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Identity Representation of Plants in Relation to Humans and the Lifescape

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Introduction

The chapter¹ focuses on the representation of plants in the lifescape (Bortoluzzi and Zurru, this volume). Vegetation and plant life include the overwhelming majority of the living mass on our planet. Animal life (human and non-human animal) would not exist without plants, whereas most plants could still exist or adapt to a life without animals (Baluška and Mancuso 2020: 1).

In ecolinguistics studies, research about animal representation constitutes a relevant subfield (see Section 7.1), while discourses about plants need further exploration. This chapter is part of an ongoing research project which focuses on plant representation in a variety of genres and text types. The overarching research questions are: How are plants represented in connection with the environment they belong to and contribute to creating? How are plants represented in relation to humans and other animals? In the present chapter, these questions will be investigated in selected multimodal texts that recognize the value of plants and ecosystems and promote environmental protection (Section 7.2). Since verbal and multimodal communication tends to be inevitably anthropocentric, this is the dominant outlook for plant representation even in texts promoting ecosustainable solutions to climate issues and the protection of life on the planet.

In this study, 'text' is meant in its sense of 'multimodal text in its discourse context' whereby a variety of modes (verbal and visual) contribute to meaning-making (Bezemer and Kress 2016). The theoretical framework draws on Critical Discourse Studies (Fairclough 2003, 2014; Reisigl and Wodak 2009), the socio-semiotic approach in multimodal discourse studies (Kress and van Leeuwen 2021; van Leeuwen 2022; Moschini and Sindoni 2022) and ecolinguistics (Fill

and Mühlhäusler 2001; Steffensen and Fill 2014; Fill and Penz 2018; Stibbe 2021). The outlook offered by these studies is used to investigate the specificities of plant representation in discourse and reveal underlying ideologies and beliefs that influence and are influenced by sociocultural conventions.

The chapter is organized as follows: Section 7.1 presents the theoretical framework; Section 7.2 introduces data selection and methodology; Section 7.3 is a summary and discussion of the findings; and Section 7.4 offers some concluding remarks and scope for further research.

7.1 Theoretical framework

In academic publications and popularization of their research, botanists, plant biologists and other experts underline how we humans tend to undermine the relevance of plants giving priority to human and non-human animals, whereas in fact animal life is only possible thanks to plants. The sheer scale of plant life is overwhelming: around 90 per cent of all that is living on the earth (biomass) consists of plants (Baluška and Mancuso 2020: 1; Mancuso 2017: 144). However, plants are often considered passive participants of life events:

Earth is a planet dominated by plants. Tundra, forests, prairies and jungle are all words that describe the easily dominant organisms. Oxygen, 20% of the atmosphere, testifies to the power and dominance of photosynthesis. Despite this dominance, plants in our time frame seem to do nothing. But when time lapse is used, movement becomes obvious. In reality, with just a few exceptions, plant movement is growth and growth is slow in all organisms. (Calvo and Trewavas 2021: 78)

Discoursal representations of concepts such as identity, movement and action tend to suit physical and sociocultural human conventions, while their suitability for other animals or plants is not without problems. However, even within the human domain, representations of identities are complex sociocultural constructs instantiated in discourse and igniting endless debates (and controversies) (Benwell and Stokoe 2006; Caldas-Coulthard and Iedema 2008; McEntee Atalianis 2019).

Plant scientists Baluška and Mancuso write: 'Self-identities allow vascular plants to act as individuals enjoying sociality via their self/non-self recognition and kin recognition' (Baluška and Mancuso 2021: 1). In their view, research clearly demonstrates that vascular plants have 'perception and awareness of the

physical self' and 'act as individualities having both plant-specific agency and cognition' (Baluška and Mancuso 2021: 3). Plants are also crucial protagonists in the preservation of the planet: 'As our survival on planet Earth is completely dependent on plants [. . .], we should change our attitudes to plants and start to study them as cognitive and intelligent organisms [. . .] endowed with lots of behavioural and cognitive competencies' (Baluška and Mancuso 2021: 6).

