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REFRAMING 'SMART CITY' NARRATIVES: AN ECOLINGUISTIC ANALYSIS OF THE DUMAGUETE RECLAMATION PROJECT

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Abstract

This study examines how language in environmental discourse shapes relationships between humans and the non-human world. Drawing on ecolinguistic perspectives, it investigates how discursive choices construct ecological meanings in texts addressing the Smart City reclamation initiative in Dumaguete City. Guided by the framework of Positive Discourse Analysis (PDA), the study uses salience as a key analytical lens to identify linguistic features that foreground environmental concerns and socio-ecological values. Quantitative results show that individualization (40.16%) and sensory imagery (37.80%) appear most frequently, followed by personalization (12.60%) and Actor roles in transitivity patterns (9.45%). Complementing these findings, qualitative analysis identified four recurring thematic patterns: (1) Highlighting of Dumaguete City and its marine ecosystems, (2) Impact of the Smart City project on the local community, (3) Role of marine ecosystems, and (4) Vivid imagery of destruction. Results suggest that "Smart City" discourses construct narratives that foreground environmental preservation and ecological value. The findings illustrate how patterned linguistic choices operate to promote ecological sustainability and shape public understanding of environmental issues affecting the community.

Keywords: ecolinguistics, positive discourse analysis, salience, smart city

Introduction

In ecological protection, language has an important role in shaping how people understand nature and how they respond to it. Stibbe (2015) argues that addressing ecological damages requires changes in dominant ways of thinking, since shared beliefs guide patterns of behavior. With this, language serves as a medium which either legitimize practices that harm ecosystems or promote discourses that support their protection. Linguistic structures shape what people believe and determine how they understand their relationship with the more-than-human world through the clustering of linguistic elements that form stories in their minds. Halliday (2001) further highlights the role of language in constructing discourses about the relationship among human species, non-human species, and the environment. He explains that "our grammar… construes air and water and soil, and also coal and iron and oil, as "unbounded," that is, as existing without limit"

(p. 194). Supporting this position, Mühlhäusler (2003) suggests that certain grammatical structures that emerged in more recent periods may have shaped linguistic habits that have played a role in the present environmental crisis.

Ecolinguistics is relevant because it questions harmful belief systems and promotes narratives that support peaceful coexistence between people and nature. Dominant discourses produced by governments, media, industries, and other institutions influence social values and cultural practices, which, according to Stibbe (2021), become embedded in social cognition. When people are exposed to discourses that carry ecologically damaging assumptions, their responses to environmental problems are less likely to result in pro-environmental action, as such discourses tend to normalize exploitation and weaken a sense of ethical responsibility toward nature (Lamb et al., 2020). In contrast, beneficial discourses cultivate positive attitudes toward environmental protection. Kingsnorth and Hine (2009) emphasized that crises in the environment have their roots in the stories people tell themselves. Changing the stories lived by individuals or nations changes the individuals or nations themselves (Okri, 1996). Hence, discourses with destructive stories are challenged and resisted, while those with positive or beneficial stories are encouraged and promoted. Consequently, the role of ecolinguistics is to analyze the potential impact of discourses on human behavior and on the ecosystems that support life (Alexander & Stibbe, 2014).

In the Philippines, one challenging environmental issue was the proposed 174-hectare land-reclamation project in Dumaguete City, Negros Oriental. Dubbed as a "Smart City," the public private plan to build mixed-use urban facilities on dredged and filled coastline, which was promoted as modernization and inclusive growth, was threatening the marine ecosystems as well as the local fisheries in the affected areas (Brier, 2021). For this reason, it was necessary to investigate which areas of life were prominently and saliently represented in the texts. This study utilized an ecolinguistic framework to explore how linguistic analysis may inform language practices that contribute to ecological protection. In particular, the concept of salience was used to trace the lexico-grammatical choices through which writers foregrounded environmental issues in their "Smart City" discourse. Moreover, Positive Discourse Analysis (PDA) informed the critical interpretation of ideologies embedded in these texts, especially those that highlight socio-ecological justice. Taken together, these approaches suggest that language in environmental discourse serves not only as a means of communication but also as a discursive resource that can influence ecological awareness and foster shared commitments to sustainability.

