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## 'Biodiversity' in Extinction Rebellion's words: an ecostylistic examination of a beneficial text

Daniela Francesca Viridis 

Department of Humanities, Languages and Heritage, Faculty of Humanities, University of Cagliari, Cagliari, Italy

### ABSTRACT

This article refers to the ecological rhetorical terms 'marker word' and 'environet' and to the ecolinguistic terms 'beneficial discourse' and 'ecosophy', and applies the stylistic theories of foregrounding, point of view, and metaphor to explore two diverse but complementary sets of linguistic data pertaining to the environet and containing the marker word 'biodiversity'. The first set of data is realised by four definitions of the noun 'biodiversity' provided by the Oxford English Dictionary and by three recent ecology and environment dictionaries and textbooks. Taking these definitions as a starting point, the second set of data consists of a text drawn from the environmental website of the international movement Extinction Rebellion incorporating the same marker word and showing its use in the beneficial context of an ecologically committed text in line with the ecosophy of this article and its seven norms. The article has a two fold research purpose: 1. To identify the beneficial ecostylistic strategies utilised in the dictionary and textbook definitions and in the text from XR's website; 2. To promote these beneficial ecostylistic strategies and the beneficial messages they convey among the general public.

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## 1. Introduction

In his latest book, Goatly (2022b, pp. 282, 287–289) includes biodiversity among such key contemporary ecological issues as capitalism and human control over nature. More precisely, this scholar discusses the quantifying potential of the noun phrase and states that quantification sustains the monetising practices of capitalist ideology. This leads to gradual commodification of both humans and nature, which has a dramatic impact on social equality and biodiversity, with a catastrophic reduction in the latter threatening the natural world and the entire planet. According to Goatly, biodiversity is a manifestation of the concept of the *multi-*, *poly-*, and *diverse* at both the microscopic and macroscopic levels. That is to say, it is connected with ecological and social interrelatedness, and with the richness of the world and its diversity and abundance of species, languages, and cultures; all of them are endangered by what he terms 'mono-mania' (Goatly, 2022b, pp. 282, 304). Biodiversity, Goatly continues, is also directly threatened by obvious phenomena like monoculture and species loss, but also by less obvious phenomena like standardisation, anthropocentrism, and individualistic freedom. Furthermore, as argued by this author in another contribution (Goatly, 2022a, p. 453), biodiversity apparently has a mutual relation to language, and biodiversity loss is associated with language attrition. To be more specific, more and more languages are dying, together with the cultures they convey, which have been based on ecological principles for millennia, and together with the various animal and vegetable species sustaining those cultures and regarded highly by them.

According to Stibbe (2021, pp. 151–155), the term 'biodiversity' is often employed in ecosystem assessment reports and in the United Nations' Sustainable Development Goals as an erasure strategy, erasure being 'A story in people's minds that an area of life is unimportant or unworthy of attention' (Stibbe,

**CONTACT** Daniela Francesca Viridis  [dfvirdis@unica.it](mailto:dfvirdis@unica.it)  Department of Humanities, Languages and Heritage, Faculty of Humanities, University of Cagliari, Via San Giorgio 12, Cagliari, 09124, Italy

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2021, p. 223). In these documents, along with such nouns as 'fauna' and 'flora', 'biodiversity' and the noun phrase 'components of biodiversity' are utilised as abstractions: they become hypernyms substituting the hyponymic names of a diversity of concrete and individual species, thereby erasing their distinctive features. Moreover, in these texts, several coordinated noun phrases (for instance, 'biodiversity and other ecological resources') frame biodiversity and animal and vegetable organisms as co-hyponyms of resources and of inanimate entities: these devices erase the specific nature of more-than-human life, and depict animals and plants as objects to be exploited. Given these ecological challenges and these linguistic practices, it is of topical interest to clearly define what 'biodiversity' means from different disciplinary perspectives and to exemplify its meaning in ecological discourse, thus filling a research gap in the fields of ecostylistics, ecolinguistics, and positive discourse analysis.

Moving from this background and from the results achieved in a recent book-length study on ecostylistics and on ecological texts, keywords, and strategies (Virdis, 2022), this article fills that research gap and complements that study by investigating the marker word (Myerson & Rydin, 1996, pp. 6, 37; see Section 2) 'biodiversity'. To collect and scrutinise comparable data and make comparable findings, the article applies the same ecostylistic theoretical framework and methodology as those adopted by that study; namely, underpinning the article are the stylistic theories of foregrounding (Leech, 2007), point of view (Simpson, 1993), and metaphor (Steen, 2016) and the examination of their linguistic realisations. Moreover, on the one hand, the ecostylistic study explores the definitions of five marker words from the academic standpoints of lexicology (OED Online, 2024) and of ecology and environmental studies (recent ecology and environment dictionaries and textbooks in their latest editions or reprints); and, on the other hand, it analyses five ecological texts drawn from the websites of environmental organisations and agencies belonging to the environet (Myerson & Rydin, 1996, pp. 7–10; see Section 2) and comprising those marker words.

Therefore, this article examines four definitions of the marker word 'biodiversity' taken from the same lexicological and naturalistic sources; this examination functions as an introduction to the scrutiny of a text from the environmental website of the international movement Extinction Rebellion (XR) (<https://rebellion.global/>) containing that marker word and providing it with a militant context moving its addressee to action. As in the ecostylistic study, in the article, the definitions of the noun 'biodiversity', the text from the Extinction Rebellion website, and the ecological messages relayed by their stylistic devices are compared with and evaluated against the ecosophy of this article and its seven norms (Stibbe, 2021, pp. 14–15; see Section 2).

It follows that this article has the same two fold research purpose as the ecostylistic study, that is:

1. To detect the beneficial (Stibbe, 2021, pp. 26–30; see Section 2) ecostylistic practices employed to produce the four dictionary and textbook definitions and the text from the environmental website of Extinction Rebellion, thereby investigating beneficial discourses from the environet;
2. To propose these beneficial ecostylistic practices and the beneficial considerations they communicate for broader use and circulation among the general public, so as to ultimately encourage ecological and social change.

This two fold research purpose aligns with the aims and scope of this Article Collection on positive discourse and language, namely, highlighting alternative and more positive discourses underlining and praising the interpenetration and dynamic relationship of all human, animal, and vegetable organisms on the earth. For this reason, this article as a whole falls within the broad remit of positive discourse analysis. This area is not concerned with the deconstruction of power and discriminatory values, as critical discourse analysis is; it is concerned with constructive social action upon the world and with presenting productive descriptions of alternative forms of social subjects, organisations, and processes. The thrust of positive discourse analysis, as well as of this article, is to supply inspiring models to design better futures, in order to energise social change and transform reality (Martin, 2004; see also Stibbe, 2018 for an ecolinguistic approach to positive discourse analysis).

With a view to accomplishing its research purpose, this article is structured as follows. Section 2 presents such major terms in ecological rhetoric and ecolinguistics as 'marker word', 'environet', 'beneficial discourse', and 'ecosophy'. Section 3 outlines the discipline of stylistics and its theories of foregrounding,

point of view, and metaphor applied in the article (Section 3.1). It also describes the data under scrutiny here, that is, on the one hand, the four definitions of the marker word 'biodiversity' provided by the Oxford English Dictionary Online (OED Online, 2024) and by three ecology and environment dictionaries and textbooks; and, on the other hand, the text from the ecologically committed website of Extinction Rebellion incorporating this marker word. Section 4.1, the first analytical part of the article, explores the definitions of the noun 'biodiversity'. These definitions and their investigation offer a background to the examination of this noun in the context of the text from the Extinction Rebellion website, undertaken in the second analytical part, Section 4.2, and in its three sub-sections. The concluding Section 5 assesses the contribution of this research, appraises whether its research purpose has been attained, and summarises the results of the article.

## 2. Literature review: key terms in ecological rhetoric and ecolinguistics

As noted in the introductory Section 1, this article is founded on and leads on from a recent book-length study on ecostylistics (Virdis, 2022). In turn, underlying that study are four main terms and notions: 'marker word' and 'environet', from the professional field of ecological rhetoric, and 'beneficial discourse' and 'ecosophy', from the professional field of ecolinguistics. In this article, the noun 'biodiversity' is investigated as a marker word or environment word. By, incidentally, hinting at 'biodiversity', Myerson and Rydin explain what marker words are and why it is fruitful to pinpoint and scrutinise them in ecological text and discourse:

Their [marker words'] presence reveals the environmental agenda. As they appear, change and are contested, they show the dynamics of that agenda. More important, the words carry the viewpoints; without these marker words there would be no focus for the viewpoints. Imagine the debate about the rainforests without the environment word "biodiversity". Different voices, expressing these viewpoints, use the words, are heard through the words. By looking at environment words we come to hear the different voices of the environmental agenda. And as words engage with each other in argument, so the voices engage.

(Myerson & Rydin, 1996, p. 6)

As contended by these researchers (Myerson & Rydin, 1996, p. 6), the meanings of marker words are contested in texts, so much so that these words are characterised by a 'repeatedly changing nature' and a 'continuing quest to define their meanings'. These features are distinctive of the present times in general and contemporary ecological debates in particular. This multiplicity of meanings and the arguments related to them is the reason why this article defines the noun 'biodiversity' from two distinct disciplinary viewpoints—lexicology and ecology and environmental studies—and explores its use in an activist text from the website of Extinction Rebellion.

This text and the website it is drawn from are a part of what Myerson and Rydin call the environet, namely, a net of various texts belonging to diverse text-types, including one or more marker words, considering environmental questions, and expressing dissimilar, also conflictual, views:

each [text] has a topical consciousness of the environment, of what currently should be argued about and how. Our metaphor for the aggregate collection of texts, words and voices is "the environet", a network making linkage upon linkage between the environment words. [...] The environet can also be imagined as a "textual carnival" in the metaphor of Miller (1991). A carnival is also dynamic, full of connections made and broken in the *melée*. And a carnival (such as the Rio Earth Summit?) mixes people and voices: the prestigious and peripheral, authoritative and popular, would-be weighty and knowingly transient.