Plants are represented by these scientists as active networks of living beings that improve their environment as ecological actors: plants 'provide' for their existence, 'choose' how to grow, 'sequester' carbon dioxide and chemicals, 'enjoy' features considered specific to animals, 'influence' how animals around them behave (see Gagliano, Ryan and Vieira 2017). Plants are presented as initiators and active participants of '(social) action' in the sense that plants actively interact with their context, other plants and animals in complex networks that are sometimes called 'wood-wide-webs' (Baluška and Mancuso 2020; Calvo 2022).

The question, then, is what frameworks can be used to analyse (identity) representations and interactions of plants in discourse? Representation of identity, action and interaction are mostly related to studies of human groups in human-centred disciplines, such as anthropology, sociology, linguistics and so on, or in groups of animals as in ethology. Social action, for instance, refers to human groups when representing themselves and 'others' and interacting among themselves and with 'others' (van Leeuwen 2008). Brubacker and Cooper (2000: 14 ff) define (dis)identification as a dynamic and multifaceted act of human positioning towards 'self' and 'others'. It is a balancing act between 'personal', 'relational' and 'collective' identities (Brewer and Gardner 1996: 83–4).

Investigating human identities from a socio-semiotic point of view, van Leeuwen states that social identity 'relates people, not only to other people but also to things, places, animals and their spiritual values' (2022: 7). The list does not mean to be exhaustive, but it is remarkable that plants are not mentioned. Are they implicitly included as 'things' or elements of 'places'?

Language and other semiotic systems we humans use for communicating are inevitably anthropocentric due to their nature and origin (Heuberger 2018) and to our bio-sensory perception of nature as being 'around us' as 'environment' rather than 'us' (Jung 2001). This anthropocentrism is instantiated in linguistic and socio-semiotic outcomes that can powerfully influence the way we experience our relation with the lifescape (see Bortoluzzi and Zurru, this volume). Latour calls this phenomenon (found also in scientific discourse) 'pseudo-realism', because it is perceived as 'realistic', even though it gives salience to humans against the background of the natural world (Latour 2020: 96).

Plant specificity has been discussed in some fields of discourse studies such as MG crops (Cook 2004). Literary criticism has a long tradition of dealing with plants representation in literature (see *Critical Plant Studies* by Woodward and Lemmer 2019) and so does research focusing on First Nations' traditions and communication; the latter two fields are beyond the scope of this chapter. At the time of writing, plant relevance seems to be under-represented in ecolinguistics (Poole and Micalay-Hurtado 2022 is an exception), whereas discourse on non-human animals has been widely investigated (among many others, Freeman 2009; Stibbe 2012; Forte 2015; Jacobs 2016; Cook and Sealey 2018; Zhdanova, Surinderpal and Kumaran 2021; Lamb this volume and 2024).

The literature focusing on non-human animals (their treatment and the discourses of respect or exploitation) shows that (critical) discourse frameworks developed for human groups and individuals tend to be applied to the relation between human and non-human animals. Stibbe writes: 'The way that animals are socially constructed influences how they are treated by human society' (Stibbe 2012: 20) and '[t]he relationship between humans and other animals is, therefore, partially constructed by the language used to talk to and about them' (Stibbe 2012: 64–5). These remarks derive from a Hallidayan view of language whereby 'our "reality" is not something ready made and waiting to be meant – it has to be actively construed; and [. . .] language evolved in the process of, and as the agency of, its construal' (Halliday 2001: 179).

This view of language and communication also informs the present study. All texts and artefacts influence, reproduce and transform social practices; discourses are a recontextualization of social practices (Fairclough and Wodak 1997; Fairclough 2003). Within this framework, van Leeuwen (2008, 2022) draws up 'sociosemantic inventories' of the ways in which human social actors can be represented in language and other modes: 'Activation occurs when social actors are represented as the active, dynamic forces in an activity, passivation when they are represented as "undergoing" the activity, or as being "at the receiving end of it"' (van Leeuwen 2008: 33).