Development of ecolinguistics as a discipline

The field of ecolinguistics can be traced to early linguistic theories linking language with human perception of the world. This can be seen in Humboldt's (1767-1835) work on comparative linguistics and his view of the interdependence between language and the world (Chen, 2016) and the "Sapir-Whorf hypothesis" or the notion that an individual's worldviews and cognitive processes are conditioned by their linguistic system. These ideas were later applied to explore language-context interactions through ecological concepts. Haugen (1972) then argued that language is part of a larger environment that is physical, psychological, and sociological, and further defined language ecology as the "study of interactions between any language and its environment" (p. 325). This later led to the development of ecolinguistics (Eliasson, 2015).

Ecolinguistics took off as an emerging discipline in the 1990s (Do Couto, 2014) and later developed with Halliday's (1990) keynote speech on "new ways of meaning", in which he established connections between language and ecological issues (Chen, 2016). According to Halliday (1990), some aspects of a language's grammar construe reality in a particular way, for example, mass nouns like "soil" and "water" are seen as unbounded and therefore unlimited; antonymic pairs present "positive" (unmarked) forms to mean that "bigger" is "better"; and humans are granted agency while other species are passivized. In short, his argument concerns linguistic anthropomorphism, demonstrating utilitarian anthropomorphism and the escalation of ecological issues by discourses promoting non-sustainable actions (Chen, 2016).

Ecolinguistics research has flourished as evidenced by the various publications in the field. Mühlhäusler (2003, p. 68) notes that "language is interconnected with the world it both constructs and is constructed by it." Alexander and Stibbe (2014) also analyzed the linguistic aspect of discourses rather than commenting on the grammar of English emphasizing the potential impact of discourses on people's attitudes towards the environment within an ecological framework which should consider well-being and social justice. All in all, these perspectives underscore language's role in shaping what is visible and obscured in the discourse, thereby indicating the need to examine which aspects of the environment are made salient through linguistic choices.

Salience as a form of story

The concept of salience is utilized in visual analysis (Kress & van Leeuwen, 2006) to show how an element is highlighted in visual texts using colors, sizes, sharpness, and other visual features. However, in ecolinguistics, salience is achieved by using salient patterns or linguistic devices that concretely, vividly, and specifically represent an area of life. It involves using linguistic structures highlighting a particular element that appears important and valuable. Stibbe (2015) suggests linguistic elements that constitute salience in ecological discourses: individualization, transitivity patterns (Actor, Senser, Sayer), personalization, and sense image.

Individualization involves using language that ascribes unique individual identities to animals and plants making them "unique and irreplaceable" (Stibbe, 2015, p. 166). In ecological discourse, this is realized using personal pronouns, names that position animals and plants with a sense of agency and personhood. In ecolinguistics, examining transitivity patterns involves identifying the roles of Actor, Senser, and Sayer. The Actor refers to the participant that initiates or carries out an action within a clause, whereas the Senser designates the participant that experiences perception, cognition, or emotion in relation to a particular process. The Sayer is the entity or being that communicates the action or activity through language. By foregrounding non-human elements and giving them agency, readers can challenge dominant narratives that prioritize human interests over ecological considerations. Personalization, in contrast to individualization, is a way of representing individuals by name (Fairclough, 2003). For example, by using the names such as "Pumba" and "Naughty Nigel", pigs are given high prominence through being named as individuals (Stibbe 2015, p.166). Lastly, sense image refers to the description of how a particular object or entity affects the senses, such as sight, smell, touch, taste, or sound (Stibbe, 2015). Rather than being objective, sense images are subjective allowing readers to visualize themselves in the scene described by the author, thus highlighting the importance and significance of what is being described. Utilizing salience patterns can help develop more positive ways of representing both the human and non-human worlds, thus promoting new ecological narratives.

Positive discourse analysis as productive activity in ecolinguistics

The deconstruction activity of critical discourse analysis does not offer new ways of using language to create beneficial discourses (Bartlett, 2012) thus contributes little to the real solution of problems. According to Stibbe (2018, p. 165), the next step should be to look for alternative discourses, emphasizing "being more rather than having more, well-being rather than growth, and respecting rather than conquering nature." To address this issue, Kress (1996, p. 15) suggests a complementary perspective, a shift "from deconstructive activity to productive activity" which Martin (2004) described as complementary and evolutionary as opposed to contradictory and revolutionary. Therefore, he described Positive Discourse Analysis (PDA) as "a positive style of discourse analysis that focuses on hope and change, by way of complementing the deconstructive exposé associated with critical discourse analysis" (Martin, 1999, p. 29).

