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THE ROLE OF LANGUAGE IN THE ENVIRONMENTAL MOVEMENT: A COMPARATIVE  
DISCOURSE ANALYSIS OF SPANISH AND ENGLISH THROUGH AN ECOLINGUISTICS  
FRAMEWORK

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<sup>1</sup> Trickey, Alex. (2023). Elucidating the Barrier-Regulatory Effects of Butyrate and Indole on Intestinal Mucus and Goblet Cells. pp. 4.

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## **Abstract**

This study focuses on the role of language in producing and encouraging environmental frameworks and attitudes. Research within this sphere aims to determine the capacity of discourse analysis in influencing ecosophy. Within the current Anthropocene exist a variety of ideologies that shape human interaction with the environment. This paper considers an ecolinguistics framework with which to compare the linguistic structure and lexicon of two widespread languages, Spanish and English, through a comparative literature review. It takes a linguistic relativity approach to discourse analysis, examining the way in which corresponding environmental articles, written in Spanish and English, diverge. Findings within the scope of this research suggest that Spanish and English discourse differ substantially with regard to descriptions of agency, urgency, and pronouns, important components in the creation of ecological frameworks. Agency, urgency, and pronoun usage have the power to create a space in which the reader has a deeper connection with, and a more empathetic role regarding, the natural world. They also contribute to a heightened sense of perceived actionability. The results of this analysis illustrate how ecolinguistics can be used in future research and in sparking social action through intentional language use and messaging within the environmental movement.

### **Keywords:**

Ecolinguistics, Linguistic relativity, Discourse analysis, Anthropocene, Ecosophy, Ideology, Lexicon.

## Introduction

As the climate crisis continues to persist, a multitude of problems have surfaced that are not strictly within the sphere of physical science. While they have emerged alongside the scientific study of ecological destruction, they fall under moral, social, philosophical, structural, justice, and ethical categories. These problems add to the nuance and complexity of climate change, demonstrating that science alone is no longer the way to look for solutions; the climate crisis requires a more interdisciplinary solution-oriented approach.<sup>2</sup>

The interconnectedness between human systems and non-human biological ecosystems can be, in large part, represented through language and ecology. These spheres, however disconnected they seem, rely on one another. Language is central to our human experience and to our understanding of the world. It expresses personal identity and culture, shaping the way we think and constructing our boundaries of behavior. The non-human natural world, too, is central to our human experience, and further exploring the connections between the two would be advantageous. As the climate continues to change, analyzing the world's spoken and written language as it relates to the non-human natural world can prove crucial in identifying collective or cultural ideologies that shape people's relationship with the environment.

Ecolinguistics explores this relationship between language and ecology, and highlights the more interdisciplinary reality of the field of linguistics, reorienting it as an emerging part of life sciences.<sup>3</sup> This allows for a conceptual reunion between the natural world and human society and can address new ways of understanding what makes humans central in the current ecological crisis.

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<sup>2</sup> Wenjuan Zhou et. al. (2017). Ecolinguistics: Towards a new harmony. *Language Sciences*. Retrieved March 8, 2023, from [https://www.sciencedirect.com/science/article/pii/S0388000116301826?casa\\_token=i1HnZ4JWnbAAAAAA%3AeIjowjuv0U-hGRer8RB1qNJ8jBtFLcWsptZ97Y1163BgZ1jfK\\_Dh60sIwsi0y8bh5YfWV3](https://www.sciencedirect.com/science/article/pii/S0388000116301826?casa_token=i1HnZ4JWnbAAAAAA%3AeIjowjuv0U-hGRer8RB1qNJ8jBtFLcWsptZ97Y1163BgZ1jfK_Dh60sIwsi0y8bh5YfWV3)

<sup>3</sup> Ibid

Spanish is one of the world's most pervasive languages. It is the most widely spoken Romance Language, the second most spoken native language worldwide, and holds official status in countries in four continents,<sup>4</sup> yet there is a gap in Spanish-focused ecolinguistics research. I am interested in doing a deep dive into the way in which the Spanish language compares to previous ecolinguistics studies in the way that it situates people's experiences with and perceptions of the environment around them. Primarily, I want to tackle the following question: Does the Spanish language's structure and use, in comparison to English, produce a different ecological framework or story that is more beneficial to the preservation of the environment? Other relevant questions I'm looking to explore are: Can this framework have implications in the overarching environmental movement? Can language be used to shift attitudes towards environmental issues and influence social action? How does multilingualism play a role in this framework? I will address these issues through the medium of a comparative literature review. This review will look at corresponding articles written in both English and Spanish. These articles, about varying current events and environmental issues, will be put side-by-side and analyzed through an ecolinguistics framework, noting differences in discourse and language use. My research suggests that there is a substantial difference between discursive choices made in English from those made in Spanish, and that these differences contribute to the production of distinct ecological frameworks. Discursive choices include pronoun usage, words that attribute urgency, and agentive language. Each of these differences opens up space for the reader to feel more connected to, or empathetic to, the content they're reading, or more distant and neutral towards that content. Either way, the consequent frameworks ultimately encourage different ways of looking at the natural world.

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<sup>4</sup> Spanish - worldwide distribution. *Worlddata.info*. (n.d.). Retrieved March 8, 2023, from <https://www.worlddata.info/languages/spanish.php>

The implications of this research could have an effect on language use in environmental and educational contexts, environmental theorization, and new research explorations. Spanish is a widely-used and continuously growing language, and further exploring ecological frameworks that result from Spanish literature can be highly advantageous to the ongoing ecological crisis. Studies like this one also have the potential to heighten awareness of implicit biases in our framing of the world and instigate careful examination of the way these biases influence our actions.

### **Conceptual Framework**

It is important to begin by introducing the connection between language and thought. As cognitive psychological studies continue to research the nature of human cognition, the interplay between language, culture, and thought often remains at the forefront of these discussions.<sup>5</sup> The Sapir-Whorfian hypothesis, or the theory of linguistic relativity, suggests that language influences thought.<sup>6</sup> This framework focuses on structural differences between languages, stating that they function not only as a means through which to express one's ideas or report one's experiences but also, more importantly, as a shaper of these ideas and a definer of experience; thought and lived experience is confined within the structure and organization of one's native language. This hypothesis questions the objectivity not only of the world but also of scientific knowledge, and it addresses issues which fall in the spheres of psychology, sociology, philosophy, and anthropology, and a variety of natural sciences.<sup>7</sup>

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<sup>5</sup> Imai, Mutsumi, et al. (2016) The relation between language, culture, and thought. *ScienceDirect: Current Opinion in Psychology*, vol. 8, Elsevier, pp. 70-77.

<sup>6</sup> Lucy, John. (1997). Linguistic Relativity. *Annual Review of Anthropology*, vol. 26, pp. 291-312. [https://cslc.nd.edu/assets/142525/lucy\\_linguistic\\_relativity.pdf](https://cslc.nd.edu/assets/142525/lucy_linguistic_relativity.pdf)

<sup>7</sup> Hussein, Basel Al-Sheikh. (2012). The Sapir-Whorf Hypothesis Today. *Theory and Practice in Language Studies*, Vol. 2, No. 3, pp. 642-646. <https://www.academypublication.com/issues/past/tpls/vol02/03/30.pdf>

Languages reveal a lot about cognitive development, the way the world presents itself, and internal mental processes. As the world becomes increasingly bilingual, understanding the implications and importance of language and its role in human development becomes increasingly important. The claim that each distinct language holds a varied world view becomes more complicated with the ever growing presence of multilingualism. While multilingualism ultimately falls outside the scope of this study, it is interesting to note how different frameworks perhaps overlap or interact with one another within one mind. It would be advantageous to further explore multilingualism within the theory of linguistic relativity.

Without question, linguistic relativity has been a topic of controversy. The claim that language is a structure that determines attitudes towards reality has raised questions of absoluteness - should the idea of language relativity be posed deterministically, or does it actualize in varying degrees?<sup>8</sup> In other words, to what extent does language influence attitudes towards reality? Additionally, the pool of knowledge around thought and the way that the brain works has been and continues to be limited, bringing into question how sound the foundations of the linguistic relativity hypothesis actually are. Regardless of this uncertainty and whichever degree is taken into account, the findings of a growing collection of methodological studies which have analyzed languages around the world have found commonality in that language has the power to shape and create reality.