(Myerson & Rydin, 1996, p. 7)

Even when the environet texts and their arguments derive from different contexts, look separate, and do not explicitly cite or recall one another, they forge links and appear as an organic and seamless whole to their addressee, as in a collage or a composite picture. The environet texts strengthen or weaken the arguments put forward by other environet texts, thereby establishing cultural connections; as a result, Myerson and Rydin (1996, p. 11) maintain that 'Our claim is that the argumentative environet is a central fact of contemporary culture'.

As previously mentioned, this article analyses the use of the marker word 'biodiversity' in an environet text from the militant website of Extinction Rebellion. The text relays a beneficial discourse or, in Stibbe's (2021, p. 26) words, one of those 'new discourses that convey ideologies which can actively encourage people to protect the systems which support life'. In other words, beneficial discourses inspire their addressee to act in a more ecological way, 'value the lives and wellbeing of humans and other species, promote reduction in consumption and social justice, or work towards resilience' (Stibbe, 2021, p. 26). These discourses are neither hegemonic nor extensively diffused or disseminated in our unecological cultures; consequently, the objectives of ecolinguistic and ecostylistic examination are to advocate their perspectives on reality, opposite to those of dominant discourses, and to concur in popularising them, their beneficial stylistic characteristics, and the value-systems they suggest. After setting out what beneficial discourses are, Stibbe (2021, pp. 27–29) reviews several studies which identified and explored instances of them, among which are:

1. Goatly's (2000, pp. 285–302) investigation of Wordsworth's 'The Prelude', which depicts the natural world as lively and full of energy and animation;
2. Macfarlane's (2013) analysis of the work of two groups of writers he termed Imaginative Naturalists and New Nature Writing, which gives prominence to the mutual connection between the human world and the more-than-human world;
3. Dewi and Perangin-Angin (2020) scrutiny of traditional Indonesian Pagu tales, which call for an ethic of care for the planet and consideration for the ecological structures sustaining life.

How can the discourse communicated by the text from the website of Extinction Rebellion examined in this article be judged as beneficial? Ecolinguistics scholars compare the texts and discourses they study to an ecosophy: this is 'An ecological philosophy, i.e. a set of values concerning the ideal relationship of humans with each other, other species, and the physical environment' (Stibbe, 2021, p. 223). This article adopts the ecosophy developed by Stibbe (2021, pp. 14–15) and its set of seven normative values, which are summarised below:

#### **Ecosophy in one word:** Living!

1. **Valuing living:** Not only must we humans recognise the value of the lives of all human, animal, and vegetable species, but also appreciate, extol, and honour them. Underpinning this norm is the fact that every organism values its life and does anything that is required of them to keep on living.
2. **Wellbeing:** The thrust of the ecosophy for all human and more-than-human organisms is not merely being alive, experiencing pain, and surviving in wretched circumstances; instead, it is valuing being alive and enjoying high levels of wellbeing.
3. **Now and the future:** The time range of the ecosophy is not restricted to the present, but encompasses high wellbeing in both the present and the future for all organisms and for all generations to come.
4. **Care:** This norm focuses on the animals and plants we humans kill and damage so that we can carry on our own wellbeing. The norm comprises the tenets of empathy, respect, and gratitude. Empathy involves consciousness of how we affect more-than-human life; regret means reducing the damage we cause to it; and gratitude entails giving back to the animal and vegetable species sustaining us.
5. **Environmental limits:** With a view for the earth to supporting life and wellbeing into the years to come, we must not cross its environmental limits; that is to say, it is essential that we cut down our consumption and waste rates globally and without delay.
6. **Social justice:** At present, most people from the Global South only have exiguous and inadequate means to live; hence, natural materials must be more fairly redistributed from the richer Global North to the poorer Global South.
7. **Deep adaptation:** Ecological devastation is already taking place, and further ruin seems to be unavoidable; accordingly, we must take an urgent course of action to protect life and wellbeing in our radically changing or even collapsing industrial civilisations.

It is against the background supplied by the ecological rhetorical concepts of marker word and environet, and by the ecolinguistic notions of beneficial discourse and ecosophy, that this article, in its analytical [Section 4](#), investigates the four definitions of ‘biodiversity’ and the text from the Extinction Rebellion website. This investigation is pursued via the research area of stylistics and its techniques of foregrounding, point of view, and metaphor, which are presented in [Section 3.1](#) below.

### 3. Methodology and data

#### 3.1. Methodology: stylistics and foregrounding, point of view, and metaphor

As asserted by Simpson (2014 [2004], p. 3), ‘Stylistics is a method of textual interpretation in which primacy of place is assigned to *language*’; more precisely, stylistics scrutinises creativity in language use. Stylistic practice subscribes to three core tenets, the so-called ‘three Rs’: it must be rigorous, retrievable, and replicable. Firstly, the method complied with by stylistics must be rigorous, that is, underlying it is a structured analytical framework and organised models of language and discourse. Secondly, the stylistic method must be retrievable, namely, examination is founded on clear terms and arranged in accordance with clear criteria, whose meanings and standards are approved by the stylistic community. Thirdly, the stylistic method must be replicable, that is, it must be evident enough so that other researchers are enabled to check it for accuracy by verifying it on the same text or on other texts.

The stylistic method has traditionally been marked by the study of a number of linguistic mechanisms in text and discourse. This article explores the occurrence and role of three such mechanisms in the text from the Extinction Rebellion website; the first is foregrounding. According to Leech’s (2007, p. 3) definition in the latest book-length study of this phenomenon, foregrounding ‘is the meeting point of formal and functional points of view. Formally, foregrounding is a deviation, or departure, from what is expected in the linguistic code or the social code expressed through language; functionally, it is a special effect or significance conveyed by that departure.’ ‘Foregrounding’ is a metaphorical term evoking Gestalt psychology and its opposition between figure and ground: the structures of standard language offer a background (ground) to the deliberate use of deviations from the standard (figures). Foregrounding is, therefore, the linguistic strategy utilised to undermine the linguistic or social code, to upset its expected structural system, or normal paradigm, and to create an unexpected structural system, or deviant paradigm. This can occur at any of the various levels of the language: from the phonological, graphological, and morphological levels, to the lexical, semantic, syntactic, and discursive levels. This device achieves a defamiliarising effect and provides old, common, and ordinary entities with new, uncommon, and unordinary meanings and interpretations (Leech, 2007, pp. 15–19).

The second linguistic practice analysed in this article and distinguishing the stylistic method and its topics of investigation is point of view. In his seminal book on point of view, Simpson (1993, p. 2) claims that it consists of ‘language as representation, as a projection of positions and perspectives, as a way of communicating attitudes and assumptions’, in sum, ‘the “angle of telling” adopted in a text’ to relate a fact or portray an entity. This scholar detects four basic categories of point of view:

1. Spatial point of view: the physical perspective adopted by the author of a text or, in the case of narrative fiction, by its narrator or characters. It regards the camera angle taken in a text, which ranges from an unlimited bird’s-eye view of activities and phenomena to the limited standpoint of an individual observer (Simpson, 1993, pp. 11–19).
2. Temporal point of view: whether the author or narrator of a text represents activities and phenomena as happening at a fast or slow pace, in a connected series or in disconnected parts, with or without narrative gaps, with flashbacks or flashforwards, developing in a linear way or interweaving with other storylines (Simpson, 1993, pp. 11–19).
3. Psychological point of view: how activities and phenomena are linguistically conveyed in the text by the consciousness of its author or by the perception of its narrator or characters. The most stylistically relevant tool to scrutinise psychological point of view is what Simpson (1993, Chapter 3) calls the modal grammar of point of view, which is constituted by the operators of deontic, boulomaic, epistemic, and perception modality.

4. Ideological point of view: how the linguistic make-up and configuration of a text effectively suggest the specific value-system of the author or narrator of that text, namely, their ideological bias, and determine how the addressee of that text perceives its message. The primary markers of ideological point of view are value-laden linguistic selections, that is, evaluative stylistic and lexical choices (Simpson, 1993, pp. 96–101).

Metaphor is the third linguistic technique characterising the stylistic method to be explored in this article. Of the diverse theories of and approaches to metaphor recently elaborated in different linguistic and cognitive disciplines, this article applies the model evolved by Steen (2016), owing to its explicit stylistic and analytical orientation. This model postulates three distinct dimensions of metaphor. The first dimension is expression, or metaphor in language. It originates from the means of discourse and the various lexical and syntactic structures it shows; for example, the linguistic differences between metaphor and simile (Steen, 2016, pp. 315–318). The second dimension is conceptualisation, or metaphor in thought. It stems from the individual participants in the discourse deploying their mental faculties and diverse conceptual structures, namely, either the conventional metaphors available in their minds or the novel or creative metaphors they invent (Steen, 2016, pp. 311–315). The third dimension is communication, or metaphor in interaction. It derives from the participants in the discourse engaged in their joint communicative exchange, that is, from the distinct communicative functions of that discourse and of the metaphors employed in it (Steen, 2016, pp. 318–322).

It is at this third level that the difference between deliberate metaphor and non-deliberate metaphor arises. Non-deliberate metaphors are metaphorical in the language/expression and thought/conceptualisation dimensions, but work automatically and are not utilised intentionally as metaphors in the interaction/communication dimension. Opposed to them are deliberate metaphors, which have an interactive or communicative objective: they make explicit cross-domain comparisons between the target domain and the source domain with a view to the addressee giving heed to their similarities (Steen, 2016, pp. 318–319).

As noted in the introductory Section 1, in a recent ecostylistic examination (Virdis, 2022), the stylistic mechanisms of foregrounding, point of view, and metaphor were pinpointed and studied in five beneficial texts from as many environmental websites pertaining to the environet and featuring a marker word each. This article expands that examination by identifying and investigating these stylistic devices in four definitions of the marker word ‘biodiversity’ and in a beneficial text from the environmental website of Extinction Rebellion where this marker word figures prominently. The definitions and the text are described in Section 3.2 below.