In general, Positive Discourse Analysis focuses on the "greening" of language to potentially help protect and preserve conditions that support life (Stibbe, 2014). It emphasizes both resistance to harmful discourses and promotion of beneficial discourses. Thus, positive analysts look for "healing" discourses that "make the world a better place" (Bartlett, 2018). Positive analysts do not abandon the critical aspect of analysis but allow the process to remain critical. One thing that positive analysts should consider is using a framework that involves criteria for what 'positive' means in practice (Stibbe, 2018). On this matter, ecolinguists should view the discourses against the ecological philosophy (ecosophy). Here, this study distinguishes anthropocentric framings, which prioritize human-centered benefits from ecocentric framings, which ascribe intrinsic value and agency to more-than-human entities. Discourses aligning with the ecosophy (ecocentric) are treated as beneficial stories. The ecosophy will be the basis in making criteria for judging whether discourses are positive or not. In sum, the process of PDA begins with analyzing linguistic features of a text to reveal ideologies embedded in the text. The ideologies are then compared to the analyst's ecosophy and are judged to be positive when they align with its principles. The final step involves advancing positive discourses and making them available to the mainstream so they can offer alternative narratives about relations between humans and nature (Stibbe, 2018).

Method

This study utilized ecolinguistics in examining environmental texts concerning the "Smart City" reclamation project. Salience was used as the primary analytical lens to identify linguistic patterns that foreground ecological protection. It involves using linguistic structures that highlight a particular element and make it appear important and valuable (Stibbe, 2015). To interpret how the language choices reveal meanings supporting ecological preservation, Positive Discourse Analysis (PDA) was adopted with emphasis on hope and change as a complement to the deconstructive nature of CDA (Martin, 1999). Thus, this research aimed to examine forms of language and narratives that encourage environmental protection.

Sources of data

All relevant online materials available at the time of data collection were systematically reviewed. The size of the corpus was determined by the texts accessible on the Internet, and all qualifying sources were included to capture a range of genres, strengthen the reliability of the salience analysis, and reduce selection bias. Consistent with the orientation of Positive Discourse Analysis, the dataset was restricted to online texts expressing opposition to the Smart City reclamation project. In total, 31 texts were analyzed, drawn from blogs, feature and news articles, opinion columns, a university literary folio, petition and position letters, Facebook pages, and a Learning Event Series channel on YouTube. Only texts written in English were included during the selection process to avoid translation-induced bias to maintain comparability of linguistic features. For news articles, only the directly quoted sections of the news were extracted as they contained the opinions of the individuals interviewed. In contrast, since opinion pieces, feature articles, blog posts, YouTube discussions, petition letters, and social media posts are inherently subjective, they were analyzed in their entirety.

Data collection

The data in this study were built through systematic web searches using predefined keywords across named sources: local/national news outlets (Daily Guardian, The Philippine Star, Rappler, Puerto Parrot, Inquirer.net, Union of Catholic Asian News, CBCP News), Facebook pages (NoTo174DumagueteIslands, STEWARD, LUPAD Dumaguete), a university literary folio (Sands & Corals), a Learning Event Series on YouTube, and environmental groups (HARIBON Foundation, Aksyon Klima Pilipinas, SandStories.org, Adobo Magazine, Science for the People, Positively Filipino). A university literary folio titled Sands & Corals was also used, along with a Learning Event Series on YouTube. Furthermore, data was obtained from environmental groups including the HARIBON Foundation, Aksyon Klima Pilipinas, SandStories.org, Adobo Magazine, Science for the People, and Positively Filipino.

Only those texts that contained opposition and resistance to the “Smart City” project were categorized as beneficial and were considered for analysis. Prior to data collection, ethical clearance was secured from the University Research Ethics Committee. The data were sorted by source, URL, date, and content and indexed in a researcher-designed text-locator. A codebook was developed with initial sets of codes, descriptions, sample excerpts, and source locators or references. Table 1 provides some examples of the codes.

Table 1. Example of the codebook

Category/ Theme	Code	Description	Excerpts	References
Highlighting Dumaguete City and its Marine Ecosystems	Distinctive qualities of Dumaguete City BLG1-1 FB3	Dumaguete City is described with distinctive qualities	"Tropical paradise", "The City of Gentle People", "rich coastal ecosystems"	Blog (Carl Joel Tilos) Facebook Page (NoTo174DumagueteIslands)
Impact of Smart City Project to Community	Individualizing fisherman's narrative/experiences NA17	Personalizing the lived experience of the fisherman who is affected by the project	"The sea (of Dumaguete) is full of life because fishes are still very abundant"	News Article (Press One)
Role of Marine Ecosystems	Marine animals as ecological actors OA7	Highlighting the dynamic and essential roles of marine species in ecological cycle	"Whales serve as 'whale pumps,'	Opinion Article (The Philippine Star)
Vivid Imagery of Destruction	Visual imagery of destruction BLG1-5	Imagery of the consequence of the reclamation project	"habitats that will be directly covered or buried,"	Blog (Carl Joel Tilos)