In Actor-Network Theory, Latour (2005) goes beyond the dichotomy animate/inanimate and includes the effects of animate and inanimate participants in social action and interaction. In socio-semiotic studies, meaning is achieved by and through the interaction between animate and inanimate participants in the process of communication (Bezemer and Kress 2016; Kress and van Leeuwen 2021; van Leeuwen 2022). In multimodal studies, the term 'participant' is used to encompass a variety of elements in visual compositions (Kress and van Leeuwen 2021: 47) which are related to one another through processes;

participants are defined according to their positioning in the composition (Kress and van Leeuwen 2021). In critical discourse analytical methodology the representation of social actors includes ‘objects/phenomena/events and processes/actions’ which are discursively construed ‘more or less positively or negatively’ (Reisigl and Wodak 2009: 95). Drawing on these studies, the present research focuses on the positioning and the representation of plants as actors/participants in relation with human and non-human (social) actors/participants in (multimodal) discourse. Issues of representation of individual and collective identities, ‘animacy’ and ‘agency’ in multimodal texts will be presented and discussed in the data analysis, reflecting on the (inevitable) human perspective (van Leeuwen 2008, 2022). The analysis adopts a social-semiotic multimodality framework to discuss the orchestration of modes in the selected texts (Baldry and Thibault 2006; Kress 2010; Bezemer and Kress 2016; Kress and van Leeuwen 2021; Moschini and Sindoni 2022).

7.2 Data selection and methodology

Whereas the human point of view is unavoidable in texts that humans have created for other humans, my working hypothesis to investigate plant representation is that plants are backgrounded or represented as passive participants even in texts which seemingly focus on their environmental relevance and role. The follow-up hypothesis is that plants are represented as serving purposes for humans rather than as key ecological protagonists of the planet ecosystems.

For this study, the working definition of the hypernym ‘plant’ is very broad and based on the entry of the Encyclopedia Britannica (2022): plants are eukaryotic life forms that mostly (but not in all cases) present characteristics which range from the capacity to produce chemical energy through photosynthesis (for green plants), cells that contain cellulose, the absence of organs of motions and nervous system.

The texts selected as data are addressed to a variety of publics, encompassing expert and non-expert communities of addressees. The criteria for selecting the first three texts follow Reisigl and Wodak (2009: 98): they belong to similar if widespread language communities; they are present-day reports of international authoritative organizations; they are based on research; they are agenda setting and therefore they belong to specific fields of action related to the formation of public attitudes and opinion; they can be found open access online; they are Reports or Summaries of Reports by the United Nations and UNESCO. The

publics addressed are local, national and global policymakers, educators, expert and non-expert citizens. The main purpose of these texts is promoting a better quality of life and the protection of the environment. The addressers tend to influence and guide environmental policies and educational programmes. These reports are part of institutional discourse (Mayr 2008) that informs policymaking and agenda setting at global and local levels.

The analysis is complemented by two short videos about positive environmental awareness and action. *Nature Now* is an awareness-raising and fund-raising video promoting natural sustainable actions. The second video is the official trailer of the BBC documentary series *The Green Planet* by David Attenborough. Both videos address international English-speaking publics, mostly in the Global North; the first addresses non-experts and the second both expert and non-expert publics.

The three reports and two videos are so authoritative and influential (in different ways) that their evaluations, explanations, causal representations and call for action become advisable and desirable.

The data analysis is qualitative and offers reflections for further research, as mentioned in the concluding remarks (Section 7.4). The label 'participant' is used for entities socioculturally construed in discourse which are part of the environment (Fill 2001) or lifescape (Bortoluzzi and Zurru, this volume): human and non-human animals, plants, inanimate objects, events and situations that contribute to and interact with plant representation in context.