### **3.2. Data: ‘biodiversity’ definitions and Extinction Rebellion text**

Scrutinising the language of the environet necessarily involves different academic fields and professional paradigms, and needs an openly transdisciplinary approach. Therefore, in Section 4.1 of this article, the marker word ‘biodiversity’ is firstly described from two complementary perspectives: the linguistic viewpoint of lexicology, and the naturalistic viewpoint of ecology and environmental studies. To be more specific, I consulted the OED Online (2024), and seven recent ecology and environment dictionaries and textbooks in their latest editions or reprints (Allaby, 2015 [1994]; Bailey, 2004; Collin, 2011 [1985]; Editors of Salem Press, 2004; Kemp, 2002 [1998]; Miller & Spoolman, 2019 [2007]; Smith & Smith, 2015). With the only exception of Smith and Smith (2015), six of them contain definitions of the noun ‘biodiversity’ confirming and amplifying that offered by the OED. Three definitions feature details not appearing in the OED or in the other dictionaries or textbooks; accordingly, they are marked and are explored in this article. In sum, the four definitions of the marker word ‘biodiversity’ analysed here are from the following sources:

1. OED Online (2024);
2. Bloomsbury’s *Dictionary of Environment & Ecology* (Collin, 2011 [1985], p. 20);
3. Market House Books’ *The Facts on File Dictionary of Ecology and the Environment* (Bailey, 2004, p. 23);
4. Routledge’s *The Environment Dictionary* (Kemp, 2002 [1998], p. 44).

Secondly, in [Section 4.2](#), taking these definitions as a starting point, the marker word 'biodiversity' is examined in the context of an environmental website: that of the decentralised, international, and politically non-partisan movement Extinction Rebellion (henceforth, XR) (<https://rebellion.global/>). The website presents XR's activist ecosophy and the activities and events arranged by its members. The members of the movement, which saw its inception in London in October 2018, resort to disruptive civil disobedience and non-violent strategies and tactics to convince states and their political administrators to take equitable action against the ecological crisis. XR has three core demands on governments, who must: 1. Tell the truth about the ecological crisis and cooperate with other organisations to inform the general public of the imperativeness of change; 2. Act now to block biodiversity loss and decrease greenhouse gas emissions to net zero as soon as possible; 3. Go beyond politics by appointing a Citizens' Assembly on ecological justice and by being guided by its determinations. Within the movement, power is decentralised: permission from a central authority or group is not required to organise activities or events. In other words, anybody or any group can act independently in the name of XR, provided always that what they organise tallies with the movement's ten ecological and social values, namely, with its ecosophy. These values are listed and detailed on XR's website, and range from a shared vision of change and the need for a regenerative culture (that is, healthy, resilient, and adaptable), to avoiding blaming and shaming individuals in our toxic system and actively breaking down power hierarchies (<https://rebellion.global/about-us/>).

XR, its environmental website, and the beneficial text drawn from it were chosen for analysis in this article for the same reasons as the environmental organisations and agencies explored in the recent ecostylistics book-length study quoted above (Viridis, 2022). Firstly, the movement's environmental website shows several marker words and, as a result, concurs in forming the worldwide social and cultural environet; incidentally, the marker word 'biodiversity' investigated here is present twice on the homepage (<https://rebellion.global/>) (in the opening paragraph and in the text of the second demand) and nine times on the Why Rebel? page (<https://rebellion.global/why-rebel/>). Secondly, XR is a part of the ecological and environmental movement throughout the world, which embraces a large number of groups with various missions and spheres of interest and action. Thirdly, the XR website and the ecological messages it conveys are internationally widespread: the version in English, the lingua franca of online global communication, has counterparts in fifteen further languages. Lastly, the movement and, consequently, the texts it produces and publishes on its website are apparently even more militant and ecologically and socially committed than some of those examined in the book-length study; hence, these texts are likely to contain a fair number of beneficial stylistic techniques and to relay a fair number of beneficial discourses.

The beneficial techniques deployed by XR and the beneficial discourses it expresses are investigated in this article by scrutinising the occurrence of the marker word 'biodiversity' in a short sequence taken from its website. The sequence was decided on in early September 2023 by adopting the same methodology as in Viridis (2022). Firstly, the website does not feature a search tool; accordingly, I searched for the marker word on it through a search engine by entering the string 'biodiversity site: <https://rebellion.global/>'; this yielded about 362 webpages ordered by relevance. Secondly, I clicked on the webpages provided by the search and, by means of the Find tool in the browser, found the instances of the marker word on those pages. Thirdly, I opted for sequences where the marker word appeared only or mostly as a noun (namely, 'biodiversity'), not as an adjective (the less frequent 'biodiverse'); in addition, the noun must not have the syntactic function of premodifier in a noun phrase (the recurrent 'biodiversity loss'). The final selection was made based on qualitative factors: during a first, but thorough reading, the chosen sequence apparently incorporated several beneficial ecostylistic mechanisms, thus indicating a beneficial ecosophy agreeing with that of this article and its seven norms ([Section 2](#)). Furthermore, the sequence includes five occurrences of the marker word 'biodiversity' and explicitly supplies a definition of it.

So as to achieve the two fold research purpose presented in the introductory [Section 1](#), the sequence is explored in [Section 4.2](#) by detecting the stylistic strategies of foregrounding, point of view, and metaphor ([Section 3.1](#)) occurring in it, and by bringing to light the ecological considerations they convey. By comparing them with the ecosophy of this article, this qualitative analysis demonstrates that the sequence relays a beneficial discourse ([Section 2](#)). The analysis is introduced and contextualised in



Section 4.1 below by the examination of the four definitions of the marker word 'biodiversity' provided by the OED and by three ecology and environment dictionaries and textbooks.

## 4. Data analysis

### 4.1. Definition and evaluation of 'biodiversity'

In the OED, the definition of the noun 'biodiversity' is supplemented with additional information. The label 'ecology' shows what domain the noun belongs to, and the date '1985' indicates its first recorded use in the English language. Its synonyms or near synonyms are the noun phrases 'biological diversity' (dating back to 1916) and 'species richness' (1972). It is formed within English, by compounding the combining form 'bio-' with the noun 'diversity'. It is commonly found around three times per million words in modern written English; to be more specific, it falls within OED's frequency band 5, which encompasses words appearing between one and ten times per million words in modern written English.

The OED adds details about the frequency of the noun 'biodiversity' per million words in written English in the decades 1980–2010, as derived from Google Books Ngrams (version 2): it ranges from 1.5 in 1980 to 4.5 in 2010, with an increase of three occurrences per million words (200%) in 30 years. Moreover, the OED also supplies information on the frequency of the noun 'biodiversity' per million words in written English in the period October 2017 to March 2023, as derived from a corpus of 20 billion words mainly compiled from online news sources: it ranges from 2.5 in October 2017 to 9.5 in March 2023, with an increase of seven occurrences per million words (280%) in five years and six months. These figures, especially the recent ones, and their being steadily on the rise prove the weight this marker word carries in the contemporary environment, therefore the need for studying it, its use in ecological discourse, and the environmental principles this use evokes.

The OED offers the following definition of the noun 'biodiversity':

#### Definition 1

Diversity of plant and animal life, esp. as represented by the number of extant species.

That is to say, this noun denotes diversity of animal and vegetable organisms, particularly as shown in the quantity of living species. This denotation is communicated via essential stylistic devices. To name just foregrounding, point of view, and metaphor, the elliptical finite clause 'as represented by the number of extant species', introduced by the shortened adverb 'esp.', realises a case of foregrounded over-specification (Emmott & Alexander, 2016, p. 290). Nevertheless, being over-specific is sometimes required by the text-type of the dictionary for the sake of clarity; as a result, it does not express any extra meaning or need any further reading. In terms of psychological point of view, the definition is an unmodalised categorical assertion comprising no modal operators, thereby signalling neutral modal shading (Simpson, 1993, p. 70). Neutrality on the plane of psychological point of view is reinforced by neutrality on the plane of ideological point of view: the definition is composed of value-neutral words indicating no specific mindset or agenda. Finally, the words the definition consists of have a literal meaning in their context, and do not acquire a metaphorical or figurative sense. In short, from a stylistic perspective, the text of the definition of the noun 'biodiversity' is non-deviant, psychologically and ideologically neutral, and non-metaphorical; consequently, it conveys a lucid, clearly expressed, and easily understood idea.

From an ecological perspective, this idea is beneficial and in line with the ecosophy of this article and its norms no. 1: Valuing Living and no. 2: Wellbeing. By referring to animals and plants and to the amount of more-than-human species, the definition takes the entire ecosphere into account, not only its human components (norm no. 1), and implies striving to overcome the extinction of animal and vegetable species and advocating their flourishing, variety, and abundance (norm no. 2). In ecolinguistics research (see, among others, Stibbe, 2012, pp. 129–131), the use of such mass and collective nouns as 'life' and 'species' is thought to evoke an ambivalent story, that is, 'A story which only partially accords with the ecosophy of the analyst (e.g. it is seen as having mixed benefits and drawbacks in encouraging people to protect the ecosystems that life depends on)' (Stibbe, 2021, p. 221). This is

because these nouns depict more than one animal or plant in the singular, as an undifferentiated group, not as the unique individuals animals and plants actually are. However, underpinning the concept of biodiversity is the quantity of species, not of individuals; hence, in this context, the use of these mass and collective nouns is not particularly ambivalent, and the definition provided by the OED remains beneficial.

Moving from the academic field of lexicology to that of ecology and environmental studies, three non-standard definitions of the noun 'biodiversity' are investigated in this article. They are non-standard for they feature more information than the OED and the other ecology and environment dictionaries and textbooks referred to. The first can be found in Bloomsbury's *Dictionary of Environment & Ecology*. The definition proper precedes a citation:

### Definition 2

'Modern intensive farming is probably the main cause of declining biodiversity in the countryside. (Delivering the evidence. Defra's Science and Innovation Strategy 2003–2006).'