Building on the ideas generated by this hypothesis is where we find the field of ecolinguistics. Ecolinguistics remains a relatively new subdiscipline within the study of language, defined by the International Ecolinguistics Association as the exploration of the “role of language in the life-sustaining interactions of humans, other species, and the physical

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<sup>8</sup> Ibid



environment.”<sup>9</sup> In contrast to the Sapir-Whorfian hypothesis of linguistic relativity in relation to defining human experience, the field of ecolinguistics stretches those ideas into a tangible ecological context, concerning itself with both the social and physical aspects of ecology that are impacted by language. This developing framework furthers theoretical research of language discourse to include a more empirical, practical, and applicable facet.

The general objectives of the ecolinguistic framework are twofold.<sup>10</sup> The theoretical approach involves shifting linguistic theories and developing collective ideologies where human societies function as a part of a larger ecosystem, not separately. This ideological shift aims to challenge various issues that have burgeoned during the anthropocene, the current geological age during which human activity has disproportionately influenced the climate and the global ecosystem. The more applied approach explores the ways in which language scholarship can be used in addressing fundamental ecological issues. Most ecolinguistics studies have focused on English through a Western epistemological framework (Brown, 2022, Faramarzi, 2021, Rosenfeld, 2019). Exploring other realms of linguistic and cultural diversity and how they interact with these ideologies allows for a necessary, more global approach to environmental studies. The implications of more globalized research could crucially affect language use in education, environmental theorization, and new research explorations in addition to heightening awareness of implicit biases in collective environmental frameworks during the anthropocene and instigating careful examination of the way these biases influence social action.

The purpose of this study is to complete a deeper dive into understanding underlying stories to live by within Spanish and English narratives. Arran Stibbe, pioneer of ecolinguistics

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<sup>9</sup> Stanlaw, James. (2020). Ecolinguistics. *The International Encyclopedia of Linguistic Anthropology*. Retrieved March 8, 2023, from <https://onlinelibrary.wiley.com/doi/full/10.1002/9781118786093.iela0110#:~:text=On%20its%20website%20the%20>

<sup>10</sup> Ibid

research, highlights the idea that “stories are the secret reservoirs of values,” and emphasizes that if the stories we live by are able to be shifted, then each individual, community, nation, and global society has the power to shift as well.<sup>11</sup> This concept is at the core of his research of ecolinguistics. His work is an attempt to analyze the ways that language is used and the way that usage shapes human industrial and consumerist cultures to uncover the underlying stories we live by - stories that are more ecologically destructive, stories that are more ecologically beneficial, and ways in which people can strive towards a world of beneficial stories to live by.<sup>12</sup>

Ecosophy, relevant to these themes, is an important term to define, emerging in the 1980’s-1990’s. The Father of Deep Ecology, a movement that postulates that there is no importance of humans over other species, ecosystems, or natural processes, Arne Naess, introduced the meaning of ecosophy as the following: an ecological philosophy that prioritizes and emphasizes a respect for nature and the “inherent worth of beings other than human.”<sup>13</sup> In simpler terms, ecosophy is a philosophy that assumes ecological equilibrium. Naess was not the only one who is credited with a definition of ecosophy, he is accompanied by Felix Guattari, a French philosopher who produced a ecosophical model of nature as a “cybernetic system of interconnected feedback loops and nonlinear causality,” further stressing the lack of hierarchical structure within the natural world.<sup>14</sup> The etymology of ecosophy comes from the Greek language. The word is formed from two Greek roots, *oikos* (household) and *sophia* (wisdom) - a wise household. Fundamentally, an ecosophy refers to a wisely-governed society in which human

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<sup>11</sup> Ma, Chen, and Stibbe, Arran. (2022). The search for new stories to live by: A summary of ten ecolinguistics lectures delivered by Arran Stibbe. *Journal of World Languages*, De Gruyter, pp. 164-187.

<sup>12</sup> Ibid

<sup>13</sup> Sullivan, Patricia. (2009). Philosopher coined term 'deep ecology'. *Los Angeles Times*. Retrieved March 8, 2023, from <https://www.latimes.com/archives/la-xpm-2009-jan-26-me-naess26-story.html#:~:text=Arne%20Naess%2C%20a%20Norwegian%20philosopher,of%20environmental%20activism%20and%20thinking>

<sup>14</sup> Sahtouris, Elisabet. (2014). Ecosophy: Nature's Guide to a Better World. *Kosmos Journal*. Retrieved March 8, 2023, from <https://www.kosmosjournal.org/article/ecosophy-natures-guide-to-a-better-world/>

structures and ecology are viewed as separate parts of a single living system.<sup>15</sup> This world expresses a care for natural ecosystems and for the sustainable usage of surrounding resources. A strong presence of ecosophy, therefore, provides an example of an ecologically beneficial story to live by, a story that is productive in the way it encourages the revitalization of the surrounding environment. It is important to look into ecosophy in order to ecologically re-orient current stories to live by.

The aim of this paper is to establish a connection between linguistic structure or choices within the Spanish language and the underlying story to live by that this framework produces, which will be contrasted with English linguistic structure/choice and its consequent story. Furthermore, “the role of ecosophy is seen as the weighing scale between stories and the linguistic toolkit which helps to reveal them. To judge the stories as beneficial, destructive, or ambivalent, ecolinguists should use their ecosophy as an ethical tool for exposing the underlying message that stories convey.”<sup>16</sup> This assessment of ecosophy allows for the questioning and the re-orienting of current stories to live by from a purely ecological standpoint: do they encourage people to destroy their ecosystems or to protect them?

As mentioned before, central to the ecolinguistic theory are two assumptions, the first being that there is a relation between language, culture, and thought that shapes the nature of human cognition.<sup>17</sup> The second is that the linguistic relativity hypothesis forms a part of the larger discussion.<sup>18</sup> Another key aspect of ecolinguistic research is ecological discourse analysis, or the analysis of discourse that falls under the category of any ecological framework. Ecological

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<sup>15</sup> Ibid

<sup>16</sup> Ma, Chen, and Stibbe, Arran. (2022). The search for new stories to live by: A summary of ten ecolinguistics lectures delivered by Arran Stibbe. *Journal of World Languages*, De Gruyter, pp. 164-187.

<sup>17</sup> Imai, Mutsumi, et al. (2016) The relation between language, culture, and thought. *ScienceDirect: Current Opinion in Psychology*, vol. 8, Elsevier, pp. 70-77.

<sup>18</sup> Lucy, John. (1997). Linguistic Relativity. *Annual Review of Anthropology*, vol. 26, pp. 291-312. [https://csle.nd.edu/assets/142525/lucy\\_linguistic\\_relativity.pdf](https://csle.nd.edu/assets/142525/lucy_linguistic_relativity.pdf)

discourse analysis comprises two main areas of thought: the analysis of ecological discourse and the ecological analysis of discourse.<sup>19</sup> The approaches used for the ecological analysis of discourse include things like Critical Discourse Analysis, Positive Discourse Analysis, Multimodal Discourse Analysis, Ecosystemic Linguistics, and Harmonious Discourse Analysis.<sup>20</sup> These approaches, more specifically, focus on things like grammar (agents, participants, active voice, circumstances), narratives, framing, metaphors, rhetorics, and patterns of factivity<sup>21</sup> to determine the type of discourse analysis. All of these lexicogrammar choices play a role in ideological frameworks and advertising.<sup>22</sup>

As languages, Spanish and English both differ in many ways and also share many similarities. They each belong to separate language groups - Spanish is a Romance language and English is a Germanic one. They do share, however, the use of the Roman alphabet and lexical influence from Latin, a reality that helps to build a phonemic and phonological foundation between the two. This foundation still produces differences, particularly with the uneven distribution of vowel sounds.