The main categorization is based on Social Actors by van Leeuwen (2008, 2022) and adapted to capture the different ways in which plants can be construed as participants. The categories Inclusion and Exclusion² are seen as a cline rather than a dichotomy. Exclusion can be instantiated as Suppression or Backgrounding (van Leeuwen 2008: 28 et passim; Stibbe 2021: 139 et passim). Suppression is rather problematic to detect since the participant is completely absent from the text. By default, texts and discourses are a selection of semiotic (and linguistic) features (van Leeuwen 2008: 30); therefore, a participant can be considered suppressed only when it is expected it should be present but it is not. However, different publics might have different expectations influenced by sociocultural conventions. In Backgrounding, participants are 'de-emphasized, pushed into the background' (van Leeuwen 2008: 29; Stibbe 2021). Linguistically this is instantiated in a variety of ways (some cases of agentless passive use, non-finite clauses, nominalizations, etc.; see Fairclough 2003, 2014; van Leeuwen 2008; Stibbe 2021). In visual modes, participants can be blurred, unidentifiable, peripheral elements (see Kress and van Leeuwen

2021). In this study, Backgrounding is part of the cline between Exclusion and Inclusion.

Inclusion can be expressed verbally and represented visually in a great variety of ways. Two main subcategories used here are Activation and Passivation. Van Leeuwen (2008: 33) writes: 'Activation occurs when social actors are represented as the active, dynamic forces in an activity, passivation when they are represented as "undergoing" the activity, or as being "at the receiving end of it."' This will be adapted to plant behaviour and to the relationship plant-animal (human or non-human) taking into account that plant participants activate themselves differently from animals (see Section 7.1). Other subcategories (Personalization and Impersonalization, for instance) emphasize human-related aspects which are not suitable for plant representation. Zhdanava, Surinderpal and Kumaran (2021) adopt Social Actor Theory to 'identify whether nonhuman animals are presented as human equals to human beings, and if so, how' (2021: 8). The present study does not take 'equality' with humans as a benchmark feature to represent plants but rather recognition and respect for multispecies diversity.

For images and videos, the analysis draws on the socio-semiotic approach elaborated, among others, by Kress and van Leeuwen (2021), van Leeuwen (2008, 2022) and Baldry and Thibault (2006). Van Leeuwen (2008: 147) summarizes the strategies to represent human others vis-à-vis the viewer as 'visual actor network': Inclusion includes three levels: Involved in Action (as Agent or Patient), Generic (Cultural categorization or Biological categorization) or Specific, and Individual and Group (Homogenization and Differentiation).

The qualitative data-driven analysis will show how these variables can be adapted to suit plant representations in a variety of contexts and modes. More specifically, variables as 'Involved in action' can mean doing what plants normally do (such as producing oxygen or storing carbon) and the categories of Generic and Specific, Individual and Group assume a different meaning for living beings who can be represented as 'individuals' but generally exist in networks of plants and other beings (including animals).

7.3 Data analysis and discussion

7.3.1 The 2030 Agenda for Sustainable Development

The 2030 Agenda for Sustainable Development by the United Nations is a document that has been having a great impact in policymaking, education and

social action of charity work at local and global levels (Valvason 2019/2020; Stibbe 2021: 150 et passim). The official version of the Resolution A/Res/70/1 was published on 21 October 2015 (2030ASDG2015).

The document defines itself as ‘an Agenda of unprecedented scope and significance’ which aims at a world ‘free from poverty, hunger, disease and want where all life can thrive’ (2030ASDG2015-6-7).³ The Preamble sets the priority for the whole document: ‘This Agenda is a plan of action for people, planet and prosperity’ (2030ASDG2015-3). The alliterative three-part list of the topic sentence clarifies who the beneficiaries are: humans are singled out while all ecosystems are included in the hypernym ‘planet’. ‘Prosperity’ refers to economic and cultural aspects of human society. The agenda focuses on human well-being: ‘the three dimensions of sustainable development’ are ‘the economic, social and environmental’ (2030ASDG2015-5) whereby the priority of humans and their economy is explicitly set. Within this human-centred document, how is the world of plants represented, given that it sustains the planet’s well-being and its lifescape?

