threats for many communities, thus reinforcing forest exploitation due to short-term survival needs. Such ideologies and social practices inevitably translate into biology. Widespread deforestation results in biodiversity loss, habitat loss, and climate change because forests are a vital component of carbon absorption and oxygen creation. These biological effects then ripple back into society, leading to more significant exposure risks from natural disasters, soil erosion, and

poorer air and water quality. When deforestation seeps into ideology and cultural values, it permeates ecosystems around the globe. It is one of the drivers of climate change while threatening species with extinction—ultimately impacting human health.

This relationship underlines how our shared attitudes and behaviors are not just changing policies and social norms but creating a biological crisis. Not directly but with ample clarity, our worldviews and social leanings determine how deforestation affects life on Earth when it becomes rooted in nature and reverberates through various habitats.

CARTOON 4: CLIMATE CHANGE (17-12-2019)

VISUAL GRAMMAR ANALYSIS

Elements and structure: Earth / Climate talks (Fire)
Position of participants: Fire superordinate, Earth subordinate
Modality: Burning 'climate talks' a truth flame on global inaction
Composition: Earth focus, framing highlights climate emergency

DIALECTICAL HIERARCHY ANALYSIS

Ideological: SymbolizingSymbolizing climate change and the global failure to adapt.
Sociological: displays the global societal and international power shift of climate change.
Biological: Physical Earth, e.g., struggling with global warming

The cartoon vividly demonstrates the world's climate crisis and the failure of international negotiations. It uses a stark visual metaphor, portraying the Earth in flames with climate talks also on fire to illustrate how dire both are. The people's political ideologies shape how society views climate change—not as an immediate priority but as a hindrance to economic growth. It drives behaviors and policies that continue to degrade ecosystems. Within this sociological aspect lies another inequity: many low-income communities face the brunt of climate impacts, which leads to a vicious cycle where maximum natural resource exploitation solutions are implemented for short-term survival against threats. From ideological and social systems, these actions are played from abuse to the planet's biologicals as this causes biodiversity disintegration and severe climate change events. The resulting biological processes provide societal feedback, constraining ideologies, and norms toward sustainability.

CARTOON 5: SMOG (18-11-2019)

VISUAL GRAMMAR ANALYSIS

Elements and structure: Smog, Lahore (personified as a man)
Position of participants: Smog is dominant, and man is subordinate
Modality: Smog, a reality check on air pollution crisis in Lahore
Composition: The prominent smog shows how it has framed the city

DIALECTICAL HIERARCHY ANALYSIS

Ideological: How and why the urban air pollution crisis translates to daily life.
Sociological: Its effects on Urban society, health, and quality of life
Biologic: physical effects of air pollution on human health and the environment.

Urban air pollution presents a problem that intertwines ideological, sociological, and biological dimensions in an entangled web of dialectics wherein each facet informs the other and feeds back to exacerbate the overall issue. That is about as ideological as it comes, and in today's cities — shaped by nearly 40 years of modern urbanism — they often provide a choice of industrial development, economic expansion, and ease of use for cars over environmental sustainability. Such a mentality enables the continuation of policies and public behaviors that foster air pollution, making it one of those things we have to live with, like madding crowds in our cities. This ideology, sociologically, results in different deficits of effect on large populations within urban centers. Air pollution has severe implications for public health, limits outdoor activity, and reduces the quality of life among city residents, especially to a large extent those vulnerable groups such as children or the elderly as well as low-income populations who lack access to means of protection against polluted atmosphere. This social impact, in turn, may foment a feeling of frustration or learned helplessness, entraining polluted air as "normal" from an urban way of life. The biological manifestations of this ideology and these social structures are observed as increased respiratory and cardiovascular disease, environmental pathobiology, chronic pollution, and ecopathology. These biological effects, in turn, burden society with rising healthcare requirements, decreasing lifespan, and a heightened consciousness that challenges ideologies. Degrading public health creates an imperative to end unsustainable production and consumption, and these sustainability efforts are continually changing the specific forms of each dimension. The dialectics demonstrate that ideological changes, shifts in societal priorities from

people to cities, and respect for biological consequences can only happen through an interplay across these three dimensions.

CARTOON 5: WATER CRISIS (29-05-2018)

VISUAL GRAMMAR ANALYSIS

Elements and structure: Older man, older woman, crow, drop of water, bucket with water, tap.