(Collin, 2011 [1985], p. 20)

The citation illustrates the use of the noun 'biodiversity' in context and is drawn from a document issued by the United Kingdom's Department for Environment, Food & Rural Affairs (DEFRA). A definition followed by a citation constitutes a foregrounded instance of external deviation from the norms complied with in the texts of the other definitions; it also realises a partially foregrounded example of internal deviation from the norms set up by the *Dictionary* itself, since several definitions only precede citations (Short, 1996, p. 59). This deviation emphasises a beneficial notion aligning with the ecosophy of this article. In accordance with norm no. 4: Care, the citation establishes and underscores our human guilt ('Modern intensive farming') for how we exploit animal and vegetable organisms ('declining biodiversity in the countryside'); and, agreeing with norm no. 5: Environmental Limits, it highlights that biodiversity is harmed by us humans using natural materials to excess.

Market House Books' *The Facts on File Dictionary of Ecology and the Environment* incorporates the second deviant definition of the noun 'biodiversity' in the sample under scrutiny. The second half of the definition reads as follows:

### Definition 3

In general, biodiversity tends to be highest in complex and highly productive ecosystems, such as tropical rainforests. Biodiversity is often used as an indicator of the health of such ecosystems.

(Bailey, 2004, p. 23)

The most conspicuous stylistic practice employed here is psychological point of view. This is linguistically relayed by three markers of epistemic modality: the prepositional phrase 'In general', the lexical verb 'tends', and the adverb 'often'. The epistemic modal system and its markers suggest to what extent the addresser of a text (in this case, the author of the dictionary definition) is assured of the truth and certainty of a given proposition (here, biodiversity matters). This stylistic practice contributes to underlining an idea occurring in this definition only, namely, 'the health of such ecosystems'. This is in line with the ecosophy of this article and its norm no. 2: Wellbeing, which notes that 'existing' or 'surviving' is different from 'living well'. It is therefore beneficial that this norm and the concept of being healthy also apply to the animals and plants in a biodiverse ecosystem, not only to us humans.

The last, longest, and most articulate marked definition of the noun 'biodiversity' in the sample is present in Routledge's *The Environment Dictionary*:

### Definition 4

[A] The variety of life forms that inhabit the earth. Biodiversity involves habitat diversity, plant and animal species diversity within the various habitats and the genetic diversity of individual species. [B] The large-scale slaughter of wild animals, the overharvesting of trees and other plants and the destruction of habitat worldwide are threatening biodiversity at a time when its importance is becoming increasingly apparent. Particular

concerns are expressed over the habitat destruction in areas such as the tropical rainforest or the near extinction of such marine species as the northern cod and the blue whale, but these are perhaps only the more extreme examples of a ubiquitous problem.

(Kemp, 2002 [1998], p. 44)

The text of the definition can be divided into two parts, A and B. Composed of 29 words out of a total of 105 (27.6%), part A supplies the definition proper and features the same stylistic traits as the OED definition. In particular, with reference to psychological point of view, part A communicates neutral modal shading through the lack of modal operators and through unmodalised categorical assertions; with reference to ideological point of view, part A expresses no specific worldview or value-system by means of the value-neutral words it consists of.

On the contrary, part B, constituted by 76 words out of 105 (72.4%), elaborates on the definition and portrays the current danger biodiversity is exposed to around the world. Part B also signals neutral modal shading, with a view to representing the factuality of this danger. Nevertheless, part B also relays psychological point of view via three modal indicators: 1. The deontic noun 'importance', suggesting that we humans must be committed to biodiversity; 2. The perception adjective 'apparent', premodified by the adverb 'increasingly', evoking that we are finally discerning the veracity of the importance of biodiversity; 3. The epistemic adverb 'perhaps', conveying that there may be even graver dangers to biodiversity than those mentioned in the definition. In addition, part B communicates ideological point of view through eight negatively value-laden words. They refer to biodiversity loss and ecological devastation, and appear with other words intensifying their negative meanings: the lexical verb 'threatening' and the nouns 'slaughter' (premodified by the adjective 'large-scale'), 'overharvesting', 'destruction' (twice, once followed by the adverb 'worldwide'), 'concerns' (premodified by the adjective 'particular'), 'extinction', 'problem' (premodified by the adjective 'ubiquitous').

Because of these stylistic aspects, this definition of the noun 'biodiversity' is beneficial when compared with the ecosophy of this article, especially with four of its norms. In norm no. 2: Wellbeing, it is entailed that we humans must fight the extinction of all animals and plants and promote their diversity, richness, and conservation. Norm no. 4: Care involves our human responsibility to animals and plants. It is pointed out in norm no. 5: Environmental Limits that we are to blame for capitalising excessively on animal and vegetable organisms and on such habitats as the tropical rainforest and the ocean. Finally, norm no. 7: Deep Adaptation observes that ecological issues like biodiversity loss are looming large at present; as a result, we must take serious steps to rescue more-than-human life at once. It is clearly inferable from the context of the definition that we are the agents accountable for negatively value-laden actions like 'slaughter', 'overharvesting', and 'destruction', that is, for 'threatening biodiversity'. However, the text of the definition would have been more beneficial if it had stated our accountability to biodiversity more openly; for instance, not by means of the above nominalisations with an implicit agent, but by expressing processes by means of verbal groups with explicit nominal—and human—agents (e.g. 'we humans slaughter wild animals') (Halliday, 1990, p. 189, 2014 [1985], p. 710).

Leading on from the four definitions of the marker word 'biodiversity' provided from the lexicological standpoint of the OED and from the naturalistic standpoint of ecology and environmental studies, Section 4.2 below explores how this marker word is utilised in the environet, more precisely, in the environmental website and discourse of XR (<https://rebellion.global/>), and what beneficial ecostylistic techniques are linked to it.

#### **4.2. 'Biodiversity' in Extinction Rebellion's words**

The text from XR's environmental website analysed here is taken from the article 'Biodiversity: What is it, how are we losing so much of it, and why does it matter?', which was authored by Lauren Alysanne Ford and posted on the website on 18 January 2021. The article is composed of an opening section followed by seven headed sections; the text below is drawn from the first headed section and consists of the section heading (Sentence 1), its first three paragraphs (Sentences 2–14), and the first sentence of the fourth paragraph (Sentence 15).

### [1] Biodiversity is un-bee-lievable

[2] You've probably heard the word 'biodiversity' mentioned in recent discussions around the environment. [3] But what exactly does it mean? [4] In simple terms, biodiversity is the foundation of life. [5] It is the variety of creatures that exist on Earth—from the largest (e.g., whales) to the smallest (e.g., bacteria)—and how they interact with one another. [6] In many ways, it is what is keeping you and me and everything else on this planet alive.

[7] When a single part of biodiversity is lost or degraded, this negatively affects the functioning of the whole system. [8] This is why issues such as the decline of bee populations are very worrisome. [9] These tiny insects are important in the survival of ecosystems that create food sources for many different species, including us.

[10] If bees disappeared, life as we know it would change. [11] Many of the fruits, vegetables and nuts that we currently enjoy would become scarce or disappear entirely (no more apples, almonds, blueberries, or cherries!). [12] The majority of wildflower species would wither and die, draining the world of its natural vibrant colour. [13] Bee-dependent animals, such as birds, spiders, butterflies, and squirrels would also likely disappear sparking other animal species who rely on them to vanish too. [14] A planet without bees is not a planet we should ever have to live on.

[15] This is what can happen when a single important piece of the biodiversity puzzle is lost.

(Copyright © 2021 Extinction Rebellion (XR). "Biodiversity: What is it, how are we losing so much of it, and why does it matter?". By Lauren Alysanne Ford. Posted 18/01/2021. Available at <https://rebellion.global/blog/2021/01/18/biodiversity-definition-losing-importance/>. Last accessed March 2024)

[235 words]

The marker word 'biodiversity' can be found five times in the text, in Sentences 1 (the section heading), 2, 4, 7, and 15. Sentences 1–7 present this notion; the following Sentences 8–14 illustrate it by treating the example of bees; and the concluding Sentence 15 returns to this notion to expand it. Underlying these five sentences and the entire text are the four definitions of the marker word 'biodiversity' offered by the OED and by three ecology and environment dictionaries and textbooks examined in Section 4.1. As noted above, these definitions are beneficial and align with the ecosophy of this article and its norms as follows:

1. OED: no. 1: Valuing Living and no. 2: Wellbeing;
2. Bloomsbury's *Dictionary of Environment & Ecology* (Collin, 2011 [1985], p. 20): no. 4: Care and no. 5: Environmental Limits;
3. Market House Books' *The Facts on File Dictionary of Ecology and the Environment* (Bailey, 2004, p. 23): no. 2: Wellbeing;
4. Routledge's *The Environment Dictionary* (Kemp, 2002 [1998], p. 44): no. 2: Wellbeing, no. 4: Care, no. 5: Environmental Limits, and no. 7: Deep Adaptation.

Consequently, a text from an activist environmental website covering the idea of biodiversity is also likely to be in accordance with the ecosophy and several of its norms, namely, to be beneficial. The text from XR's website is constructed as beneficial via the stylistic mechanisms outlined in Section 3.1: foregrounding, point of view, and metaphor.

#### 4.2.1. Foregrounding

The text opens with a foregrounding strategy in Sentence 1 ('Biodiversity is un-bee-lievable'). The adjective 'un-bee-lievable', deployed predicatively to describe the noun 'biodiversity', is spelt in an unordinary way: the standard syllable 'be' is replaced by the non-standard syllable 'bee', which is given additional prominence by the hyphens preceding and following it. This is a case of lexical deviation (Short, 1996, p. 45) strengthened by graphological deviation (Short, 1996, p. 54). It creates a neologism that can be interpreted as 'what bees are and do is incredible' and, in the context of Sentence 1, as 'what bees do for biodiversity is incredible'. This meaning agrees with the ecosophy and its norm no. 1: Valuing Living: the text acknowledges that bees, namely, more-than-human life, have worth in themselves and celebrates them.