In her corpus-assisted analysis of the text, Valvason (2019/2020: 155–6, 380) categorizes the occurrence of tokens (percentage of single occurrences of lexemes) as follows: natural elements (56 per cent), humans (38 per cent), non-human animals (3 per cent), plants (3 per cent). Only one positive keyword⁴ explicitly refers to plants: ‘forests’ (ranking 206 in the keyword list). In terms of quantitative presence, both plants and non-human animals are definitely backgrounded.

A close qualitative reading of the report shows that the natural habitats to protect (‘the planet and its natural resources’) are viewed as ‘resources’ for human needs (see a critique of this document in Stibbe 2021: 150 et passim). In the text, plant life is either implied in highly generic and all-encompassing terms, such as ‘biodiversity’, ‘nature’, ‘wildlife and other living species’ and ‘biological system of the planet’ (2030ASDG2015-7-9), or it is implicit in generic terms of human activities such as ‘agriculture’ or human categories such as ‘farmers’ (and their specifications) as in Example 1:

1. 2030ASDG2015-11 ‘We will devote resources to developing rural areas and sustainable agriculture and fisheries, supporting smallholder farmers, especially women farmers, herders and fishers in developing countries, particularly least developed countries.’

The explicit mention of plant life as ‘forests’ occurs in text structures where humans are the agents that ‘conserve and sustainably use’ ‘natural resources’ whereas plants are undergoing the process (Example 2):

2. 2030ASDG2015-13 ‘We are therefore determined to conserve and sustainably use oceans and seas, freshwater resources, as well as forests, mountains and drylands and to protect biodiversity, ecosystems and wildlife.’

In the document, plants are either implied in non-specific metonymic relation to their hypernyms (‘biodiversity’, ‘ecosystems’) or mentioned as generic ‘resources’ for human needs (‘forests’, ‘plants’). Both plants and non-human animals are backgrounded and represented in generic terms as beneficial for humans. Given the policymaking aims for improving human life quality on the planet, it could be argued that backgrounding other than human life might be expected. The counterargument, however, is that humans would benefit from establishing a more respectful relation with all aspects of the lifescape especially in globally influential agenda-setting texts.

7.3.2 Restoring life to the land and heritage forests

Two reports released by prestigious international organizations in 2021 were selected as data because they focus on the protection of plant ecosystems and forests: *Restoring Life to the Land. The Role of Sustainable Land Management in Ecosystem Restoration* (RLL2021, 21,442 words) was co-published by United Nations Convention to Combat Desertification (UNCCD) and World Overview of Conservation Approaches and Technologies (WOCAT); *World Heritage Forests. Carbon sinks under pressure* (WHF2021, 13,404 words) was published by the United Nations Educational, Scientific and Cultural Organization (UNESCO). They belong to the genre of institutional reports which summarize wide-ranging research for publics of policymakers at global and local levels, international charities and NGOs, academia and educational institutions. They are authoritative, research-based and agenda-setting reports. Both texts are freely accessible online and rich in colour images, photos and diagrams. Due to the similarities in text type, purpose, authorship and publics addressed, these two texts form a small corpus.

The #Lancsbox corpus tools (Brezina, Weill-Tessier and McEnery 2021) were used for basic data extraction and context retrieval. The data were qualitatively analysed and manually checked to eliminate occurrences with a different meaning (e.g. industrial ‘plant’ and surnames); header and footer occurrences were also excluded.

Some frequent collocations confirm the focus on land protection: ‘world heritage sites’, ‘sustainable land management’, ‘ecosystem restoration’, ‘world

heritage forests’, ‘heritage forests’. In these collocations, a close relation between humans and other participants (land, ecosystems and forests) is established through the human-centred concepts of ‘restoration’ and ‘heritage’ (respectively occurring also in the titles of the two reports). Heritage is, in this context, a metonymic extension of passing on valuable assets from (human) generation to generation. However positive and respectful, the concept is mapped onto human ownership and framed as such (Entman 1993 and Lakoff 2010 for a definition of frames). The collocations ‘sustainable land management’ and ‘ecosystem restoration’ are nominalizations in which the head noun implies human agency. In the complex nominalization ‘Heritage forests carbon sinks’ (WHF2021), ‘heritage forests’ are modifiers of ‘carbon sinks’ whereby human responsibility for carbon in excess is obfuscated. Interestingly, however, the nominalization ‘carbon sinks’ also implies the active role of the forest in holding on to carbon that would otherwise be dangerous for the planet.