Position of participants: Water Tap dominates human

Modality: Dripping tap and a long line of buckets reveal water scarcity.

Composition: The water tap takes the lead in this photo and represents water scarcity.

DIALECTICAL HIERARCHY ANALYSIS

Ideological: This cartoon explores the idea of water scarcity and how it may affect various areas in the future. It shows a historical period in which how smarter decisions around pollution are likely related to more water access.

Sociological: Demonstrates how water scarcity affects human behavior and quality of life.

Biological: A physical reality of water scarcity and how it manifests in human life

Water scarcity is an ideological, sociological, and biological phenomenon; one circles the other in an unending dance of linked reinforcement that amplifies the severity of crises. Ideologically, consumers believe that this planet belongs to them and they can enjoy it perfectly however they want, so society, for decades and centuries, was only focused on industrial growth; minimal pollution laws guided each plant of any production sector to do whatever allowed by their governments making growth more powerful than sustainability, sociologically, that turns into a community experience every day. People live with limited access to water, adjusting their behaviors and routines, meaning that we lose sight of the inequalities being created by this lack of water – where families need to travel for up to ten hours to access clean drinking water, changing how they can work and interact with others alongside waiting in line for whatever quantity is available. The biological implications are clear; water shortages disturb natural systems, reduce agricultural production and food security, and affect human health through reduced drinking water or sanitation access. So, the social problems that arise from this material environment are compounded to enforce an ideological transition, and they need a societal transformation toward sustainability. These three dimensions do not exist in isolation; they interact and create a feedback loop — the ideological choice of managing the ecosystem influences social realities that affect biological health, creating biological outcomes that push

society to change its management approach to water — illustrating how interlinked these three dimensions are in driving the water scarcity crisis.

CARTOON 6: FLOODS (31-07-2019)

VISUAL GRAMMAR ANALYSIS

Elements and structure: four male characters, water, rain, a building, buffalo, a car

Position of participants: In this image, the characters are subordinate. The cartoonist depicted raindrops in a diagonal pattern, indicating an imbalance.

Modality: The interrogative statement in bold capital letters at the top of this strip, 'Some things never change, huh?' refers to the situation drawn in this cartoon strip. It conveys the speaker's truth and realism about the situation and demonstrates that the government still needs to take the initiative to deal with the flood.

Composition: The image's framing implies that excessive monsoon rainfall is a significant problem the government should solve. Additionally, the mutual structure of these components demonstrates that they form a unified entity termed the environment.

DIALECTICAL HIERARCHY ANALYSIS

Ideological: Annual Floods and damage due to monsoon rains in Pakistan.

Social: Impacts on human life and unfulfilled responsibilities of the government

Biological: Flood and water-affected characters and background

Pakistan's annual monsoon floods represent a triadic entanglement of ideological, sociological, and biological elements that each, in turn, produce the conditions for sustained social catastrophe. Ideologically, the government's failure to provide long-term effective planning and sustainable infrastructure highlights an approach of treating floods as a disturbance rather than trying to prevent more effective flood management. Such an ideological gap results in insufficient preparedness by the time the floods arrive and continues to ensure that flooding gets redressed reactively rather than through preventing these disasters from ever happening and increasing resiliency. Sociologically, these ideological failures are harmful to communities. Inadequate state response leads to repeated displacement, property loss, health hazards, and lower quality of life. That social aspect becomes even more strained in the face of increasing frustration from citizens over unfinished duties and the view that floods are an inevitable

annual burden. Biologically, people are witnessing the impacts of climate change on their surroundings — with repeated flooding ruining farmland, disrupting other ecosystems, and polluting water sources. This destruction of the environment not only exacerbates public health problems but also intensifies social problems, with communities facing escalating poverty numbers, food insecurity, and scarcity of resources.

These dimensions are interconnected in a feedback loop: ideological neglect → social suffering (intensified through biological substrates) prompts reframing of public consciousness and behavioral pressure on governing authorities to change their stance.