Sentences 2 and 6 include two instances of the second-person pronoun 'you' ('You've probably heard'; 'you and me and everything else on this planet'). In the context of the text, the pronoun does not have a general reference or, in Grundy's (2008, p. 25) terminology, an empathetic non-deictic use; in fact, it cannot be substituted by the pronoun 'one' (\*'One's probably heard'; \*'one and me and everything else on this planet'). Hence, the pronoun 'you' is employed deictically, to be more specific, symbolically (Grundy, 2008, p. 25), that is, "you" picks out a particular but different person on each separate occasion when the sentence is read' (Grundy, 2008, p. 24). This symbolic deictic use is confirmed by one occurrence of the first-person singular pronoun 'me' in Sentence 6 and by four total occurrences of the first-person plural pronouns 'we' (three instances in Sentences 10, 11, and 14) and 'us' (one instance in Sentence 9). This pronoun use constitutes an example of foregrounded discursual deviation (Short, 1996, pp. 37–43), because the author of the text unusually refers to herself and to each of her readers directly, and initiates a conversation between herself (the addresser of the text) and any of her readers (her addressee). This stylistic device has the function of explicitly engaging the addressee in arguments about biodiversity and to make them personal, thus making those arguments more persuasive and more difficult to ignore. By strongly reminding us humans of biodiversity, this device and its function are in line with the ecosophy: its norm no. 4: Care contends that we must empathise with all animal and vegetable species, and regret damaging them with our unecological lifestyle.

This stylistic device and its function are reinforced by a stylistic practice utilised in Sentence 3 ('But what exactly does it [biodiversity] mean?'). The sentence has the grammatical structure of an interrogative and is deployed with the communicative function of asking a question about what biodiversity is. This is the only interrogative sentence out of the 15 total sentences the text is composed of; as such, it realises a case of foregrounded internal deviation from the rules prescribed by the text itself. It concurs in creating a conversational tone between the addresser and her addressee, intensifies the sense of energy in the discussion, and introduces the answer to the question by arousing the addressee's expectation and curiosity about biodiversity.

The answer structurally required by the question in Sentence 3 is supplied in the following Sentences 4–6. More precisely, three answers are supplied: 1. An essential answer in Sentence 4 ('In simple terms'); 2. A dictionary-like answer in Sentence 5, resembling the definitions studied in Section 4.1; 3. An answer openly connecting the addresser and her addressee, along with all the organisms on the earth, with the concept of biodiversity in Sentence 6 ('you and me and everything else on this planet'). Three distinct answers to one question constitute a foregrounded instance of over-specification; furthermore, the answers in Sentences 5 and 6 comprise extra layers of over-specification embedded in them. In Sentence 5, the two prepositional phrases 'from the largest (e.g., whales) to the smallest (e.g., bacteria)' provide examples of both large and small creatures in brackets. In Sentence 6, the three coordinated noun phrases 'you and me and everything else on this planet' state in detail the entities related to biodiversity, namely, the addressee, the addresser, and all the human and non-human animals and plants on the earth. These coordinated noun phrases also show a case of foregrounded grammatical deviation (Short, 1996, pp. 47–48). The two pronouns 'you' and 'me' should normally be linked by asyndetic coordination ('you, me, and everything else on this planet'), not by syndetic coordination, as they are ('you and me and everything else on this planet'): this stylistic technique underscores that the addressee and the addresser are placed at the same level as the more-than-human lives mentioned in the third coordinated noun phrase. The role of over-specification and grammatical deviation is to put special emphasis on the extensive range of animal and vegetable species on the earth, and to signal that *Homo sapiens*, epitomised by the addressee and the addresser, is simply one of those species. This message aligns with the ecosophy and its norms no. 1: Valuing Living and no. 2: Wellbeing: all animal and vegetable organisms have intrinsic value; accordingly, we must pay tribute to them and enable them not only to live but also to thrive.

The stylistic mechanism of over-specification occurs in two more sentences, appearing in the section of the text about the relationship between biodiversity and bees. In Sentence 11, the three-part list 'fruits, vegetables and nuts' is glossed by the four-part list 'no more apples, almonds, blueberries, or cherries!' in the brackets at the end of the sentence, highlighted by the exclamation mark at the end of the list. In Sentence 13, the noun phrase 'Bee-dependent animals' is glossed by another four-part list, 'such as birds, spiders, butterflies, and squirrels'. In both sentences, three types of agricultural produce

and one type of animal are first referred to in general terms; subsequently, they are illustrated by specific products and animals in the two four-part lists. The part played by the two lists is to present the addressee with vivid examples of food and animals they are familiar with and may eat or meet on a daily basis; in sum, the lists, and the entire text, are aimed at the individual addressee and at their everyday experience of biodiversity which, from an abstract notion, becomes a concrete idea. This is an ecological use of the term 'biodiversity' diverging from the unecological one pinpointed by Stibbe (2021, pp. 151–155; summarised in Section 1). The concretisation of biodiversity is the reason why these sentences are also in accordance with the ecosophy: these familiar products and animals evoke norm no. 4: Care and its tenets of regret and gratitude, thereby prompting us humans to minimise our negative impact on bees and biodiversity, and to do something practical for these insects supporting our lives.

#### 4.2.2. Point of view

In text and discourse, stylistic strategies often interact to underline key meanings and considerations. The text from XR's website is no exception: here, first- and second-person pronouns, realising the foregrounding device of discursual deviation (Section 4.2.1), also indicate point of view. More precisely, first-person singular pronouns suggest that the text is written from the point of view of the addresser, her point of view is made explicit, and she is responsible for what she maintains about biodiversity. Second-person pronouns make the addressee directly involved in the text and in the addresser's assertions. Indeed, after the section heading (Sentence 1), the text opens with 'You've probably heard the word "biodiversity"' (Sentence 2). The pronoun 'you' is followed by the lexical verb 'heard', a *verbum sentiendi* denoting a character's thoughts, feelings, and perceptions (Simpson, 1993, p. 35), here the addressee's auditory perceptions; therefore, the text begins by introducing the addressee's point of view. Moreover, first-person plural pronouns are cases of inclusive we, that is, they encompass the addresser (the author of the text), the addressee (the text readers), and all other humans. They are employed to claim that we all depend on biodiversity and bees for our sustenance, share the same experience of life, eat the same food, and benefit from what bees do to the earth. As a result, the findings of the investigation of first- and second-person pronouns by means of point of view strengthen those of their scrutiny via foregrounding. These findings agree with the ecosophy, its norm no. 4: Care, and its tenet of empathy: this notes that the addresser, the addressee, and all other humans must be informed of how we harm animals and plants with our unsustainable behaviour.

Written from the addresser's point of view, which is common to the addressee's, the text also conveys their spatial and temporal point of view through few, but noteworthy, markers. With regard to spatial point of view, the prepositional phrases 'on Earth' (Sentence 5) and 'on this planet' (Sentence 6) and the noun phrases 'the world' (Sentence 12) and 'A planet' (Sentence 14, twice) relay that the extent of the damage to biodiversity caused by us humans is not confined to a single area of the earth or to an individual animal or vegetable species: it is as large as the entire planet and encompasses all the human and more-than-human lives dwelling on it. Consequently, these operators of spatial point of view, in their context, communicate a message in line with the ecosophy. Its norm no. 1: Valuing Living observes that all animal and vegetable organisms are an end in themselves and must be praised for this; in norm no. 2: Wellbeing, it is pointed out that these organisms must benefit from their right to prosperity. With regard to temporal point of view, the adjective 'recent' (Sentence 2) refers to a period of time that has just passed, and the adverb 'currently' (Sentence 11) to the present period of time. Hence, the ecosophy is also expressed by these indicators of temporal point of view. Its norm no. 3: Now and the Future states that the temporal scope of the ecosophy embraces both the present years and the years to come. As argued in norm no. 7: Deep Adaptation, given that we are facing ecological challenges nowadays, we must urgently take tough measures aimed at replenishing biodiversity and the entire natural world.

Whereas few markers of spatial and temporal point of view appear in the text, it features a fair number of markers of psychological point of view signalling its author's internal knowledge and convictions. The most frequent operators are those of epistemic modality, which amount to 12:

[2] probably; [6] many; [9] many; [10] would; [11] Many; [11] would; [12] majority; [12] would; [13] would; [13] likely; [14] ever; [15] can.

Operators of epistemic modality indicate the degree of assurance the author feels toward the truthfulness of the propositions containing them. The list of epistemic modal indicators above incorporates the adverb ‘ever’ (Sentence 14): it communicates a value in the scale of usuality and oftenness and, in accordance with the Hallidayan view of modality (Halliday, 2014 [1985], pp. 176–183), expresses epistemic modality. The list of epistemic modal indicators also comprises three occurrences of the quantifier ‘many’ (Sentences 6, 9, and 11) and one occurrence of the noun ‘majority’ (Sentence 12): they are explored in this article as suggesting epistemic modality, as they restrict the factuality of the propositions they are included in. Actually, by means of scalar implicatures, the noun phrase ‘many ways’ (Sentence 6) implicates ‘not all ways’, and the noun phrase ‘The majority of wildflower species’ implicates ‘Not the totality of wildflower species.’<sup>1</sup>

The hypothetical if-clause ‘If bees disappeared’ (Sentence 10) opens a sequence composed of Sentences 10–13 showing four instances of the modal auxiliary ‘would’ (Sentences 10–13) and one instance of the adverb ‘likely’ (Sentence 13). The sequence constitutes an example of disnarration: the activities and phenomena referred to do not take place but are, nonetheless, reported; namely, possible yet unreal events are paradoxically mentioned (Lambrou, 2019). A ‘what if?’ future scenario is openly introduced by the if-clause and evoked by the use of ‘would’ and ‘likely’. In this scenario, ‘life as we know it’ (Sentence 10) takes a possible course of action with undesirable outcomes: bees (Sentence 10), ordinary food (Sentence 11), familiar flowers (Sentence 12), and common animals (Sentence 13)—in a word, biodiversity—disappear from nature. The paragraph with the disnarrated sequence closes with Sentence 14 (‘A planet without bees is not a planet we should ever have to live on’). The sentence comprises the only two markers of deontic modality in the text: the modal auxiliaries ‘should’ and ‘have to’; their meaning is intensified by the epistemic adverb ‘ever’. Deontic modality communicates the addresser’s position on the level of duty or commitment she attributes to the fulfilment of certain actions; here, she ascribes a high level of obligation to the proposition that we humans must not be forced to dwell in an environment lacking bees and the biodiversity they bring along.