Syntax is a specific area of linguistics that focuses on the arrangement and internal structure of a language through sentences. It looks at the grammatically correct necessities of sentence construction and phrase structure and highlights the importance of word order. When looking at Spanish and English through this perspective, it is of note that Spanish syntax allows for a greater amount of flexibility when thinking about grammatically correct or acceptable sentence structures. This can be shown through the way that Spanish verb forms can change

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<sup>19</sup> Ma, Chen, and Stibbe, Arran. (2022). The search for new stories to live by: A summary of ten ecolinguistics lectures delivered by Arran Stibbe. *Journal of World Languages*, De Gruyter, pp. 164-187.

<sup>20</sup> Penz, Hermine, and Fill, Alwin. (2022). Ecolinguistics: History, today, and tomorrow. *Journal of World Languages*, De Gruyter, pp. 232-253.

<sup>21</sup> Ibid

<sup>22</sup> Ma, Chen, and Stibbe, Arran. (2022). The search for new stories to live by: A summary of ten ecolinguistics lectures delivered by Arran Stibbe. *Journal of World Languages*, De Gruyter, pp. 164-187.

depending on the subject. In a Spanish sentence, one does not have to specify who is speaking, they can simply use the appropriate verb form that already indicates the subject. Take the verb *hablar* for example. Yo hablo could be written as “hablo,” and the information given would be the same. In English, verb forms don’t work in the same way and within the same system, so this kind of syntax is not possible.

More relevant to this particular study, English morphology is also structurally more simple than Spanish morphology. Morphology is the study of word structures, looking at the function of the parts that make up words. These structures include things like prefixes and suffixes which can be arranged in various ways that are all grammatically sound. An aspect of this morphological difference is highlighted when comparing the average number of syllabi between Spanish and English - English has one and Spanish has three. English, therefore, can be more effective with delivering information in that it can theoretically fit more content - it is more synthetic. These are only a few examples of the structural differences between the two languages, and provide a better understanding of Spanish linguistic structure.

### **Literature Review**

Einar Haugen, an American linguist and professor who was born in the early 20th century, is largely credited for, or connected to, the establishment of the field of ecolinguistics after his definition of the ecology of language as “the study of interactions between any given language and its environment.”<sup>23</sup> The term ‘ecolinguistics’, however, was coined by a French sociolinguist in the late 1900s, Jean Baptiste Marcellesi. Throughout the mid-to-late 20th century, many linguists, sociolinguists, and historical linguists in various forums worldwide

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<sup>23</sup> Penz, Hermine, and Fill, Alwin. (2022). Ecolinguistics: History, today, and tomorrow. *Journal of World Languages*, De Gruyter, pp. 232-253.

discussed the importance of merging the field of ecology and the environment with linguistic and social studies.<sup>24</sup> However, given the field's interdisciplinary nature, its purpose and definition continue to vary to this day.

“Ecolinguistics is the search for new stories to live by.”<sup>25</sup> A principal researcher, investigator, and educator within the field, Stibbe's work further contextualizes the frameworks and background necessary to understand the scope of this research. Stibbe's research, building off of the numerous linguistics before him, comprises the basis through which this overarching thesis ultimately structures its assumptions.

An interdisciplinary field of study, ecolinguistics is relatively new and takes on various theoretical frameworks, the most straight-forward and synthesizing being that human interaction with the environment is both mediated and influenced by language.<sup>26</sup> Within the past 50 years, ecolinguistic theoretical and empirical research has significantly grown and evolved. The emphasis on expansion is a result of, in large part, its relevance regarding the ongoing climate crisis and the devastating degradation of the natural environment. This new theoretical branch of linguistics continues to be studied and discussed today. The applied, empirical research within the field, however, is much less developed and remains in the beginning stages. The following literature will review the historical context and overview of the ecolinguistics field, it will parse out the theoretical frameworks upon which it builds, and it will provide insight into various completed case studies which inform the overarching thesis project.

The sources selected in this review provide contextual information, display various case methodologies and research methods within the field of ecolinguistics, and reveal the various

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<sup>24</sup> Ibid

<sup>25</sup> Ma, Chen, and Stibbe, Arran. (2022). The search for new stories to live by: A summary of ten ecolinguistics lectures delivered by Arran Stibbe. *Journal of World Languages*, De Gruyter, pp. 164-187.

<sup>26</sup> Penz, Hermine, and Fill, Alwin. (2022). Ecolinguistics: History, today, and tomorrow. *Journal of World Languages*, De Gruyter, pp. 232-253.

findings that researchers have discovered regarding the role of language in mediating and influencing the environment. Most sources were selected from academic journals that collect ecolinguistics research and articles on ecolinguistic thought globally or are independent studies that are relevant to the purposes of this thesis project. Although there are a limited number of completed case studies within the field of ecolinguistics overall, the case studies chosen intentionally relate to the research question, methodological practice, or the intended future goals of this prospective research. Each source provides some example of a research method, reveals missing information, or contributes to the problems posed that resulted in the creation of this project's main research question.

The future of ecolinguistics as a field of study will include a multitude of new topics and research explorations. There is still a vast wealth of knowledge that has yet to be explored and rising contemporary issues that affect the environment, like tourism, will need to be investigated as well as knowledge gaps in the euro-centric languages that have made up the majority of ecolinguistics studies.

### *Case studies*

While there are limited ecolinguistic case studies, those that have been done are extremely useful in analyzing and further understanding ways in which to conduct empirical research, ways in which the field is progressing, and to learn more about diverse language structures and frameworks that exist. Three of the five following case studies look at English through distinct lenses, one centers around a Romance minoritized language, and the last on a dialect spoken in East Africa. I have yet to find a case study involving the Spanish language.

The first relevant case study focuses on ecological discourse and stories we live by through an entertainment framework. The study narrows in on the film *Zootopia* and the way in which it has the potential to instill certain values through its animated discourse. This movie comprises an ecodiscourse throughout the film that is accompanied by a narrative coming from animals themselves. The researchers conclude that ecological comic functions like *Zootopia* are important ways of encouraging eco-friendly behavior and communication, as well as promoting thought on solutions to current ecological problems and critical thinking.<sup>27</sup> The study centers around narrative and the way in which information is presented to consumers, hypothesizing that the agency given to animals within this film to carry out ecodiscourse can be used to promote change in pervasive stories to live by. These underlying ideas parallel those of the overarching thesis project. This study, however, focuses more on discourse, specifically in English, than it does comparative linguistic structure.

A second case study was done focusing on the Emilian minoritized language of Italy, where the author uses five poems written in Emilian vernacular and focuses on the descriptors, the use of first singular person possessive pronouns, similes, and other writing style choices made by the poets to draw conclusions about the positive effects these stylistic choices have. She discusses how poems of minoritized languages can expose readers to various beneficial ways of interacting with the natural world, and that an ecolinguistic framework can be a powerful tool in language revitalization efforts.<sup>28</sup> Although this was the only ecolinguistic case study that dealt with a Romance language, it focuses more on revitalization efforts of minoritized languages,

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<sup>27</sup> Ivchenko, Natalia. (2021). Comic Function in the Animated Ecodiscourse: Case Study of ‘Zootopia’. *Theory and Practice in Language Studies*, Vol. 11, No. 9, Academy Publication, pp. 1080-1086.

<sup>28</sup> Hampton, Jessica. (2022). Telling stories of the local natural world: A path of reconnection with language and place in the Emilian context. *Journal of World Languages*, De Gruyter, pp. 409-433.



another subfield of ecolinguistic study, than on the stylistic choices in the poems and their direct effects.

One of the most widely discussed aspects of the English language and its linguistic structure is the use of pronouns. Both displayed in ecological discourse and in the frameworks of various participants, the use of the pronouns ‘it’ or ‘they’ is common within ecological contexts. In contrast to various branches of languages where natural ecosystems and biodiversity are referred to in a more individualized way, spoken about through gendered terms, or associated through interconnectivity frameworks, the English use of these particular pronouns distances the realm of humans from the realm of wildlife. Michael Brown conducted a study isolating linguistics through the use of pronouns, and found that the pronoun “it” was often used to describe wildlife, but distinctly was never used in the context of pets. Not only this, but participants tended to label animals that are thought of as dangerous or scary with the ‘it’ pronoun, while other wildlife pronoun usage was more varied.<sup>29</sup> These findings emphasize the way that language establishes distance or closeness perceptions and varied treatment of animals as a result of their generally accepted mental categorization. These results show ways in which English linguistic choices emphasize direct relationship with nature, and establishes pronouns as a useful tool that I can use and observe while conducting subsequent research.