Table 7.1 reports the raw occurrences of the most frequent generic search terms related to plants. All occurrences were qualitatively analysed in their wider discursive context of occurrence, and findings are summarized later in the text. Specific plant names (coffee, *Casuarina Equisetifolia*, etc.) rarely occur in the two texts. The asterisk means that the term includes all types of the relevant lemmas.

In RLL2021, the definition of sustainable land management clearly defines ‘plants’ as one of the ‘land resources’ for human needs (Example 3):

3. RLL2021-5 ‘land resources including soils, water, animals and plants, for the production of goods to meet changing human needs.’

The occurrences of the verb ‘to plant’ and the term ‘plantation’ (included in the analysis) imply human agency.⁵ In most contexts where the lemma ‘plant’ occurs as noun or modifier, the active agent in the clause is human, even when only implied, as in the agentless passive of Example 4:

4. RLL2021-16 ‘in developing countries many medicinal drugs are derived from local plants.’

Table 7.1 Occurrences of generic terms related to plants in RLL2021 and WHF2021

	plant*	tree*	vegetation*	forest*
RLL2021	56	23	17	86
WHF2021	3	31	4	260

In the very few occurrences in which plants are overtly active participants, the result of their action is, without exception, a positive outcome for humans. Among these occurrences, I included the following instance of nominalization: ‘dynamic development of plant synergies’ presented as part of ‘dynamic agroforestry’ (RLL2021-13). In nominalizations, processes are presented as noun phrases and agency in the process is only implied, not explicitly expressed. Thus, plant agency and animacy is discursively obfuscated and backgrounded even when implied, and it is usually represented as driven by human agency (see Example 4).

The only contexts in which plants are not directly related to human well-being are in diagrams, as in the categorization ‘plant diversity’ (RLL2021-12). In a few instances plants become problematic for other organisms as in the generic statement: ‘Invasive aquatic plants are a threat’ (RLL2021-20).

In one occurrence plants are beneficiaries of human action which protects them from other animals (indirectly implied in ‘grazing areas’) in order to restore ‘indigenous plant cover’ without further specification of direct advantage for humans (RLL2021-31).

Only exceptionally, plants are represented as active agents:

5. ‘Mangroves are propagated through cigar-shaped “propagules”, produced by mature plants.’ (RLL2021-27)

In Example 5, the passive structure thematizes these specific plants that are also presented as producing what propagates themselves. If this is common to all plants, here the concept is rendered salient in a context where plant reproduction is generally viewed as triggered by human action.

In summary, in RLL2021, plants are represented in relation to human needs and dependent on human action and agency. Similarly, the term ‘tree*’, in its singular or plural form, occurs as undergoing human action or contributing to human needs or well-being (Example 6):

6. RLL2021-17 ‘Coffee is originally a forest species, and when the first commercial plantations were created, tall shade trees were planted amongst the coffee.’

In one only occurrence (Example 7) human action, implied in the infinitival form ‘mixing’, is reported as beneficial to crops and trees:

7. RLL2021-13 ‘Mixing trees and crops can be mutually beneficial.’

In two occurrences, tree action is mentioned because beneficial to human activities and animals related to them (‘cattle’):

8. RLL2021-19 ‘The trees *Parashorea* s: , *Taxus* s: and *Nyssa* s: have intrinsic value- while shading the ground and depressing weeds.’

In Example 8, the trees mentioned by their species names seem to have ‘intrinsic value’, but in fact, their actions facilitate the healthy growth of the rubber plant as economic crops.