By applying the point of view practice of disnarration, the addresser makes her addressee contemplate and reflect on the potentially ruinous consequences of our unecological way of life: although hypothetical, these consequences are a factor in delineating her environmental agenda. This point of view practice co-occurs with the foregrounding technique of over-specification and the two four-part lists analysed in Section 4.2.1. As shown above, they convey considerations following the ecosophy, its norm no. 4: Care, and its tenets of regret and gratitude; accordingly, disnarration also relays the same considerations. These considerations also align with norm no. 3: Now and the Future: the disnarrated future scenario without bees and biodiversity must not occur. In addition, Sentence 14, completing the paragraph with the disnarrated sequence and containing deontic modality, refers to norm no. 7: Deep Adaptation. On the one hand, the sentence agrees with the norm by implying that we humans must take drastic steps to restore biodiversity immediately. On the other hand, it also implies that we must not resign ourselves to accepting biodiversity loss as an inevitable event.

Apart from the 12 operators of epistemic modality and the two operators of deontic modality, the text also incorporates the two lexical verbs ‘heard’ (Sentence 2) and ‘know’ (Sentence 10). These are *verba sentiendi* expressing perception modality, that is, a sub-system of epistemic modality signalling the degree of the addresser’s certitude in the veracity of a proposition as based on (generally human) senses and powers of perception. The occurrence of several indicators of epistemic modality and perception modality, particularly in their lower values, results in negative modal shading (Simpson, 1993, p. 70): it suggests that an addresser is uncertain about the truthfulness of the activities and phenomena they are discussing. Nevertheless, what appears in the text is not lower modal values, but primarily medium modal values (e.g. ‘probably’, ‘many’), as well as a few higher modal values (e.g. ‘majority’, ‘ever’); furthermore, eight of the 14 overall modal markers are found in the disnarrated sequence, which is explicitly presented as unreal.

Moreover, of the 15 sentences the text consists of, five realise the modalised paragraph with the disnarrated sequence (Sentences 10–13) and its closing sentence (Sentence 14). Of the ten remaining sentences, six (Sentences 1, 3, 4, 5, 7, 8) are unmodalised categorical assertions, where modality is not present (Lyons, 1977, pp. 763, 808–809). Therefore, the six sentences feature neutral modal shading, namely, they evoke the highest possible level of addresser commitment to the accuracy of her

propositions and do not psychologically assess the activities and phenomena under consideration. What are these accurate propositions and these unassessed activities and phenomena? The six unmodalised sentences are deployed as follows: 1. As the section heading extolling biodiversity and bees (Sentence 1); 2. To introduce and offer a definition of biodiversity (Sentences 3, 4, 5); 3. To present the question of biodiversity loss and degradation and the reduction of bee populations (Sentences 7 and 8).

The modality configuration emerging from this examination (lack of negative modal shading plus neutral modal shading) characterises the addresser of the text as a self-assured author committed to the factuality of her propositions about biodiversity and to the norms in the ecosophy underpinning her text, that is, no. 1: Valuing Living, no. 2: Wellbeing, no. 3: Now and the Future, no. 4: Care, and no. 7: Deep Adaptation. Thanks to her self-assurance, the addressee of the text is strongly encouraged to also accept the veracity of the addresser's contentions about biodiversity and to share her militant stance and psychological point of view.

Moving from psychological point of view to ideological point of view, the text shows words which have positively or negatively value-laden denotations, or which acquire positive or negative connotations in the specific context of the text. These words are not distributed evenly in the text. In fact, of the 15 sentences it is composed of, 10 (Sentences 1 and 7–15) include positively and negatively value-laden words, whilst Sentences 2–6, namely, the whole first paragraph, do not. This may be because this paragraph introduces the term and the concept of biodiversity, and provides a definition of it; this is not evaluative, but impartial and objective.

The following are the positively value-laden words occurring in the remaining sentences, which add up to seven:

[1] un-bee-lievable; [9] tiny; [9] important; [11] enjoy; [12] natural; [12] vibrant; [15] important.

The first word in the list, the adjective 'un-bee-lievable' (Sentence 1), is used predicatively as a quality of biodiversity and, via the foregrounding mechanism of lexical and graphological deviation studied in [Section 4.2.1](#), of bees too. In Sentence 9, these insects are also credited with the adjectives 'tiny' and 'important': the former depicts them as minute, very small, or slight, consequently, as apparently fragile; the latter as having great significance in, as maintained in the text, their food-producing ecosystems. The alleged contrast between these two attributes arouses the addressee's interest in bees and in their accomplishments, and urges the addressee to read on and learn more about these insects—incidentally, what follows in Sentences 10–13 is the disnarrated sequence about the disappearance of bees investigated above.

The four remaining positively value-laden words in the list appear in the text in a consistent pattern: they are preceded or followed by negatively value-laden words countering and undoing their positive meanings. For instance, in Sentence 11, a number of fruits, vegetables, and nuts are first said to be 'enjoy[ed]' by us humans and, subsequently, to come to be 'scarce' or 'disappear', with the latter lexical verb reinforced by the adverb 'entirely'. Sentence 12 asserts that wildflowers supply the earth with its 'natural' and 'vibrant' colour; without bees, these plants would 'wither' and 'die', and the earth would be 'drain[ed]' of this colour. In Sentence 15, bees are portrayed as an 'important' constituent of biodiversity which can be easily 'lost'.

With regard to the negatively value-laden words found in the text, they amount to 14:

[7] lost; [7] degraded; [7] negatively [affects]; [8] decline; [8] [very] worrisome; [10] disappeared; [11] scarce; [11] disappear [entirely]; [12] wither; [12] die; [12] draining; [13] disappear; [13] vanish; [15] lost.

They are twice as many as the positively value-laden words; hence, several of them are not preceded or followed by positive words or messages, and the text features a lexical and ideological prevalence of negative words and considerations. Most of the negatively value-laden words not accompanied by positively value-laden words pertain to the semantic field of loss and degradation, especially of biodiversity and its components: 'lost', 'degraded' (Sentence 7); 'decline' (Sentence 8); 'disappeared' (Sentence 10); 'disappear', 'vanish' (Sentence 13). In addition, the phenomenon of biodiversity loss is openly appraised through the adverb 'negatively' (Sentence 7), referring to how it harms entire ecosystems, and through the adjective 'worrisome', premodified by the intensifier 'very' (Sentence 8), commenting on the reduction of bee populations.



Nevertheless, the use of these negatively value-laden words is not fully beneficial. This is because several of them are deployed as follows: 1. As participial adjectives ('lost' (twice), 'degraded'); 2. With inanimate or understood agents ('this negatively affects', 'draining the world of its natural vibrant colour'); 3. As nominalisations of processes ('decline'); 4. In the case of ergative verbs, as intransitive verbs ('disappeared', 'disappear entirely', 'wither', 'disappear'). By means of these grammatical practices, the text does not assign an agent to these processes of loss and degradation; on the contrary, biodiversity is represented as degrading, bee populations as declining, food as disappearing, and wildflower species as withering spontaneously, with no apparent external cause. An addressee with an ecological mindset may deduce from their knowledge of the world that we humans are the agents to blame for losing, degrading, and negatively affecting biodiversity; yet, a different addressee may not. As a result, the text would have been more beneficial if this had been argued explicitly and firmly via dissimilar grammatical practices. In this way, the text would also have followed the ecosophy and its norm no. 5: Environmental Limits: it would have reminded its addressee that we humans must not go beyond the planet's ecological boundaries and must not use biodiversity to our own advantage.

Despite these grammatical practices, the text remains beneficial. It distinctly assesses the entities, activities, and phenomena it mentions, and categorises them as either positive or negative. The reiterated structure consisting of positive words and meanings controverted by negative words and messages, and the predominance of negatively value-laden words over positively value-laden ones remind the addressee that we humans must adopt the ecological ideology put forward by the ecosophy. In particular, we must comply with its norm no. 2: Wellbeing, which entails that we must strive for the conservation of all animal and vegetable species and against their extinction; with its norm no. 4: Care, which centres on the more-than-human lives we take and affect adversely; and with its norm no. 7: Deep Adaptation, which revolves around us taking urgent measures to conserve all biodiversity.

#### 4.2.3. Metaphor

As noted in [Section 4.2.2](#), in the text from XR's website, the stylistic strategies of foregrounding and point of view frequently co-occur to give prominence to major ecological messages; it will be demonstrated here that they also interact with the stylistic device of metaphor. In terms of foregrounding, Sentence 4 ('In simple terms, biodiversity is the foundation of life') constitutes an example of over-specification ([Section 4.2.1](#)); in terms of psychological point of view, it realises a case of unmodalised categorical assertion ([Section 4.2.2](#)); and, in terms of metaphor, it is based on one: BIODIVERSITY IS THE FOUNDATION OF LIFE. This is a multi-layered metaphor: the target BIODIVERSITY is conceptualised in terms of the source THE FOUNDATION OF LIFE, which, in turn, is metaphorical; as such, it requires analysis in order for the main metaphor to be fully understood.