The final focus regarding the English language is shown through the following case study that looks at earth-centered language and storytelling. This, in contrast to the previous studies, focuses on vocabulary usage and word choice when it comes to the Earth. Words like ‘dirt’, ‘soil’, ‘weed’, and ‘no man’s land’ bring out the negative associations that accompany them in

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<sup>29</sup> Brown, Michael. (2022). English pronouns and human exceptionalism: A corpus-based study of singular ‘they’ usage for nonhuman animals. *International Ecolinguistics Association, Language and Ecology*, pp. 1-22.

various manners, like through dictionary definitions, synonyms, and parts of speech.<sup>30</sup> The researchers ultimately emphasize an importance of shifting commonly used damaging language to a more earth-centered, less anthropocentric frame. Vocabulary and word-choice in stories and in storytelling is useful information that can also be a tool I use while conducting discourse analysis research.

Perhaps the most parallel to the overarching research project is the following final case study, one that focuses on the Kalenjin language. This study looks at a Kalenjin folk narrative and observes the ways in which agency, the active voice, verbs, and rhetorical devices are used in an attempt to create a framework in which the consumers of this narrative/speakers of this language would want to protect animals. The researchers ultimately find that particular and intentional use of agency through active voice allows the consumer to assign blame and to assign justice to various scenarios. Along with that, verb choice heavily influenced emotion and rhetorical devices allowed for more empathetic views of non-human animals in this folk narrative, which ultimately reflected cultural and ethical values as well as discouraging anthropocentrism.<sup>31</sup> The researchers conclude that this language form directly contributes to mental processes which expose the community's ecosophy - protecting animals is important because they themselves are equally important. This type of study reflects and guides the methodological process through which I want to conduct my research, and it shows the impact that this discourse analysis could have on the natural environment around these speakers. To my knowledge, this type of ecolinguistic study has not been done with Spanish.

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<sup>30</sup> Rosenfeld, Cynthia. (2019). From Prometheus to Gaea: A Case for Earth-Centered Language. *International Ecolinguistics Association, Language and Ecology*, pp. 1-16.

[https://www.ecolinguistics-association.org/\\_files/ugd/ae088a\\_fbc1bad9f5374739b13d2fb6d988e7be.pdf](https://www.ecolinguistics-association.org/_files/ugd/ae088a_fbc1bad9f5374739b13d2fb6d988e7be.pdf)

<sup>31</sup> Simotwo, Prisca. (2019). An analysis of linguistic choices in Kalenjin narratives relating to protection of animals. *International Ecolinguistics Association, Language and Ecology*, pp. 1-24.

[https://www.ecolinguistics-association.org/\\_files/ugd/ae088a\\_2bca486cbbd7401c803d4127e20cff39.pdf](https://www.ecolinguistics-association.org/_files/ugd/ae088a_2bca486cbbd7401c803d4127e20cff39.pdf)

The case studies discussed contribute to the larger pool of knowledge within the ecolinguistics field, but also reveal gaps within that knowledge. I am researching the effect of the most widely-used Romance language, Spanish, in similar ecological research contexts. Spanish and English have two very different uses of grammar and sentence structures that would be beneficial to analyze in an ecolinguistic framework. The case studies in particular help to inform my methodological approach. They contribute to the list of linguistic aspects in writing that I'll analyze, and they demonstrate the importance and the saliency of this type of research.

### **Data and Methods**

Ecolinguistic research remains in its developing stages, and as the field continues to grow and more theory and empirical studies emerge, so do questions of effective methodology and research implementation strategies in order to yield the most productive results. Throughout the course of this study, I am intending to tackle the following overarching question: Does the Spanish language's structure and use, in comparison to English, produce a different ecological framework or story that is more beneficial to the preservation of the environment? This leading question proposes a comparison between two languages - English, a Germanic language which has been subject to considerable ecolinguistic focus, and Spanish, a Romance language much less present in ecolinguistic literature to date.

The purpose of research is to identify linguistic structure and choices within the Spanish language, to identify linguistic structure and choices within the English language, to compare those literary and language choices, and ultimately establish a relationship and a connection between them within the larger social context of stories to live by. This study includes a content analysis of Spanish publications as well as an analysis of language assembly.

In order to methodologically tackle this research question in a productive way, I have chosen to analyze this gap in ecolinguistics research through the lens of, initially, ecological discourse analysis, and then through conducting a comparative literature review. Environmental literature is vast, and as the climate crisis continues to persist, there are more and more accounts of climate issues around the world. Ecological discourse analysis is a research method that focuses on the role of language in ecosystems, particularly how language can be used to build ecologically beneficial relationships that promote sustainability. In the context of this research, I will observe and analyze written forms of language to identify ecological frameworks in conversation with their social contexts. Although there are many sources of environmental literature, the written language in this study will come from five short news articles that cover current, environmentally-related topics.

1. Focus on the Amazon Rainforest

E - <https://www.nytimes.com/2022/12/31/opinion/brazil-elections-amazon-rainforest.html>

S - <https://www.nytimes.com/es/2023/01/03/espanol/opinion/lula-amazonia-brasil.html>

2. Focus on the ozone layer

E - <https://www.nytimes.com/2023/01/09/climate/ozone-hole-restoration-montreal-protocol.html>

S - <https://www.nytimes.com/es/2023/01/12/espanol/capa-ozono-china.html>

3. Focus on 2022 as a year of “green transition”

E - <https://www.nytimes.com/2022/12/25/opinion/gas-prices-crisis-climate-change.html>

S - <https://www.nytimes.com/es/2022/12/29/espanol/opinion/cambio-climatico-2022.html>

4. Focus on the environment as a victim in geopolitical conflict

E - <https://www.nytimes.com/2022/04/13/science/war-environmental-impact-ukraine.html>

S - <https://www.nytimes.com/es/2022/04/15/espanol/guerra-ucrania-medio-ambiente.html>

5. Focus on the President of Brazil's impact on climate

E - <https://www.nytimes.com/2022/10/31/climate/brazil-election-lula-bolsonaro-climate.html>

S - <https://www.nytimes.com/es/2022/11/02/espanol/brasil-lula-medio-ambiente.html>

These news articles are written both in English and in Spanish, involving the use of translation which I will discuss shortly, and come from the New York Times. The *Times* has a long history of newsmaking in relation to environmental issues, dating back to the 1950s and 1960s, integral years in the history of the movement. The newspaper often distinguishes itself from other publications due to the resources it devotes to coverage of the environment, and it is undeniable that it is one of the most well-known and widely-read publications when it comes to climate-related news. The use of discourse analysis in this study allows for a close inspection of the stylistic devices and choices used in each article. A linguistic analysis of ecological discourse, in the form of media literature, is an effective and concise way to begin tackling the broader research question by finding and highlighting side-by-side comparisons, similarities, or linguistic choices directly. Within these articles, there are differences in the assignment of agency, in the use of pronouns, a variety of uses of active and passive voice, and differences in the use of literary styles. These differences in themselves are an interesting point of investigation within the larger conversation of ecological discourse. The existence of differences in representation that appear in translation potentially indicate varied frameworks that inherently come with each distinct language.

Ecological discourse analysis is a huge branch of ecolinguistic research, and has been used in various previous studies.<sup>32</sup> The use of articles, as opposed to other discourse like books or media coverage, was prioritized because they provide not only clear side-by-side comparisons of

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<sup>32</sup> Cheng, Ming. (2022). Theoretical framework for ecological discourse analysis: A summary of New Developments of Ecological Discourse Analysis. *The Journal of World Languages*, vol. 8 iss. 1. Retrieved March 8, 2023, from <https://www.degruyter.com/document/doi/10.1515/jwl-2021-0030/html?lang=en>

linguistic choice, but they're also digestible and relevant to current events. In order to analyze the aforementioned data in a methodological way, I plan to use a coding and analysis method to interpret the texts and the differences that are selected. This method allows for a more grounded approach to data analysis, and includes the following methods that start narrowly and expand outward. I will primarily look through each document in its entirety to select relevant portions of the texts that contribute to answering the overarching question. Then I will identify relevant ideas or themes that find themselves repeated throughout each text, in order to further organize those themes into more conceptual or abstract ideas. This allows for a relationship between the written text and abstract theories and frameworks that have been outlined in this study.