In WHF2021 trees are places for carbon storage (circumstantial):

9. WHF2021-7 ‘Carbon in forests is mainly stored in trees (aboveground biomass), roots (belowground biomass) and soils.’

‘Tree’ is often used as attributions in nominalizations such as ‘tree cover loss’, ‘lack of tree cover gain’ and ‘tree mortality and reduced resilience to climate change’. The implied process is represented as an environmental threat to the well-being of the tree and the planet. In this sense, WHF2021 moves beyond the framing of plants as beneficial for human needs (as crops or grazing land) as in RLL2021, and it establishes the connection between the health of plant biomass and the health of the planet.

A similar discursual situation can be seen for the term ‘vegetation*’: vegetation tends to be either part of the general setting (circumstantial), passivated or viewed as a resource. However, in two occurrences out of twenty-one ‘vegetation’ (as noun or adjective) is presented as just ‘existing’ (in existential process clauses), and in three instances out of twenty-one, vegetation is an active participant (two occurrences in WHF2021 and one in RLL2021).

‘Forests’ and ‘forest’ are, respectively, the fourth and ninth keyword of the mini-corpus.⁶ Forests are also one of the eight main ecosystems in RLL2021 and the central topic in WHF2021.

In RLL2021, the *Take Away Message* states:

10. RLL2021-vii ‘FORESTS are in the public eye – with dramatic images of degradation stemming from deforestation. Protection of forest areas is only a partial answer: there is growing experience of successful community management. Furthermore, productive agroforestry systems can effectively mimic forests and forest function.’

In Example 10, forests are represented metaphorically ‘located’ in the global infosphere (‘the public eye’) and needing human protection and community management; the third sentence entails that they can be successfully replaced by human-made environments, which does not sound promising for a *Take Away Message*.

RLL2021 represents forests as providers for human needs or needing human action. Even when a completely different vision of life is endorsed (forests as sacred places), they are still presented only as participants in need of human protection (Example 11):

11. RLL2021-17 ‘Sacred groves comprize islands of original forest, protected by the traditional authorities through a system of taboos and restrictions.’

In four instances out of eighty-six occurrences, forests are given a clear active role: ‘as protectors against storm surges and filters from sediments’ (RLL2021-26) or animals (RLL2021-27): ‘Mangrove forests are highly biodiverse and act as breeding grounds for fish and other marine creatures.’ However, one of these four occurrences is agroforestry, which means heavily managed ecosystems.

In all other eighty-two occurrences in RLL2021, forests undergo processes instigated by humans (directly or indirectly) or are viewed through a human perspective as in the following instance (Example 12), where the predicative adjective ‘simple’ sounds rather incongruous in the Conclusion of a report on global complexity:

12. RLL2021-40 ‘Forest ecosystems may appear to be simple, but forests vary enormously.’

In WHF2021, instead, forests are identified through complexity and presented as active participants in carbon storage (Example 13):

13. WHF2021-iii ‘Forests are some of the most biodiverse habitats on Earth and play a crucial role in climate regulation by absorbing carbon dioxide (CO₂) from the atmosphere.’

They need human protection (this is the purpose of the document), but they are key participants through their active role and their value in environmental processes. They are represented not only in function of human needs but also as intrinsically valuable for the crucial processes they carry out. As suggested in Example 14, they need protection due to large-scale human-made damage:

14. WHF2021-3 ‘World Heritage forests provide critical climate benefits only if safeguarded from threats.’

As already mentioned, in RLL2021 the written text construes the identity and the role of plants as closely related to human priorities and the passive participant of human actions (positive or negative). Also, non-human animals connected to plants are mentioned or implied in relation to human needs (see, for instance,

‘grazing’). In a nutshell, the title of RLL2021 summarizes the key viewpoint of the report: the action of ‘restoring life to the land’ is performed by humans through sustainable land management: it is humans that give life to the land and not vice versa. The colour images in the report are aligned with this, as shown in Table 7.2:

In the photos, local people belonging to a variety of ethnicities are represented working on the land or planning together in different natural settings. In Table 7.2, humans are categorized as backgrounded when only human artefacts and not people are present in the photo; images clearly represent the relevance of local communities on the land (seventy-three out of seventy-seven photos), empowering them. The implicit message is that life on land can only be restored by humans, or, more positively, it can only exist if humans relate to it respectfully as many native people do.