In line with Steen's (2016) three-dimensional model of metaphor ([Section 3.1](#)), the conceptual metaphor in the source THE FOUNDATION OF LIFE can be scrutinised as follows:

1. At the level of expression, or metaphor in language, the conceptual metaphor is triggered by the noun phrase 'the foundation of life', to be more specific, by the nominal head 'foundation' postmodified by the prepositional phrase 'of life'.
2. At the level of conceptualisation, or metaphor in thought, the noun 'life' embedded in the prepositional phrase constitutes the target domain LIFE. The noun 'foundation' denotes the solid ground or base a building rests on, supporting the weight of the whole; accordingly, if a foundation is the base of a building, it follows that BUILDING realises the source domain in the resulting conceptual metaphor LIFE IS A BUILDING. The main feature of the source domain mapping to the target domain is the fact that a building is a complex structure or larger unit consisting of joint parts and materials fitting together, all of which are necessary to the completeness or integrity of the structure or unit.
3. At the level of communication, or metaphor in interaction, LIFE IS A BUILDING is activated by the noun 'foundation', whose figurative and extended meaning of 'that on which an abstract thing is based or depends' is recorded in the OED (senses 5.a and 6.a). Furthermore, the database MetaNet Metaphor Wiki (David et al., 2016–2018) sets down the conceptual metaphor LIFE IS A COMPLEX STRUCTURE (both a source and target subcase of ORGANIZATION IS PHYSICAL STRUCTURE). Therefore, considering these lexicalised and conventionalised metaphorical data, LIFE IS A BUILDING cannot be classified as a creative metaphor with a

deliberate figurative function. However, it proves to be very effective in representing the qualities of the target domain LIFE in depth, consequently useful to the addressee of the text for interpreting the target domain. By contrast, the main metaphor BIODIVERSITY IS THE FOUNDATION OF LIFE, embedding LIFE IS A BUILDING, seems to have a deliberate figurative function, and can be categorised as a creative metaphor.

Additional details about LIFE IS A BUILDING are offered by the frame Building and its inferences reported in MetaNet. These are the most pertinent to the text under examination:

1. Some parts of the building (e.g. foundation, pillars) support other parts of the building (e.g., pillars hold up the roof). If a supporting part is damaged, it will not provide as much support, and the building may collapse.
2. To be functional, a building needs to have structural integrity.
3. Destructive actions and/or processes cause a decrease in structural integrity.

(David et al., 2016–2018)

The first inference about some parts of the building supporting others, like its foundation, can be employed to explore the main metaphor BIODIVERSITY IS THE FOUNDATION OF LIFE: biodiversity sustains life and all human, animal, and vegetable life forms; if harmed, it will not supply the necessary support to the ecosphere and its ecological structures, and life as a whole may break down. Moreover, the information in the text provides linguistic evidence of the inferences of the source domain BUILDING mapping to the target domain LIFE. For instance, underlying Sentence 7 ('When a single part of biodiversity is lost or degraded, this negatively affects the functioning of the whole system') are all the three inferences listed above; all the sentences including the nouns 'part' and 'piece', the lexical verbs 'lose', 'disappear', 'vanish', and the adjective 'scarce' (Sentences 7, 10, 11, 13, 15) are based on the second inference about structural integrity; underpinning the two sentences with the lexical verbs 'degrade', 'wither', 'die', and 'drain' (Sentences 7 and 12) is the third inference about destructive actions and processes. As a result, the main metaphor BIODIVERSITY IS THE FOUNDATION OF LIFE and the conceptual metaphor LIFE IS A BUILDING embedded in it align with the ecosophy and its norms no. 1: Valuing Living and no. 2: Wellbeing; all the more-than-human parts of the building of life have inherent value and must be respected and celebrated; mere being becomes wellbeing when these parts support one another and no devastating actions or processes damage the integrity and balance of their interconnected state.

As shown in Section 4.2.2 on point of view, Sentence 12 abounds in positively and negatively value-laden words; its non-finite clause 'draining the world of its natural vibrant colour' is also founded on a conceptual metaphor:

1. At the level of expression, or metaphor in language, what prompts the conceptual metaphor is the lexical verb 'drain' and its syntactic structure 'drain something (here, "the world") of something else (here, "its natural vibrant colour")'. As observed in the OED, in this syntactic structure, the lexical verb has both a literal meaning (sense II.6: cause a liquid to leak out of something gradually) and a transferred and figurative meaning (sense II.8: cause progressively to disappear or go to waste). In the text, the latter is the case: the figurative meaning is elicited by the verb phrase 'draining' collocating with the noun phrase 'the world' in a foregrounded example of semantic deviation (Short, 1996, p. 43), that is, a meaning connection which is formally incongruous.
2. At the level of conceptualisation, or metaphor in thought, the noun phrase 'its [the world's] natural vibrant colour' realises the target domain THE WORLD'S NATURAL VIBRANT COLOUR. The source domain A LIQUID ensues from the fact that, according to the OED, the verb phrase 'draining' should logically collocate with a noun phrase denoting a liquid. The target domain being represented in terms of the source domain leads to the conceptual metaphor THE WORLD'S NATURAL VIBRANT COLOUR IS A LIQUID. The OED can also be referred to pinpoint the principal characteristic of the source domain mapping to the target domain. From the comparison between the literal meaning of the lexical verb 'drain' and its figurative meaning, it emerges that the world's natural vibrant colour is described as gradually induced to vanish and to leave no trace like a liquid progressively coming out of a container.

3. At the level of communication, or metaphor in interaction, the investigation of THE WORLD'S NATURAL VIBRANT COLOUR IS A LIQUID is partly analogous to that of LIFE IS A BUILDING studied above. On the one hand, the OED records the figurative meaning of the lexical verb 'drain' triggering this conceptual metaphor. On the other hand, this conceptual metaphor is based on a foregrounded semantic deviation, is logically inconsistent, and, more importantly, is not catalogued in the two databases Master Metaphor List (Lakoff & Cognitive Linguistics Group, 1991) and MetaNet;<sup>2</sup> consequently, it can be classified as a creative metaphor with a deliberate figurative function.

THE WORLD'S NATURAL VIBRANT COLOUR IS A LIQUID can be further scrutinised by comparing it with MONEY IS A LIQUID, a conceptual metaphor set down in Master Metaphor List and MetaNet, and sharing the same source domain A LIQUID. The similarity between the two conceptual metaphors is strengthened by the noun 'drain' utilised in one of Master Metaphor List's example sentences: 'Don't pour your money down the drain'. In addition, three of the entailments of MONEY IS A LIQUID reported in MetaNet can be adapted to THE WORLD'S NATURAL VIBRANT COLOUR IS A LIQUID, so as to better understand the metaphorical traits of the latter's target domain. Hence, the adjusted target entailment 'loss of the world's natural vibrant colour' is founded on the source inference 'draining or leaking of liquid'; underlying the target entailment 'state of having no world's natural vibrant colour' is the source inference 'state of being dry'; the target entailment 'wasting the world's natural vibrant colour' is based on the source inference 'allowing liquid to drain or leak'. What comes to light from these adapted entailments and these inferences is that the target MONEY, and SO THE WORLD'S NATURAL VIBRANT COLOUR, is depicted as an entity which is readily drained, wasted, and lost completely, accordingly, a valuable entity which must be handled with attention and solicitude. This depiction is in accordance with the ecosophy: its norm no. 1: Valuing Living points out that all animal and vegetable organisms have worth in themselves, including the wildflower species offering the world its natural vibrant colour; it is stated in norm no. 3: Now and the Future that all human and more-than-human lives are entitled to good health at both the present and the future time, and must not be drained out of the natural world; norm no. 4: Care argues that we humans must not affect adversely any animal or vegetable species, and must reduce our negative influence on them to the bare minimum.

Sentence 15 is another sentence in the text under examination where point of view practices co-occur with metaphor practices. Indeed, the finite clause 'when a single important piece of the biodiversity puzzle is lost', with the value-laden adjectives 'important' and 'lost', can be analysed in terms of conceptual metaphor as follows:

1. At the level of expression, or metaphor in language, the conceptual metaphor is activated by the nominal head 'puzzle' premodified by the noun 'biodiversity'. Further words comprised in the clause belonging to the semantic field of 'puzzle' are the noun 'piece' and the participial adjective 'lost'.
2. At the level of conceptualisation, or metaphor in thought, the premodifying noun 'biodiversity' constitutes the target domain BIODIVERSITY, while the nominal head 'puzzle' realises the source domain PUZZLE; this results in the conceptual metaphor BIODIVERSITY IS A PUZZLE. The noun 'piece' and the adjective 'lost' help to recognise two of the primary aspects of the source domain mapping to the target domain: a puzzle consists of component parts of which it can be deprived or which can be destroyed. An additional mapping is the fact that the source domain is an entity composed of dissimilar interlocking pieces organised into a complex whole.
3. At the level of communication, or metaphor in interaction, the transferred and figurative meaning of the noun 'puzzle', more precisely, of the compound noun 'jigsaw puzzle' (sense b), is recorded in the OED, as are those of 'foundation' and 'drain' studied above. As a result, although this figurative use is not set down in the databases Master Metaphor List and MetaNet, BIODIVERSITY IS A PUZZLE does not apparently have a deliberate figurative function, and cannot be categorised as a creative metaphor. Nevertheless, like LIFE IS A BUILDING, it clearly and thoroughly portrays the properties of the target domain BIODIVERSITY, hence it turns out to be extremely helpful to the addressee of the text when making sense of it.