An important aspect of this study revolves around translation. The articles chosen are corresponding articles written in one language and translated into the second. The identity of the translator, however, is unknown, as the New York Times gives credit to the same author in both versions of the piece and does not include information about the original language of the article or the translation process. In this context, however, the individuals translating the articles are typically editors working for the newspaper. The newspaper has provided statements that it is dedicated, when it comes to translation, to reflect the richness and the diversity of the Spanish language.<sup>33</sup> For Spanish publications, articles are sent over to a translation agency whose team are all native Spanish speakers. The process includes two layers of editing with two different Spanish editors, people who are required to have different Spanish language backgrounds.<sup>34</sup> The purpose of this choice is to ensure that articles written in Spanish can be understood by the global Spanish-speaking community that the *Times* reaches, whether those readers are from Mexico or Argentina or Peru or Spain. Trusted sources used in answering questions of

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<sup>33</sup> Budasoff, Eliezer. (2019). How Do You Say 'The New York Times' in Spanish? *The New York Times*. Retrieved March 15, 2023, from <https://www.nytimes.com/2019/07/04/reader-center/new-york-times-spanish-translate.html>

<sup>34</sup> Ibid

readability include the Real Academia Española and Fundéu, institutions that are recognized for governing the language.<sup>35</sup>

Linguistic choices and distinctions between articles, consequently, rely entirely on decisions made by the translator. There is no single way for one to express an idea in a particular language, and although growing up in the context of a certain language influences the way one thinks to write, translation choices are essential to the way the ecological discourse is presented. There are various components to this, including things like the background of the translator, their identity, and their relationship to the topic. It is imperative, then, for translation to be a key factor discussed in the results and analysis of this paper, as linguistic differences cannot be attributed only to the language, but also to the translator. Translation ultimately sets the groundwork for the key limitations of this work.

The limitations involved in this study center around one main theme: the idea of subjectivity. When looking at the main research question, it becomes clear that answering it in the scope of this paper relies on the subjective experiences of the translators, and therefore the lack of objectivity makes it difficult to come to clear and direct conclusions, or to draw causal conclusions. Although the articles were chosen because of their distinct linguistic differences, there are a wealth of unknown factors involved in the translation process including cultural backgrounds, personal closeness with the topic, and various workplace influencers. In order to address these limitations and to try to limit the effect of this subjectivity, I intentionally selected more than one article to observe, a choice that will hopefully reveal overarching themes or patterns in the analyses of the editors and allow for a broader wealth of linguistic information/choices that couldn't be attributed to solely one translator's decisions.

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<sup>35</sup> Ibid

## *Data*

The following section comprises a brief summary of each article chosen for this study, followed by a bullet-point list of every difference found between the English and the Spanish translations. These differences are presented in a very raw format, but are further analyzed, and organized, in the next section which focuses on data analysis.

### **1. For Lula and the World, the Tough Job of Saving the Amazon Begins**

This article, written in 2022 by Heriberto Araujo, is an opinion piece about the new president of Brazil and his platform claims to help to restore progress towards saving the Amazon, progress that was stunted by his predecessor, Bolsonaro. The article discusses the setbacks that occurred within the Bolsonaro administration, including things like the deactivation of the Amazon Fund, policies that expanded gold mining, and the obstruction of the system in place for enforcing environmental fines. It also highlights the difficulty that exists with balancing restoration efforts and the need for economic development, two things that many people in Brazil believe to be mutually exclusive. The article concludes with remarks about the benefits that the international community can provide the new administration with regarding its efforts.

Heriberto Araujo is a Spanish freelance journalist. He was born in Barcelona, and has been based throughout Europe, China, and Brazil. His work focuses on the Amazon Rainforest and the various consequences of climate change. He is fluent in six languages, including Spanish and English.<sup>36</sup>

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<sup>36</sup> Araujo, Heriberto. (2022). About Heriberto Araujo. Retrieved April 3, 2023, from <https://www.heribertoaraujo.com/about>



Differences noted:

Figure 1:

	<b>English</b>	<b>Spanish</b>
<b>1</b>	Tough job of saving begins for the world	Lula needs the world
<b>2</b>	Dangerous tipping point	Close to point of no return
<b>3</b>	Safeguard	Proteger
<b>4</b>	As a result	En consecuencia
<b>5</b>	*Blank*	Un gran problema en las tierras indígenas
<b>6</b>	Important deterrent	Una importante medida que desincentiva las malas prácticas
<b>7</b>	Looting of the jungle	La depredación de los recursos naturales
<b>8</b>	Save the rainforest	Salvar su selva tropical
<b>9</b>	Prosperity and preservation are both possible	La prosperidad y la preservación no son sólo necesarias en un mundo en crisis climática, sino también son realizables

*Figure 1 shows all differences in translation between the two articles side-by-side. Analysis of these differences occurs in the next section.*

Overview: Additional phrases/sentences in Spanish, some words translated differently, use of possessive, sentences in Spanish are longer - the makeup of a language is more than vocabulary choices and grammatical structures, but also styles and different practices.

## **2. Restoration of the Ozone Layer is Back on Track, Scientists Say**

This article was published in 2023 and written by Henry Fountain. It highlights the successful efforts made by the international community regarding the depletion of the ozone

layer through the widespread elimination, or ban, of chlorofluorocarbons. The author emphasizes the importance of China’s decision to eliminate rogue emissions of one of the aforementioned chemicals, CFC-11, which allowed for a projected speed-up in recovery by a few years. Throughout the article, the protocol in place that was in charge for the global monitoring and bans is revered, described as the “most effective global environmental pact ever enacted.”<sup>37</sup>

Henry Fountain is a reporter and editor for the New York Times, primarily covering scientific and climate-related topics. His focus remains on natural and human-caused disasters, like nuclear accidents and earthquakes.<sup>38</sup>

Differences noted:

Figure 2:

	<b>English</b>	<b>Spanish</b>
<b>1</b>	Back on track	Va camino a recuperarse
<b>2</b>	Emissions were stopped	Solo se retrasó un año
<b>3</b>	Warming	Calentamiento

*Figure 2 shows all differences in translation between the two articles side-by-side. Analysis of these differences occurs in the next section.*

### **3. This Year Was the Beginning of a Green Transition**

Leah Stokes wrote this article, which was published in 2022. It begins by describing the effects of the climate crisis that have become very apparent, particularly with examples from 2022. Despite these worsening conditions, she describes the year 2022 as an “inflection point,”

<sup>37</sup> Fountain, Henry. (2023). Restoration of the Ozone Layer is Back on Track, Scientists Say. *The New York Times*. Retrieved March 8, 2023, from <https://www.nytimes.com/2023/01/09/climate/ozone-hole-restoration-montreal-protocol.html>

<sup>38</sup> Henry Fountain. *The New York Times*. Retrieved April 3, 2023, from <https://www.nytimes.com/by/henry-fountain>

citing new policies and new administrations that continue to create momentum for a sustainable shift. Throughout the article, transitions are discussed in places like Europe, the United States, Brazil, and Australia, all of which are currently facing decisions and promoting policies that tailor towards cleaner energy and greener practices. To conclude, Stokes states that climate progress is unpredictable, but that there are many reasons for the world to be optimistic.

Leah Stokes is a Canadian political scientist, currently working as an associate professor at UC Santa Barbara. Her specialty is in public policy and observing political behavior with a focus on energy and climate change.