Data analysis

Stibbe's (2015) framework on salience was employed to identify the linguistic devices in the discourses about the "Smart City" reclamation project including individualization, transitivity patterns (Actor, Senser, Sayer), personalization, and sense image. Positive Discourse Analysis (Martin, 1999) was used to identify and highlight texts that were labelled as beneficial. The six-phase thematic analysis framework developed by Braun and Clarke (2006) was used to create themes. The themes were made up of codes represented by excerpts exemplifying the different linguistic devices that were used to show salience patterns in the discourse.

To establish the validity and reliability of the findings, three language experts were trained in the process of linguistic analysis. They served as raters. The selection criteria included their expertise, educational background of at least a doctorate degree or with doctorate units, and familiarity with ecolinguistics as a field. Noting the study's discourse-analytic aims and following Braun and Clarke's (2006) reflexive thematic analysis, coding was treated as an interpretive, reflexive practice rather than a measurement exercise that seeks a single correct code. A round-table deliberation was organized and conducted together with the raters. Changes were made to some items in the codebook, and some codes were modified and revised to achieve consistency in the data and facilitate categorization through this round-table deliberation and an audit trail of coding decisions (Awny, 2023; Fish et al., 2024; Hookoomsing, 2021; Khan et al., 2025; Younis & Abdulmajeed, 2023). These procedures are conceptually more appropriate to address the study's interpretive aims than using multiple-coder agreement metrics.

Findings and Discussion

Findings

The following findings elucidate how salience is deployed in discourses surrounding the 'Smart City' project in Dumaguete City, Philippines. The analysis included the examination of the frequency (f) and distribution of different salience patterns with the categorization of qualitative themes emerging from analyzed texts and supported by representative excerpts.

Linguistic devices in the discourses about the smart city reclamation project

Table 2 presents the salience linguistic devices, namely individualization, sense image, personalization, and transitivity, which occurred 127 times. The most frequently employed device was individualization which ascribed unique qualities to individuals; it was used 51 times, representing 40.16% of all instances. This was followed by sense image or the vivid description of objects or entities with 48 (37.80%) occurrences. Personalization through the naming of individuals in the environmental discourses appeared 16 times, accounting for 12.60% of the data. In contrast, the transitivity role of Actor, where a participant, particularly a non-human entity in this study, was represented as carrying out an action (non-human elements in the study's context), occurred 12 times, or 9.45% of the total instances.

Table 2. Frequency and percentage of salience linguistic devices

Salience Themes	Linguistic Devices	Sample Data	f	Percentage (%)
Highlighting Dumaguete city and its marine ecosystems	Individualization	*"tropical paradise"* *"60 percent of the fish species"*, more than 200 species of fish	51	40.16%
Impact of 'Smart City' project on the community	Personalization	the word "*Alive*" in a Facebook poster *"HELP ME SAVE MY HOME"*, *"Bucow"* *"If the fishermen are there, we'll still be here. If they are gone, where will we go?"*	16	12.60%
Vivid imagery of destruction	Sense Image	*"the waters of Dumaguete are teeming with marine life"*, *"the fine golden sands,* *"change local water movement"*	48	37.80%
Role of marine ecosystems	Transitivity Patterns	*Actor* ecosystems *"**sustain** up to*	12	9.45%

Salience Themes	Linguistic Devices		Sample Data	f	Percentage (%)
			*84% of fish species", "**support** small-scale fisheries", "these natural resources **provide** services and benefits to many", "seagrass habitats also **store** more carbon than rainforests at equal scales"*		
		Senser	---	0	0
		Sayer	---	0	0

In the analyzed data, individualization was exemplified by mentioning marine species and characterizing Dumaguete City. Some examples are *"productive coral reefs and seagrass beds"* (NA20); *"60 percent of the fish species"* and *"more than 200 species of fish"* (FB3); *"150 species of corals, 200 species of fish, nine species of seagrass, and 20 species of mangroves"*(NA8); *"extremely rare pygmy blue whale"* (OA7); *"95 percent of fishermen in the area"* (OA7); *"tropical paradis"* (BLG1-1); *"The City of Gentle People"* (BLG1-1); and *"fishes from the nearby Apo Island, they can travel all the way to Siquijor, Dauin, and even in Dumaguete City where they grow up as adults"* (BLG1-4) among others.