The noun 'puzzle' is present in the sentence 'I'm missing a piece of the puzzle': this is one of the example sentences reported in Master Metaphor List to illustrate the conceptual metaphor COHERENT IS WHOLE. The attribute of coherence—namely, being unified and having a logical relation and

interconnection—has also relevance for the target domain BIODIVERSITY. This is demonstrated by a number of sentences in the text: 1. Sentence 5 defines biodiversity as ‘the variety of creatures that exist on Earth [...] and how they interact with one another’; 2. Sentence 7 frames biodiversity as a functioning, that is, coherent system consisting of parts; 3. The disnarrated sequence in Sentences 10–13 investigated in [Section 4.2.2](#) supplies instances of this logical relation and interconnection (e.g. ‘If bees disappeared, life as we know it would change’). These features agree with the ecosophy and its norms no. 1: Valuing Living and no. 2: Wellbeing. The pieces of the biodiversity puzzle are constituted by all the humans, animals, and plants on the planet interpenetrating and mutually connecting; accordingly, they all have intrinsic value and must be equally appreciated. When all the biodiversity pieces are in place, none has got lost, and they interlock in a coherent whole, then they can flourish and prosper together.

## 5. Conclusions

Leading on from the present ecological problems and from the need to identify positive linguistic strategies and discuss them, this ecostylistic scrutiny has contributed to current research in ecostylistics, ecolinguistics, and positive discourse analysis in two ways: 1. By offering and examining four definitions of the marker word ‘biodiversity’ from the distinct professional viewpoints of lexicology and of ecology and environmental studies; 2. By illustrating and investigating the use of this term in an activist text belonging to the environet.

This scrutiny has also attained the two fold research purpose of this article, which falls within the remit of these disciplines. Firstly, it detected the ecostylistic techniques of foregrounding, point of view, and metaphor deployed in the various texts to convey beneficial considerations aligning with the ecosophy and its seven norms; for example, to name just a few from XR’s website, the foregrounding mechanisms of lexical and graphological deviation in the adjective ‘un-bee-lievable’, internal deviation in the interrogative sentence, and over-specification at different linguistic levels; the point of view strategies of personal pronoun use, modality patterns, and value-laden lexical choices and collocations; the conceptual metaphors LIFE IS A BUILDING, THE WORLD’S NATURAL VIBRANT COLOUR IS A LIQUID, and BIODIVERSITY IS A PUZZLE. Secondly, the messages relayed by these ecostylistic devices, being beneficial, inspire ecological and social change and a new environmental agenda; therefore, they are recommended for wider dissemination among the public at large.

Underpinning the four definitions of the noun ‘biodiversity’ scrutinised in [Section 4.1](#) are five of the seven norms in the ecosophy: no. 1: Valuing Living; no. 2: Wellbeing; no. 4: Care; no. 5: Environmental Limits; no. 7: Deep Adaptation. The text from XR’s website explored in [Section 4.2](#) is also founded on five norms: no. 1: Valuing Living; no. 2: Wellbeing; no. 3: Now and the Future; no. 4: Care; no. 7: Deep Adaptation. As a result, the only norm not to be communicated by either the four definitions or the text is norm no. 6: Social Justice. This may be due to the fact that the notion of biodiversity is fully ecocentric, whereas this norm treats our human experience and our unecological social, economic, and cultural systems. Furthermore, norm no. 5: Environmental Limits is suggested in two of the dictionary and textbook definitions (Collin, 2011 [1985], p. 20; Kemp, 2002 [1998], p. 44), which emphasise that we humans damage biodiversity by overusing natural materials and by taking advantage of more-than-human life. Instead, this norm is not evoked in the text, namely, our human accountability for ruining biodiversity is not explicitly maintained there. Although the ecologically-oriented target addressee of the text is well aware of this accountability, the international general public the text is accessible to may not be fully conscious of this. Consequently, it is always beneficial to assert our responsibility as strongly and unambiguously as possible: acknowledging and accepting our own blame may be a step towards an ecological worldview and value-system and, ultimately, towards environmental action.

## Notes

1. Conversely, the adverb “entirely” (Sentence 11) is not studied here as a marker of epistemic modality, for, in Halliday’s model, it is an adverb serving as a mood Adjunct of intensity, not modality (Halliday, 2014 [1985], p. 189).
2. Metalude (Goatly & LLE Project, 2002–2005) could not also be consulted, since it was not available online when this article was researched and written.

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No potential conflict of interest was reported by the author(s).

## About the author

**Daniela Francesca Virdis** is an Associate Professor of English Language and Translation at the University of Cagliari, Italy. She is the author of the books *Ecological Stylistics: Ecostylistic Approaches to Discourses of Nature, the Environment and Sustainability* (2022) and *Serialised Gender: A Linguistic Analysis of Femininities in Contemporary TV Series and Media* (2012), which was awarded the Italian Association of English Studies (AIA) Book Prize 2013 for a monograph in the field of English Language and Linguistics. She is the editor of *Ecostylistics: Texts, Methodologies and Approaches*, a special issue of the *Journal of World Languages* (2022), and a co-editor of the books *Language in Place: Stylistic Perspectives on Landscape, Place and Environment* (2021) and *The Stylistics of Landscapes, the Landscapes of Stylistics* (2017).

## ORCID

Daniela Francesca Virdis  <http://orcid.org/0000-0003-2819-3847>

## References

- Allaby, M. (2015 [1994]). *A dictionary of ecology* (5th ed.). Oxford University Press.
- Bailey, J. (Ed.). (2004). *The facts on file dictionary of ecology and the environment*. Market House Books.
- Collin, P. H. (2011 [1985]). *Dictionary of environment & ecology* (5th ed.). Bloomsbury. [electronic edition].
- David, O., Dodge E., Gilardi, L., Hong, J., Lakoff, G., Matlock, T., Moorman, K., Stickles, E., & Sweetser, E. (2016–2018). *MetaNet metaphor wiki*. University of California. Retrieved April, 2024, from <https://metaphor.icsi.berkeley.edu/pub/en>
- Dewi, N., & Perangin-Angin, D. (2020). Of landscapes and animals: An ecosophical analysis of Pagu folktales. *Jurnal Arbitrer*, 7(1), 1–21. <https://doi.org/10.25077/ar.7.1.71-80.2020>
- Editors of Salem Press (Ed.). (2004). *Ecology basics*. Salem Press.
- Emmott, C., & Alexander, M. (2016). Defamiliarization and foregrounding: Representing experiences of change of state and perception in neurological illness autobiographies. In V. Sotirova (Ed.), *The Bloomsbury companion to stylistics* (pp. 289–307). Bloomsbury.
- Goatly, A. (2000). *Critical reading and writing: An introductory coursebook*. Routledge.
- Goatly, A. (2022a). Five themes for ecostylistics. *Journal of World Languages*, 8(3), 443–485. <https://doi.org/10.1515/jwl-2022-0026>
- Goatly, A. (2022b). *Two dimensions of meaning: Similarity and contiguity in metaphor and metonymy, language, culture, and ecology*. Routledge.
- Goatly, A., & LLE Project (2002–2005). *Metalude*. Lingnan University. Retrieved April, 2023, from <http://www.ln.edu.hk/lle/cwd/project01/web/home.html>
- Grundy, P. (2008). *Doing pragmatics* (3rd ed.). Routledge.
- Halliday, M. A. K. (1990). New ways of meaning: The challenge to applied linguistics. *Journal of Applied Linguistics*, 6, 7–36.
- Halliday, M. A. K. (2014 [1985]). *Halliday's introduction to functional grammar, revised by C.M.I.M. Matthiessen* (4th ed.). Routledge.
- Kemp, D. D. (2002 [1998]). *The environment dictionary* (2nd ed.). Routledge. [electronic edition].
- Lakoff, G., & Cognitive Linguistics Group (1991). *Master metaphor list*. University of California. Retrieved April, 2024, from <http://araw.mede.uic.edu/~alansz/metaphor/METAPHORLIST.pdf>
- Lambrou, M. (2019). *Disnarration and the unmentioned in fact and fiction*. Palgrave Macmillan.
- Leech, G. (2007). *Language in literature: Style and foregrounding*. Longman.
- Lyons, J. (1977). *Semantics, 2 volumes*. Cambridge University Press.
- Macfarlane, R. (2013). New words on the wild. *Nature*, 498(7453), 166–167. <https://doi.org/10.1038/498166a>
- Martin, J. R. (2004). Positive discourse analysis: Solidarity and change. *Revista Canaria de Estudios Ingleses*, 49, 179–200.
- Miller, G. T., & Spoolman, S. E. (2019 [2007]). *Essentials of ecology* (8th ed.). Cengage.
- Miller, S. (1991). *Textual carnivals: The politics of composition*. Southern Illinois University Press.
- Myerson, G., & Rydin, Y. (1996). *The language of environment: A new rhetoric*. Routledge.
- Oxford English Dictionary Online (2024). Oxford University Press. Retrieved April, 2024, from <https://www.oed.com/>
- Short, M. (1996). *Exploring the language of poems, plays and prose*. Longman.
- Simpson, P. (1993). *Language, ideology and point of view*. Routledge.

- Simpson, P. (2014 [2004]). *Stylistics: A resource book for students* (2nd ed.). Routledge.
- Smith, T. M., & Smith, R. L. (2015). *Elements of ecology* (9th ed.). Pearson.
- Steen, G. (2016). Metaphor: Metaphor and style through genre, with illustrations from Carol Ann Duffy's *Rapture*. In V. Sotirova (Ed.), *The Bloomsbury companion to stylistics* (pp. 308–324). Bloomsbury.
- Stibbe, A. (2012). *Animals erased: Discourse, ecology, and reconnection with the natural world*. Wesleyan University Press.
- Stibbe, A. (2018). Positive discourse analysis: Rethinking human ecological relationships. In A. F. Fill & H. Penz (Eds.), *The Routledge handbook of ecolinguistics* (pp. 165–178). Routledge.
- Stibbe, A. (2021). *Ecolinguistics: Language, ecology and the stories we live by* (2nd ed.). Routledge.
- Viridis, D. F. (2022). *Ecological stylistics: Ecostylistic approaches to discourses of nature, the environment and sustainability*. Palgrave Macmillan.