Differences noted:

Figure 3:

	<b>English</b>	<b>Spanish</b>
<b>1</b>	Now upon us	Ya están aquí
<b>2</b>	Turn the tanker around	Darle la vuelta al petrolero
<b>3</b>	Devastating wildfires...that killed or displaced...	Incendios forestales devastadores...en los que murieron o fueron desplazados
<b>4</b>	Rogue actors	Delincuentes

*Figure 3 shows all differences in translation between the two articles side-by-side. Analysis of these differences occurs in the next section.*

#### **4. A ‘Silent Victim’: How Nature Becomes a Casualty of War**

This article was written in 2022 by Emily Anthes. It focuses on the potential environmental impact of the war in Ukraine, and the ways in which nature is often dramatically impacted by conflicts of war. It discusses damages to landscapes, the use of chemical weapons,

the effects of radiation and nuclear fear, ecological cascading effects, and the effects of food insecurity on wildlife. At the end of the article, Anthes discusses the ways in which human conflicts can also provide a shield for nature, an example being disruptions to extractive industries like commercial fishing. She emphasizes that restoration is possible, but that situations of war and conflict are typically when opportunities to secure a future of biodiversity fall apart.<sup>39</sup>

Emily Anthes is a science journalist based in New York, and currently works as a science reporter for the New York Times. She focuses on topics related to animal health and science, including things like the pandemic and zoonotic disease.<sup>40</sup>

Differences noted:

Figure 4:

	<b>English</b>	<b>Spanish</b>
<b>1</b>	Profound environmental impact	Los animales y las plantas resienten las atrocidades
<b>2</b>	War	Conflictos bélicos humanos
<b>3</b>	Endangered	En peligro de extinción
<b>4</b>	Disruptive	Perjudiciales
<b>5</b>	Thin out forests	Devastar los bosques
<b>6</b>	The nuclear fear	El temor que provoca el uso de energía nuclear
<b>7</b>	Captured in	Captadas por
<b>8</b>	Enforcement	La aplicación de la ley
<b>9</b>	Invasive shrub spread through...	Un arbusto muy invasivo se extendió por

<sup>39</sup> Anthes, Emily. (2022). How Nature Becomes a Casualty of War. *The New York Times*. Retrieved March 8, 2023, from <https://www.nytimes.com/2022/04/13/science/war-environmental-impact-ukraine.html>

<sup>40</sup> Anthes, Emily. (2022). About Emily Anthes. Retrieved April 3, 2023, from <http://emilyanthes.com/about-emily/>

<b>10</b>	Risk of starvation	Riesgo de morir de hambre
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*Figure 4 shows all differences in translation between the two articles side-by-side. Analysis of these differences occurs in the next section.*

This article was the only one of the five that states that Ali Kinsella contributed to the translation, although it seems that Ali is a Ukrainian translator,<sup>41</sup> a focus unrelated to the Spanish translational aspect of this coverage.

### **5. What Lula’s Victory in Brazil Means for Climate**

This final article was written by Manuela Andreoni in 2022. It, again, discusses Lula’s victory in Brazil and its implications for the future of the Amazonian Rainforest and also for the climate crisis. She discusses the impact that the Bolsonaro administration had on climate policy and on practices within the Amazon, and the promises that Lula has made at the beginning of his term to resume policies from before Bolsonaro that reduced ecological damage. The article ends with a hopeful outlook on Lula’s mobilization to defend the natural world through climate policy change.

Manuela Andreoni is a Brazilian writer for the New York Times, writing primarily for the Climate Forward newsletter. Her focus is work related to the Brazilian Amazon.<sup>42</sup>

Differences noted:

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<sup>41</sup> Kinsella, Ali. (2022). Contributor Ali Kinsella. *Words Without Borders*. Retrieved April 3, 2023, from <https://wordswithoutborders.org/contributors/view/ali-kinsella/>

<sup>42</sup> Manuela Andreoni. *The New York Times*. Retrieved April 3, 2023, from <https://www.nytimes.com/by/manuela-andreoni>

Figure 5:

	<b>English</b>	<b>Spanish</b>
<b>1</b>	Protecting it from	Defendernos de
<b>2</b>	12,000 square miles	3 millones de hectáreas

*Figure 5 shows all differences in translation between the two articles side-by-side. Analysis of these differences occurs in the next section.*

### **Data Analysis**

Ecolinguistics-framed research on the Spanish language is an area of study that has not been thoroughly explored. The presented data highlights differences that exist between Spanish and English through comparative discourse analysis. This analysis consisted of reading each English article in its entirety and then placing it side-by-side with its Spanish counterpart in order to identify differences. These differences, although unique to each piece, present a few overarching themes in the way the articles are translated. In the following analysis, each of these themes will be introduced, analyzed, and put in conversation with the larger framework that they generate. On the whole, within the five articles, variations in English were presented in a way that created a more distant and neutral relationship between reader and content than those found in Spanish. The Spanish articles, while often directly mirroring phrases in their corresponding English narration, occasionally went beyond a neutral translation and altogether contributed, at varying degrees, to a different production of knowledge than the English versions. A relatively small-scale study, these findings reflect a more narrow scope of ecolinguistics research and cannot be generalized to be representative of a larger Spanish language framework throughout environmental literature. These articles present the beginning of an opportunity for further

research into varying forms of Spanish ecological literature, either in comparison to other languages or standing alone.

*Titles: Emphasizing urgency and accountability*

The first difference to note, and the very first thing that readers of these articles would encounter, can be found at the very beginning: the article titles and their subheadings. The Spanish translations of most of the analyzed article titles generally provided particular information for the reader that could encourage a different environmental framework right off the bat. This information came in a variety of forms including through additional phrasing, word choice, verb intensity, or perspective shifts. Below is a list of each article title and, if included, the subheading. The Spanish selections are accompanied by a direct English translation.

Figure 6:

	English	Spanish
1	<p><b>Title:</b> For Lula and the World, the Tough Job of Saving the Amazon Begins</p> <p><b>Subheading:</b> N/A</p>	<p>Lula necesita al mundo para salvar la Amazonía</p> <p><i>Direct translation: Lula needs the world to save the Amazon</i></p>
2	<p><b>Title:</b> Restoration of the Ozone Layer is Back on Track, Scientists Say</p> <p><b>Subheading:</b> Rogue emissions from China of ozone-depleting chemicals had threatened to delay recovery by a decade. But the emissions were stopped, according to a U.N.-backed report.</p>	<p>La capa de ozono va camino a recuperarse, dicen los científicos</p> <p><i>Direct translation: The ozone layer is on its way to recovery, say the scientists</i></p> <p>Las emisiones de China de productos químicos que erosionan la capa de ozono habían amenazado con demorar una década su recuperación, pero, según un nuevo informe, solo se retrasó un año.</p>

		<i>Direct translation: China's emissions of ozone-eroding chemicals had threatened to delay its recovery by a decade, but according to a new report, only delayed it one year.</i>
<b>3</b>	<p><b>Title:</b> This Year Was the Beginning of a Green Transition</p> <p><b>Subheading:</b> N/A</p>	<p>Un punto de inflexión para el cambio climático</p> <p><i>Direct translation: An inflection point for climate change</i></p>
<b>4</b>	<p><b>Title:</b> A ‘Silent Victim’: How Nature Becomes a Casualty of War</p> <p><b>Subheading:</b> Research on past conflicts suggests that the war in Ukraine could have a profound environmental impact.</p>	<p>El medioambiente es otra de las víctimas en la guerra de Ucrania</p> <p><i>Direct translation: The environment is another of the victims in the Ukrainian War</i></p> <p>Los animales y las plantas también resienten las atrocidades de los conflictos bélicos humanos, como sucede actualmente en el territorio ucraniano.</p> <p><i>Direct translation: Animals and plants also resent the atrocities of human warfare, as is currently the case in Ukrainian territory.</i></p>
<b>5</b>	<p><b>Title:</b> What Lula’s Victory in Brazil Means for Climate</p> <p><b>Subheading:</b> The president-elect once helped slash deforestation rates in the Amazon rainforest. He says he wants to do it again.</p>	<p>Qué significa la victoria de Lula en Brasil para el clima</p> <p><i>Direct translation: What Lula’s victory in Brazil means for climate</i></p> <p>Durante sus mandatos anteriores, el presidente electo ayudó a reducir las tasas de deforestación en la selva amazónica. Ahora dice que quiere volver a hacerlo.</p> <p><i>Direct translation: During his previous terms, the president elect helped reduce deforestation rates in the Amazon rainforest. Now he says he wants to do it again.</i></p>

*Figure 6: Side-by-side comparison of each article title and subheading. This figure directly displays the differences between the physical language of the corresponding messaging. Highlighted are significant differences that are further analyzed below.*



Article 5 in Figure 6 is the only one in which the translation is almost exact in both languages. Each other title and description vary in significant ways. Article 1 deals with the Amazon Rainforest in Brazil and the work that needs to be done by Brazil's new president. In the English version, the title presents a challenge. It gives the "tough job" of saving the Amazon to "Lula and the world" as a unit, facing this challenge. Not only does the phrasing present a task, it also includes the level of difficulty of that task through the use of the adjective "tough." The Spanish version, in contrast, is phrased in a more solution-oriented way. It presents the world as an option for Lula to help to save the Amazon - the world is a point of support. The phrase "Lula necesita al mundo" adds another layer to simply presenting a task, it offers a way in which to work towards solving the problem. The Spanish also omits the "tough," an adjective that has the power to shift the way readers think about the plausibility of environmental efforts.