For personalization, several excerpts include references to human entities like the narratives of the fisherman, vendor, and tricycle driver. However, there were instances that marine species were humanized in the texts. Specifically, the word "*Alive*" (FB3) appears in a Facebook poster in reference to the corals, while the phrase "*HELP ME SAVE MY HOME*" (FB4) utilizes the first-person possessive pronoun "me" in reference to a sea turtle. One example of personalization through naming is "*Bucow*" (LES1), a nickname provided to a blue whale existing to the specific locale of Dumaguete.

In addition, sense image is present in the texts using descriptive expressions associated with visual, auditory, tactile, and olfactory references. To illustrate, the texts include excerpts such as *"the waters of Dumaguete are teeming with marine life"* (FB3) from a news article; fictional descriptions like *"the fine golden sands"*, *"loud splash"*, *"black ebony hair"*, and the *"electrifying jolt"* (LitFol); and phrases like *"alter coastal topography"* and *"change local water movement"* (OA4-2). Additional examples comprise *"erosion of coastal soils"*, *"liquefaction"*, *"fisheries productivity"* and *"local tourism"* (OA5), the idea of *"increasing competition for an already overfished resource"* and the resultant *"vulnerability of the local population to food insecurity"* (PETITION2-2); and a description of the project's scale as *"equivalent to 10 Lunetas or 4000 basketball courts"* (NA30).

Further, *activation* was evident in the discourses as marine entities like fishes, corals, whales, and other species functioned as actors in the transitive clauses. In the excerpt from a blog, *"will directly destroy, literally bury, the few remaining coral reef, seagrass and soft-sediment ecosystems that* ***support*** *small-scale fisheries and gleaning in Dumaguete"* (BLG1-2) the entire marine ecosystem was given agency as they were active contributors to community life and the local economy. More examples of transitivity pattern of 'actor' included excerpts like ecosystems *"**sustain** up to 84% of fish species"* (BLG1-4), *"**support** small-scale fisheries"*, the sea **"batters"** and the winds **"whisper"** (LitFol), *"these natural resources **provide** services and benefits to many"* (LES1), *"seagrass habitats also **store** more carbon than rainforests at equal scales"* (PETITION2-1) among others.

Emergent salience themes in the discourse

Based on these linguistic patterns, four themes were categorized, each emerging from the interaction of the various linguistic devices, namely individualization, transitivity pattern of actor, personalization, and sense image. The first theme *Highlighting Dumaguete City and its marine ecosystems* reflects the use of individualization and personalization in describing Dumaguete City as an entity with distinctive qualities, as well as emphasizing the biodiversity of the marine ecosystem. The online texts portray Dumaguete City as a tourist site, a marker of local identity, and a life-sustaining place for its community. Labels such as "*tropical paradise*" and "*The City of Gentle People*" characterize Dumaguete city.

Pronouns were also prevalent across the texts. To illustrate, the pronoun "*me*" in the line "*Help me save my home*," voiced by a sea turtle, foregrounds the species, and draws attention to its role in the discourse. The personal pronoun "*they*" was employed to refer to the plural species, particularly the gobies in the text. In the phrase "*They can climb boulders and waterfalls to find their suitable habitat*", the gobies were collectively represented and referred to by the pronoun "*they*". Another linguistic device found in the analyzed texts was anthroponymy or the use of a proper name. The name "*Bucow*" was used to personally refer to a species of blue whale specifically found in Dumaguete City waters.

The second theme, *Impact of "Smart City" project to community,* illustrates the perceived effects of the project to the lives of local community which included their livelihood, as constructed through individualization, sense image, and personalization. For instance, the interview excerpts from a fisherman who narrated his lived experiences, show his relationship with the sea near Dumaguete. This is reflected in the statements "*I was so happy to have caught a lot of fishes then,"* "*They were so big,*" "*The sea (of Dumaguete) is full of life because fishes are still very abundant,*" and "*full of life.*"

The texts also present the personal experiences of a vendor and a tricycle driver, offering insight into how their livelihoods are closely tied to the fishing sector. The market vendor narrated, "*If the fishermen are there, we'll still be here. If they are gone, where will we go?*" Similarly, the corpus includes the experience of a tricycle driver who turned to fishing when pandemic restrictions reduced passengers and income. As he explained, "*My family suffered so much during the pandemic, and through fishing, my family survived… That's why we must protect the gift of nature.*"