CARTOON 7: LOCUST ATTACK (06–09–2019)

VISUAL GRAMMAR ANALYSIS
Elements and structure: Two middle-aged farmers, Locusts, Crops
Position of participants: Locusts superordinate, farmers subordinate
Modality: Giant locusts indicate the size of the infestation
Composition: Locusts in the center border implicate agriculture

DIALECTICAL HIERARCHY ANALYSIS
Ideological: How the locust invasion is a product of agricultural crisis
Sociological: Impact on farmer and food security
Biological: locust threat to crops and ecosystem

Each ideological, sociological, and biological dimension is interwoven tightly in Pakistan, with one aggravating and influencing the other, resulting in a cyclical process that deeply roots the agricultural crisis. Ideologically, the swarms come from broader agricultural systemic problems — unsustainable farming habits, poor pest management, and even short-sightedness that values high-yield crops in the immediate term rather than a healthy ecology over generations. That view has resulted in fragility in agriculture, with a heavy susceptibility of crops to infestations such as locusts. That came from the pernicious influence of the within-American ideological neglect that, in turn, sociologically _ would affect those caring for farmers, those concerned with food security. With available land in short supply, farmers suffer massive crop loss, one more devastation that diminishes livelihoods and threatens the entire food chain. Soaring food prices and more vulnerable food security, coupled with increased local economic pressure at the household level, adversely impact community health and quality of life. Biologically, the swarms of locusts are attacking crops and ecosystems directly. They consume

local farmland, disrupt ecosystems, and can wipe out food supplies. Such environmental destruction amplifies social problems and strengthens the necessity of an ideological transition toward sustainable agriculture to avert future calamities. Relating social hardships to ideological gaps in agricultural policy, which create biological vulnerability, ensures that these dimensions remain mutually reinforcing and call for a change in how agricultural resilience is understood and governed.

CARTOON 8: URBAN WASTE MANAGEMENT (09–04-2018)

VISUAL GRAMMAR ANALYSIS

Elements and structure: Karachi, commoners and garbage dump older male-female and crow

Position of participants: A superordinate garbage with subordinate people

Modality: Trash containing humans Hidden Trouble of Soil Crisis

Composition: Garbage in the foreground and framed mainly by surrounding items, the majority of which have control over the city

DIALECTICAL HIERARCHY ANALYSIS

Ideological: Represents Urban filth with emptying of Government efforts to manage the waste crisis.

Sociological: Shows how social concepts shape our understanding of waste and its place in an urban society.

Biological: Industrial advantage on Waste representation in live natural urban resource management simulation.

This cartoon stresses the Karachi waste crisis in the dialectic of ideological, sociological, and biological terrains. The ideological frame leaves government officials seem remote and impotent, debating policies amid piles of growing city refuse on the doorstep — a metaphor for the gap between what is said and what is done. Sociologically, this cartoon contrasts affluent neighborhoods with tidy places and poor ones filled to the brim with trash, highlighting social inequality in the availability of resources and unpolluted surroundings. Pollution affects human and animal health. However, urban wildlife uses polluted places for shelter and food, particularly demonstrating how biodiversity responds to pollutant stressors partially due to the ubiquity of these environments. Collectively, they illustrate the deeply entrenched reality of Karachi's waste crisis and create a matter for solutions.

CARTOON 9: ENERGY CRISIS (21-05–2018)

VISUAL GRAMMAR ANALYSIS

Elements and structure: a young man, older man and woman, three giant sharks, and a raven.

Position of participants: a giant shark shapely superordinate to humans

Modality: The Energy Crisis Exposed by Sharks Named "No Electricity, Water, Gas"

Composition: Sharks' compelling, encompassing demonstration of a more prominent problem

DIALECTICAL HIERARCHY ANALYSIS

Ideological: This cartoon alludes to a world running out of energy by metaphorically creating the same sentiment. It also suggests an apocalyptic future in terms of the only way society can end, which implies that if the grid goes down and stops working, this will be our payday for relying on too much electricity.

Sociological: energy crisis of age gaps.

Biological: Physical manifestation of energy scarcity influences human welfare.

This cartoon combines ideological, sociological, and biological tropes, highlighting the worsening energy crisis in Pakistan. Philosophically, it gestures towards a world running out of juice, in which an apocalypse awaits if we engage too deeply with the electrical net. It highlights the sociological intergenerational divide, displaying how the young will pay the heaviest price of the energy crisis. This biological example shows that energy scarcity can physically impact human health. Iconic cartoon illustrating the seriousness of Pakistan's energy crisis as giant sharks waiting at the eye, ready to eat up the next generations - unless we wake up to fight this era-defining issues that are both serious but will have inter-generational implications.