The second article presents differences in Spanish and English phrases: back on track vs. va camino a. To say something is already "back on track" is to indicate completed work, that actions have been taken already to get back to the desired track. The Spanish phrase that is used in translation is a transitioning phrase, and indicates that the situation is on the way/in the process of bettering. This, consequently, stipulates that there is more work to be done, instead of providing a sense of comfort that things have already been set on a path. Furthermore, in this article's subheading, the Spanish version includes a bit of information that does not exist in the English version. While in English, rogue emissions were stopped, in Spanish the rogue emissions delayed the recovery of the ozone layer by one year. This additional information does not fall under the category of translation, but raises questions of whether the article was written in Spanish first, why the English translator chose to omit that information, or why the Spanish translator chose to add that information at the start. In any case, the English subheading presents

the action of stopping emissions, while the Spanish presents the consequences of that action as well.

The fourth article had the most stark difference, found within the subheadings. The sentences written in each language seem completely different. While the English version simply states that there could be a “profound environmental impact” in Ukraine, the Spanish version introduces a completely new perspective coming from the natural environment through animals and plants. The choice of stating strong emotion, that plants and animals *also resent*, humanizes these two groups and allows for the reader to empathize with them. Additionally, Spanish calls the atrocities “conflictos bélicos humanos” or “human warfare,” which gives humans agency and emphasizes the role that we play in causing these conflicts, as opposed to the word “war” which is an isolated noun/event. Nature, then, becomes a human-caused casualty.

These differences and choices found within the Spanish versions of each article are solution-oriented, present themes of accountability, emphasize that work continues to be necessary, and include a voice for nature with which we can empathize. All of this work contributes to Spanish-speakers’ framing of the environment around them.

*Additional Phrases: Incorporating urgency once again*

As mentioned in the previous section, there are moments in which Spanish versions of the articles include more information than the English version. This can be seen not only at the beginning but also in the body of these articles, and this additional information tends to be not only useful but also widely ecologically beneficial. In Article 1, there are multiple examples that demonstrate this change, many of which are in the following paragraph:

Figure 7:

	English	Spanish
1	The incoming administration has signaled that the new president will repeal policies that expanded gold mining in the Amazon and obstructed the system for environmental fines, an important deterrent. It plans to bolster the federal agencies tasked with protecting the rainforest and to create a federal police unit to investigate the sophisticated criminal gangs behind the looting of the jungle.	El gobierno entrante ha dado señales de que derogará las políticas que expandieron la extracción de oro en la Amazonía, un gran problema en las tierras indígenas, y de que se restituirá el sistema de multas ambientales, una importante medida que desincentiva las malas prácticas. Lula también planea fortalecer los órganos federales encargados de proteger la selva, mientras sus ministros han anunciado la creación de una unidad federal policial para investigar a las sofisticadas bandas criminales responsables de la depredación de los recursos naturales.

*Figure 7: Side-by-side comparison of a paragraph found in an article about the Amazon that shows considerable differences in urgent language use.*

Although most sentences written in this paragraph correspond in both languages, the Spanish version includes the phrase “un gran problema en las tierras indígenas” in order to emphasize that gold mining in the Amazon has been a problem for indigenous lands. This information does not exist in the English version, and adds knowledge of the tangible consequences that come with malpractice in the Amazon to the reader. Issues regarding indigenous land are very prevalent in discussions about the Amazon, yet other than this interjection, they are not mentioned anywhere else in either version of the article. At the end of

this same sentence, the English states “important deterrent” where Spanish describes “*an important way that disincentivizes malpractice*” when discussing fines. The Spanish word for ‘deterrent’ is ignored, and the translator chose to include “malpractice” in the sentence, assigning a moral judgment. There is a greater sense of urgency at the end of the paragraph in Spanish, when instead of translating “looting,” the writer chose to say “*depredation of natural resources.*” Looting as an action focuses attention on the act itself. The Spanish version of this sentence chose to, additionally, include the negative ecological effect within the description of the action.

There is an interesting difference in pronoun usage between these two translations of this sentence, a brief interjection into the additional phrases. In the English phrasing, the article talks about the incoming administration as an “it,” whereas the Spanish phrasing initially mentions the government the same way that the English did, but instead of subsequently using “it” to address it, Spanish uses “Lula,” the name of the Brazilian President. Previous case studies have been done around the idea of pronoun usage in English and the use of the word “it” that distances the reader from the object being spoken about. In this case, the use of the pronoun “it” as opposed to “Lula” when discussing work of bolstering federal agencies contributes to an ambiguity around this larger powerful entity and brings the reader away from personal human connection related to solution-oriented themes; it shifts the onus of solution-action.

Additional phrases are again seen in English within the last sentence of Article 1, which states that “prosperity and preservation are both possible.” In Spanish, the sentence states that prosperity and preservation are not only necessary in a world with a climate crisis, but also possible. This additional introductory clause outlining necessity introduces, again, a sense of urgency and communicates to the reader the gravity of the situation.

*Translation Variations: Actionability*

Sprinkled throughout each article were various translation choices that deviated from the direct word choice expected, but that added to the different frameworks that each language produced. Below is a table that places these translation variations side-by-side.

Figure 8:

	<b>English</b>	<b>Spanish</b>
<b>1</b>	Dangerous tipping point	Más cerca que nunca del punto de no retorno (closer than ever to the point of no return)
<b>2</b>	Safeguard	Proteger (protect)
<b>3</b>	As a result	En consecuencia (as a consequence)
<b>4</b>	Warming	Calentamiento (heating)
<b>5</b>	Now upon us	Ya está aquí (already here)
<b>6</b>	Rogue actors	Delincuentes (delinquents)
<b>7</b>	Endangered	En peligro de extinción (in danger of extinction)
<b>8</b>	Disruptive	Perjudiciales (harmful)
<b>9</b>	Thin out forests	Devastar los bosques (devastate forests)
<b>10</b>	The nuclear fear	El temor que provoca el uso de energía nuclear (the fear that the use of nuclear energy provokes)
<b>11</b>	Enforcement	La aplicación de la ley (the application of the law)
<b>12</b>	12,000 square miles	Más de 3 millones de hectáreas (more than 3 million hectares)

*Figure 8: Side-by-side comparison of individual translation variations— translation choices that had a more exact alternative option but whose varied choices contribute additional information. The Spanish column also includes the direct English translation of the words that were used in the articles.*

For each of the above examples, there were intentional translation choices that differed from a possible exact translation. For example, the direct translation of ‘as a result’ would be ‘como resultado’, which was not used in the Spanish translation. Instead, the article stated ‘en consecuencia’, which means something along the lines of ‘as a consequence’. The word consequence holds a more negative connotation than the more neutral ‘result’. Identifying possible alternative exact translations and noting that they were not used indicates the presence of a linguistic choice difference instead of a translation difference. The negative connotation that comes with the Spanish version of the text can also be seen with ‘calentamiento’, where the English ‘warming’ has a more welcoming, positive tone, the use of ‘delincuentes’ instead of rogue actors connotes crime more heavily, ‘en peligro de extinción’ as opposed to endangered adds a layer of urgency, ‘perjudiciales’ or harmful instead of the English disruptive, and ‘devastar los bosques’ in contrast with the English ‘thin out forests’, devastate having a much more grave and consequential weight to it. The phrase ‘closer than ever to the point of no return’ is far more final and dramatized than its counterpart, a ‘dangerous tipping point.’ Tipping points offer two potential alternatives, whereas point of no return is definitive and threatening in nature. This relates back to the idea of Spanish morphology, emphasizing that Spanish overall is less synthetic than English in its descriptions. The Spanish translation of ‘now upon us’ reads as ‘it is already here’, defining the issue as already present instead of now incoming, another form of prescribing urgency to the reader. Each of these word choices in Spanish carry a greater sense of urgency and of harm than their English counterparts.