The third theme, *Role of marine ecosystems*, focused on the agentive roles of marine ecosystem, to the socio-economic situation and the marine ecology through the prevalent use of transitivity pattern of actor in the texts. Several samples from the texts denoted the activation of entities in the marine ecosystems as doers of action as illustrated in the statement, "*will directly destroy, literally bury, the few remaining coral reef, seagrass and soft-sediment ecosystems that **support** small-scale fisheries and gleaning in Dumaguete.*" Other than acting as supporters of and providers for humans, the marine ecosystems and species were also keeping the balance and functioning of the ecosystem as in the statement, "*Whales **serve** as 'whale pumps,' keeping the balance of their prey and circulating nutrients needed by other marine organisms*."

Furthermore, marine species in the waters of Dumaguete City were depicted as *Actors* in intransitive clauses like in the statement, "*They (gobies) climb boulders and waterfalls to find their suitable habitat.*" Some texts also emphasized the intrinsic value of marine species in addressing climate change. One instance can be seen in how seagrass ecosystems are assigned an active role through the verb *absorbs* as reflected in the statement, "*The seagrass, for example, **absorbs** a lot of the carbon that tries to mitigate climate change*."

The fourth theme, *Vivid Imagery of Destruction*, focuses on how the 'Smart City' project is represented as disrupting the city, its environment, and the surrounding community through visual imagery and sensory imagery. The texts include expressions such as "*destruction of coral reefs, seagrass, and soft-sediment ecosystems*" and "*habitats that will be directly covered or buried*." Quantification is also present in the data. For instance, the statement "*the destruction of the habitat of more than 200 species of fish*" pairs numerical specificity with ecological damage. Other excerpts describe the reclamation project as reshaping the underwater landscape of affected areas. Phrases such as "*massive disturbance underwater*" and "*sedimentation*" point to disruptions within marine ecosystems. In the same way, terms like "*murkier*" and "*sediment plumes*" help readers imagine a shift from clear, life-supporting waters to conditions that are increasingly turbid and degraded.

Furthermore, the statement *"can be carried over to other places"* indicates movement and spatial impact. Similarly, the excerpt *"Reclamation projects alter coastal topography and will change local water movement, adding to the imminent problem of sea-level rise in low-lying areas"* allowed readers to visualize the transformation of coastal landscapes. The mention of *"change local water movement"* showed the alteration of patterns and flow of water that could cause disruption to the balance of the coastal ecosystem. Beyond visual imagery, there were occurrences of olfactory and auditory imagery in the texts. In the phrase *"concentrate malodorous pollutants*", an olfactory imagery of contamination was evoked by the sense image. The word 'noise' in the phrase *"noise, dirt, and dust"* activated auditory imagery and engaged the readers with texts. Additionally, simile was indirectly utilized to help readers visualize the size and vastness of the area affected by the project. The statement, "*The project will also dump millions of tons of rubble on 174 hectares (an area equivalent to more than 4,000 basketball courts)*," employs comparison to convey spatial scale.

Overall, these findings show that both the human and more-than-human world were made salient in the findings.

Discussion

The study draws on an ecosophy that values all life forms and stresses ecological limits within interconnected systems, or a shared "convironment" (Fill, 2021), where humans are seen as part of sustaining ecosystems. Findings from the first theme present the foregrounding of Dumaguete City and its marine ecosystems through individualization and personalization. Numerical references add specificity, while naming marine species highlights their diversity. This precision helps situate readers within the ecological context and may evoke stronger affective responses. Place-based expressions also reflect indexicality (Silverstein, 2003), conveying meanings beyond literal reference. As toponyms (Nash, 2014), they function as cultural and environmental markers tied to shared identity, consistent with Clayton's (2012) view that environmental identity develops through shared experiences of place.

Another feature of the Smart City discourse is the use of pronouns as a form of personalization. Fairclough (2003) notes that naming practices shape how social actors are represented, while Pennycook (1994) highlights how pronouns organize inclusion and exclusion. Attributing personal pronouns to non-human entities casts them as active contributors within the discourse, sustaining their presence and questioning purely anthropocentric portrayals. This usage reflects anthropomorphism, which is the attribution of human traits or emotions to non-human entities (Cook & Sealey, 2018). This anthropomorphization enabled readers and viewers to "perceive human qualities in non-human entities" (Aggarwal & McGill, 2007, p. 468). The humanization of sea turtle, for example, personalized its experiences as potential victim of the reclamation project in the area. The issue was framed in terms of personal loss and vulnerability with which humans could relate and empathize. According to Decety (2011), empathy is a phenomenon that diminishes or even obscures the distinction between subject and object, or between oneself and another. Developing empathy among readers facilitated sharing of emotional or cognitive spaces between humans and non-human species, allowing humans to fully understand and resonate with the feelings and circumstances of animals.