CARTOON 10: ENVIRONMENTAL POLICY (19-11-2019)

VISUAL GRAMMAR ANALYSIS

Elements and structure: A middle-aged man, citizens, Smog, Lahore Environmental Policy banner

Position of participants: Smog is superordinate, people and policy subordinate

Modality: The fact that due to smog, citizens' mobility is restricted, and hence, they can' see the policy banner leads to failed government outreach

Composition: centered composition, smog dominant, framing indicates businesspersons' dominance of policy moves.

DIALECTICAL HIERARCHY ANALYSIS

Ideological: Based on a conception of environmental policy and actual ability to implement it.

Sociological: Demonstrates the gap between action-reaction in policy and effects.

Biological: evidence in the physical presence of environmental destruction, despite efforts to regulate it through policy

This cartoon links ideological, sociological, and biological themes to bring home the rift in environmental policy. It mirrors the spirit of environmental policies in contrast to their practicalities. From a sociological perspective, it highlights the difference between what policymakers do and its actual impact, in which the desired responses tend to lag. The cartoon example of the biological level is hiding and exposing part of it to environmental degradation, where all smog reduces visibility against regulations designed to do that. Brett Hill's shot of men unable to see a banner through thick smog powerfully wrenches together the higher hopes of policy and lower-ground environmental degradation.

FINDINGS AND DISCUSSION

The analysis shows that the cartoonists use various strategies to accentuate environmental problems caused by human intervention. Early research on political cartoons and environmentalism demonstrates the ability of such images to shape public perception (Kelsey, 2017). This study explored the natue of dialectical engagement of factors related to the three dimensions of social praxis as propounded in theoretical lens of dialectical ecolinguistics. The key findings in this regard are as under:

1.   Dialectical link between the three components of social praxis is brought forth when governmental negligence regarding environmental pollution in Karachi is highlighted. The cyclical interdependence shows how environmental, social, and political realms are interlinked.

2.   Water scarcity and pollution cartoons show this topic as a public health crisis, a social or ideological problem. The ideological dimension condemns inefficiency in water management policies, while the sociological aspect displays scarcity-affected communities. Contaminated water causes illnesses—for humans and animals alike—resulting in a social and ecological crisis with biological roots.

3.   Cartoons embodied a firm ideological critique of urban governance concerning the waste management sector, depicting the government as incompetent in tackling the waste question. Ideologically, this non-removal of waste signifies systematic scorn for people with low incomes and, biologically, leads to pollution that decreases soil quality and threatens human

health and urban wildlife, which almost shows a double-edged consequence responding on both social and biological scales. This is how the social, ideological and biological aspects are linked.

4. When portrayals of deforestation are critical of the ideology that drives the agency, the focus is often placed on policies that favor economic development geared towards industry and agriculture rather than forest preservation. This results in displacing communities that rely on forests for their livelihoods and deprivation of resources from the sociological aspect, while there is a loss of species diversity, erosion of soil, and an impact on climate from the biological point of view.

5. On the bio-social level, continuous exposure to polluted air leads to respiratory diseases, showing how ideological failures in policy-making lead to biological damage and social violence. Climate-themed cartoons rely on international symbols to highlight Pakistan's apparent susceptibility to climate influences and the relative inaction of the authorities. This is a critique of national and international policy inertia (ideologically) and suggests communities are left struggling with the impact of these extreme weather events (sociologically). Climate change shifts ecosystems, agriculture, and human health, making it a multi-tiered crisis compounded by lackluster policy response.

6. The study results show that more than just environmental concerns are expressed in the cartoons; they provide a multilevel narrative linking personal realities with systemic failures.

CONCLUSION

The current study explored the intermeshing of representational ideologies, social struggles, and biological in Dawn newspaper cartoons. These cartoon-mediated portrayals of environmental crises are socially constructed, communication-rich, and ideologically deep, and they speak to address environmental crises across ideological, sociological, and biological dimensions. The dialectical focus of Ecolinguistics encourages awareness and critique of these power relations. It predisposes viewers to reflect on their or others' individual, collective/institutional impacts on environmental degradation. Such an integrated perspective aligns with the notion that environmental problems are best addressed through a systemic view of ideology, social practice, and biology—wherein belief-driven processes interact and mutually reinforce one another. This in turn necessitates treating environmental problems as complex challenges requiring integrated approaches incorporating policy reform, public education, and social justice.

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