Another interesting difference can be seen in the difference in units used to describe how much forest has been harmed. In English, square miles is the unit used, whereas in Spanish hectares are. It is common for different units of measurement to be used in different cultures,

however the difference between the numbers 12,000 and over 3,000,000 is quite conceptually clear - it is far more alarming to consider harm inflicted on over 3,000,000 units of forest than 12,000 units.

The difference between safeguard and protect is a minor one, but the verb choice differs in that protect is more of an active action term than safeguard seems to be. On a similar note, the replacement of ‘enforcement’ with ‘the application of the law’ brings forth a more actionable account of responsibility and responding to nature. This thread of responsibility can also be seen within the nuclear fear phrasing. The English text almost uses ‘nuclear’ as an adjective, pairing nuclear and fear together in a way that comes across as stating a category of fear. In Spanish, the use of nuclear energy is the producer of a fear - the reason the fear exists is because of the use of nuclear energy, the responsibility falls under the actionable choice to use nuclear power.

*Incorporating Accountability through Agency and Pronouns*

The last but perhaps the most compelling theme to the linguistic structure of the languages surrounds the idea of agency. Agency, here, refers to the ability of a thing or a person to act and to produce a particular result. It gives responsibility for an action to that person or thing, holding them accountable. In each article, there was at least one example of shifts in the agency that various groups had which resulted in a clear overarching framework through which to look at each scenario.

Figure 9:

	<b>English</b>	<b>Spanish</b>
<b>1</b>	Devastating wildfires... that killed or displaced...	Incendios forestales devastadores... en los que murieron o fueron desplazados

2	Radioactive particles were “captured in” the local flora	Radioactive particles were “captadas por” the local flora
3	Protecting it [the Amazon] is necessary for “fending off a global biodiversity crisis.”	Protecting the Amazon is necessary for “defendernos de una crisis mundial de biodiversidad.”
4	Saving the rainforest	Salvar su selva tropical

*Figure 9: Side-by-side comparison of the differences in agentive language usage in Spanish and English.*

In Article 3, one of the paragraphs discussed the increased presence of wildfires and the consequent destruction. In English, a phrase stated, “Devastating wildfires... that killed or displaced...” while the Spanish version said, “incendios forestales devastadores... en los que murieron o fueron desplazados.” The direct translation of the Spanish sentence is “devastation wildfires in which people died or were displaced.” Although this difference is only minor compared to the original English phrase, it deliberately shifts the agency away from the nature that holds it in English. The sentence transitions from the wildfires doing the killing and the displacing to wildfires being the context in which death and displacement occurs. The blame shifts. This can be seen again in Article 4 where in English, radioactive particles were “captured in” the local flora but in Spanish they were “captadas por” the local flora. The choice to shift captured in to captured by also shifts the agency, but towards the flowers in this scenario. Here, the English flowers did capture the radioactive particles but unintentionally, whereas the Spanish flowers completed the action of capturing the flowers, which provides a net positive to the surrounding environment.



In the first and fifth articles, agency is represented in a slightly different way, bringing in the audience and handing the responsibility to people. This is done in the following manner. In Article 5, the author discusses how the Amazon Rainforest is one of the most biodiverse places on Earth, and that protecting it is necessary for “fending off a global biodiversity crisis.” In Spanish, this is phrased using the first person plural, “defendernos de una crisis mundial de biodiversidad.” The first person plural “defendernos” brings the reader into the conversation and includes them as a part of the work that needs to be done towards a solution. In Article 1, however, when the author discusses “saving the rainforest” in English, the Spanish translation uses the possessive pronoun with “salvar su selva tropical,” a choice that attaches humankind to the environmental crisis. The switch from “the” to “their” eliminates a level of neutrality and makes the sentence more personal.

After each of the articles was placed side-by-side, it became clear that there were significant differences between them. These differences, once analyzed and put in conversation with one another, reveal different information that can contribute to or encourage different frameworks towards environmentalism. The choices made regarding what words to use, when to introduce agency, when to add or eliminate information, and how to emphasize urgency and familiarity within the reader all took the established English ecological framework and shifted it to create a more action-based, knowledgeable, and emotionally invested one.

### *Limitations and Applications*

There are many limitations to this data collection and analysis. Primarily and most obvious is the number of sources used and the limited amount of content provided. These five articles were chosen from the New York Times because they were the only environmentally-related articles that were translated both into Spanish and English at the time of

the search. Five articles, no matter how long or short, is not necessarily a substantial amount of information with which to create claims. Although the analysis of these articles presents an interesting starting point and seems to agree with the overall hypothesis that Spanish and English provide different ecological frameworks that encourage varied ways of looking at the environment, this data does not definitively prove this hypothesis. It would be beneficial to continue research in this vein and to look at a wider array of sources, both in terms of quantity but also in terms of where they come from.

The translators for the New York Times, although their identity is unknown, comprise a demographic that would inherently be different from other types of authors or writers around the world. Choices made in the translation of these articles may or may not be found elsewhere in literature. A more comprehensive selection of documents would illuminate if these stylistic choices and characteristics are more generally seen in Spanish literature or if they are more specific to this smaller-scale type of research.

Overall, the results of this data analysis point toward a specific direction in Spanish ecolinguistics research. It is salient that differences in translation exist as vividly as they do, and that every time a breach occurred, the Spanish version added another layer to the English.

### *Summary*

The article comparison and the data that was produced from these side-by-sides, in large part, directly ties back to the initial hypothesis. Not only did the translated articles provide different information than a simple direct translation, this information could encourage more ecologically-focused frameworks. The choices made by the authors highlighted important information about the effects of malpractice in climate situations, brought to the forefront the human contribution to the global crisis, emphasized the reality that there is a lot of work left to

be done and that changes are slowly beginning to happen, shifted the blame away from natural disasters and instead framed them as contexts in which misfortune happens, and strengthened the emotional relationship of the reader to the contents of the text itself. Each of these aspects are necessary to explore when trying to understand the extent of the climate crisis in front of us. This crisis is propelled by issues of misinformation, malpractice, and a lack of accountability - language-use like this can be very useful and have great implications in responding to these unfortunate realities.

### **Conclusion**

Analyzing language use and language structure has the power to reveal important and productive frameworks or worldviews. As a pervasive globally-used language, English has been a primary focus within the emerging field of ecolinguistics. Although many other languages have been the subject of ecolinguistic study, research into the ecological frameworks that are produced by the Spanish language has been less comprehensive. The Spanish translations of environmental articles within the New York Times have differed from their English counterparts in specific structural and translational ways. Overall, discourse translation and linguistic variation worked in tandem to create a space of heightened empathy and compassion for the non-human natural world in comparison to the English frameworks. The results of this research reinforce previous ecolinguistics studies that include concepts like the agentive use of language, pronoun selection, word choice, and discourse analysis, as well as studies of other Romance languages that produce frameworks that encourage a higher level of ecologically-friendly ways of thinking.

The scope and angle of this research opens up research opportunities for a variety of other kinds of Spanish literature. Discourse analysis of the Spanish language could expand to other article sources but also to other types of eco-literature like books, poetry, music, or media.

Additional sourcing would allow for a more holistic analysis of a more general Spanish ecological framework, something that could give way to discussions about language use within the broader context of the climate crisis. Further investigation into language determinism and linguistic relativity within Spanish allows for a wealth of opportunity within the environmental movement for intentionally instigating social action, integration within educational contexts, and working towards a more ecologically-conscious way of thinking about our natural world.

In order to further understand the potential of these findings and other avenues through which Spanish-focused ecolinguistics research may be useful, further research is needed regarding multilingualism in the field. As Spanish becomes more and more pervasive, so does the integration of culture and language. It would be beneficial to focus on the intersection of various linguistic frameworks and the ways in which this affects both human perception of reality and the future of the field of ecolinguistics.

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