Likewise, Zhdanava et al. (2021) speculated that when non-human animals are placed in a subject position (e.g., "*they want*" and "*they love*"), the linguistic choice activates them in the discourse. Instead of singularizing the animals and using the pronoun *it*, the sample phrase invokes anti-speciesist as the use of *it* is considered inappropriate because of its tendency to construe an animal as a thing and not a being. The thought of animals as things and not beings, "may make it more likely that they will be mistreated and their mistreatment disregarded" (Brown, 2022, p. 7). This was supported by Dunayer (2003, p.61) asserting that referring to an animal as something rather than someone "groups them with inanimate things" and "obliterates their sentience and individuality." Chawla (2001, p. 118) emphasized that "Humans and animals are in a reciprocal relationship with each other. If reverently treated, these animals are beneficent; if irreverently treated, they bring disaster." According to Awny (2023), individualizing non-human species through expressions that treat them as unique and irreplaceable individuals and through naming and personal pronouns increased their prominence and salience in the texts whereas backgrounding and omission of ecological elements from the discourse is referred to as erasure (Stibbe, 2015).

These contrasting discursive strategies shape how environmental problems are perceived and understood in public discourse (Suhandano et al., 2025). This discursive framing positions Dumaguete as a shared ecological space for both human and non-human species and not merely as a location.

Furthermore, the anthropocentric view about ecological systems places humans on top of the hierarchical ladder and diminishes non-human entities to lower rungs of importance. Humans are positioned at the top of a hierarchy, obscuring the recognition of the natural and social worlds as interconnected entities (Pennycook, 2017). However, the findings in the second theme reveal that there were groups of humans that might potentially suffer from this ecological injustice and considered themselves as negatively affected participants in the project. They were fishermen, vendors, and tricycle drivers whose economic interactions were intertwined with the very nature of fishing as the sole source of livelihood for local fisherfolk.

The narratives of the affected communities showed how the "Smart City" project could destructively affect ordinary people's livelihoods. This aligned with Everett and Neu's (2000) notion of the "erasure of people" in the discourse of ecological modernization, where vulnerable populations are affected, and issues of social justice are overlooked. As Capra (2002, p. 88) explains, "A sustainable human community interacts with other living systems - human and non-human - in ways that enable those systems to live and develop according to their nature". The establishment of the "Smart City" by the local government, could therefore pose a threat to different marine species both endangered and non- endangered. This takes into account the impact of reclamation on marine ecosystems particularly on the growth and reproduction of marine species, decreasing biodiversity, and the bringing in of land-sourced pollutants and industrial sewage (Li et al., 2010). Further, land reclamation fundamentally changes the natural characteristics of coastal resources and the environment, leading to considerable harm to the services provided by marine ecosystems (Shan & Li, 2020).

Moreover, a key claim of the "Smart City" project in Dumaguete City was its plan to convert the area into a highly urbanized center supported by modern technological systems. Presenting the "Smart City" in this manner, as Ponton (2016) contends, sidelines other narratives about the city's existing concerns, which might otherwise encourage public discussion and greater political participation in identifying appropriate responses. Drawing on Stibbe's (2009) ecolinguistic framework, the promises of the "Smart City" project may be interpreted as a form of pseudo-satisfier discourse, which creates the illusion of well-being while reinforcing the ideology that "growth is a good story." Stibbe (2015) pointed out that when growth is used as an indicator of a country's wellbeing, it only prioritizes the growing economy rather than social development, the health of ecosystems, and human and non-human wellbeing. These findings suggest that environmental discourse extends beyond ecological concerns to socio-economic issues that affect the marginalized communities. By sharing their experiences of survival through nature, community members produced narratives that reinforce what Haraway (2016) describes as a praxis of care and response within ongoing multispecies relations (p. 105). This approach highlights how language promotes deeper engagement with the natural world and a sense of responsibility toward it, emphasizing the interconnectedness of human and non-human life.

Notably, one aspect of language that affects our understanding of the natural world by increasing the salience of non-human elements in discourse is the transitivity pattern of "Actor" as demonstrated in the third theme. The Actor is the doer of the action in a material process which indicates the highest degree of agency attributable to an entity (Bellewes, 2023). In the context of this study, the representation of non-human entities as active participants in the discourse challenged the traditional anthropocentric views of humans occupying the Actor role in environmental texts. The marine species and ecosystems were not mere passive backdrops or resources for human exploitation but active participants in ecological and social systems.

The representation of the marine ecosystems, specifically the reefs and seagrass as entities that supported livelihood to small-scale fishermen in the area illustrated their invaluable contribution to the local community. It contradicted the central theme in anthropocentrism that non-human nature was merely a resource for human use, stemming from its perceived passivity and absence of agency (Bellewes, 2023). This kind of structuring shifted the focus from viewing marine ecosystems as object of economic activities but as active and dynamic systems that contributed to human communities. This contrasts the objectification of marine entities because humans were relegated as *goal* in the given examples. Specifically naming them "gobies" rather than "fish" increases their salience, as specialized terms signal ecological significance (Chrzanowska-Kluczewska, 2022). The texts also depict marine species as self-directed actors. Consistent with Ma (2024), such representation highlights their "inherent agency and self-motivation," portraying "autonomy and independence" (p. 10). This framing presents them as active agents engaged in survival and encourages greater appreciation of the gobies' resilience and intrinsic value.

Other representation of marine species in the texts referred to them as participants in combating climate change. According to Ma (2024), when the Actors and goals in transitive clauses are the physical environment, they are presented as mutually influencing and coexisting in the ecosystem. In this type of representation, the usual and commonly viewed hierarchical or competitive portrayal of interactions in the ecosystems was challenged. Particularly, presenting seagrass as an active contributor to environmental stability invites policymakers and environmental groups to recognize its role in climate mitigation which supports continued scientific study of seagrass ecology and promotes more evidence-based conservation strategies.

The description of non-human elements in the given examples aligned to the ecosophy of this study which emphasized the intrinsic value of various life forms. This was like Zaytoon's (2022) analysis of Bond's Great Stories for Children where nature was constantly represented as an agent in the transitive clause which advocated love for the environment. This approach of presenting the dynamic and mutual relationships of both the physical environment and organisms could instil values of interdependence, respect, and stewardship. This discursive orientation moves beyond a human-centered view and foregrounds the significance of other life forms. By recognizing nonhuman species as agents, it highlights their autonomy and ecological interrelations, giving rise to a deeper appreciation of their intrinsic value beyond human use.

Findings from the fourth theme show that sensory imagery in the "Smart City" discourse reinforces environmental meaning through lexical choices that evoke emotional engagement and empathy toward non-human life. The theme draws on contrasting imagery to depict the project's potential ecological harm. As O'Neill et al. (2013) note, such imagery helps communicate complex environmental issues to wider audiences. Multi-sensory descriptions, including visual similes (Pierini, 2007) and olfactory imagery (Stevenson & Case, 2005), further strengthen its persuasive effect. In this context, descriptive language not only depicts scenes but also highlights anticipated ecological consequences. Although largely negative, this framing may encourage more environmentally responsible responses by making abstract environmental risks more tangible and relatable. Consequently, using sensory imagery to depict the destructive impacts of the "Smart City" project can enhance public awareness and understanding of environmental issues.

Overall, language choices in the texts create patterns of salience that foreground marine ecosystem protection. The analysis highlights Dumaguete City's ecological diversity while drawing attention to the anticipated environmental and livelihood impacts of the proposed "Smart City" project. It also underscores the role of language in shaping public perception and supporting environmental conservation efforts.

Conclusion

Linguistic analysis of ecological discourse shows how sustainability is framed through language choices. Supportive narratives in the texts reflect the role of community-based advocacy in shaping public opinion and policy discussions, while also demonstrating how language can raise awareness and encourage collective action. Salience analysis identifies four themes that show how affirmative language supports ecological protection. This perspective offers insight into relationships between human and non-human life and contributes to discussions of a shared, sustainable future. By foregrounding environmental elements and non-human entities, the texts invite readers to recognize their value beyond utilitarian purposes. Transitivity patterns further present non-human species as active participants, highlighting their autonomy and ecological roles. Descriptions of the project's adverse effects draw attention to its socio-ecological consequences and encourage more critical engagement with development concerns. Together, these themes point to the need for more inclusive and ecologically attentive language in addressing environmental issues. In the context of Dumaguete City's "Smart City" initiative, the findings underscore the link between language and environmental discourse, showing how specific linguistic choices can shape public understanding of local sustainability issues.

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