There is a tension between the representation discussed so far (in written text and photos) and the visual representation of the eight ecosystems excluded from the count in Table 7.2 because it is a mosaic of images and drawings forming a visual refrain which signposts each section in the document⁷ and dominates the cover. The same composition of eight photos and eight drawings representing the main eight ecosystems can be also found in the copyright page and at p. 11. At the end of the report (RLL2021-39) the drawings only (without the photos) form a jigsaw puzzle, visually implicating the necessity of interrelation between these ecosystems. The key issue here is that this composite image seems to contradict the idea that all life-giving restoration powers are in human hands: only two images (out of eight) include humans (working the land or as human-made artefacts in urban areas). Non-human animals are erased and plant ecosystems are salient, both in the drawings and in the photos. Thus the most representative visual feature of the report is not aligned with the general message of the text.

In the written text of WHF2021, the ecosystems of the forests are represented as multifaceted and complex: their intrinsic qualities, values and activities are acknowledged and highlighted, along with human needs and factors that

Table 7.2 Images in RLL2021

Vegetation – no visible animal	3
Vegetation + non-human animal	1
Vegetation + human and/or non-human animals – humans backgrounded	31
Vegetation + human and/or non-human animals – humans foregrounded	41
Only humans no vegetation	1
Total	77

damage the environment. Plants, especially the collective entity of forests, are activated through both the powerful and unique activities they carry out on the planet and the forests' position in relation to human needs and values. This report clearly states the need for humans to repair the damage done to ecosystems that prevents forests from performing their irreplaceable active role on the planet.

The cover of the WHF2021 report is a drawing that represents an idyllic, fairy-tale-like forest without humans; stylized birds cross the sky as the only animals. The drawing, in the dominant colours that have metonymically come to represent the planet (green and blue), includes waving lines connecting sky and soil and evoking either carbon emissions or their sequestration by the forest. The report includes diagrams and drawings that visually expose the complexity of the issues, give agency to forests using arrows as action vectors indicating absorption of carbon (WHF2021-7) and represent trees including what is hidden to the human eye (root system and its effects) (WHF2021-12). The photos are only thirteen (including three headers); the images of forests are mostly taken from above in panoramic bird's-eye view (eleven out of thirteen) to give the impression of the extension of these forested areas and the thickness of the canopy. Humans are only physically present in three photos out of thirteen as watch guarding the forest from above and as firefighters. In other four photos the human presence is implied in images of deforestation and degraded land. The forest is represented as an imposingly powerful yet fragile ecosystem.

7.3.3 'Nature Now' video and 'The Green Planet' trailer

Two additional examples of plant representation are taken from two short videos. The first is *Nature Now* (NN2019⁸) released in 2019 and narrated by climate activists Greta Thunberg and George Monbiot; it is a social promotional video to raise awareness and funds for Natural Climate Solutions (NCS), namely solutions based on the healing power of natural events. The two protagonists address the viewers directly by looking into the camera (level direct gaze) from what looks like rooms in their respective homes. Medium/close-up shots establish a friendly, informal and equal relation between them and the viewers.

Greta Thunberg mentions the core problem and George Monbiot provides a natural solution (Examples 15 and 16, respectively):

15. Thunberg: 'Our Climate is breaking down [. . .] But we can still fix this. You can still fix it.' (NN2019: 00'12"–00'17")

16. Monbiot: ‘There is a magic machine that sucks carbon out of the air, costs very little and builds itself. It is called . . . a tree. The tree is an example of NATURAL CLIMATE SOLUTION. Mangroves, peatbogs, jungles, marshes, seabeds, kelp forests, swamps, coral reefs. They take carbon out of the air and lock it away. Nature is a tool we can use to repair our broken climate.’ (NN2019: 00’38”–01’08”)

Both verbally and visually, trees are given emphasis and activated as offering a solution to the climate crisis: the scene shifts from Monbiot’s medium/close-up shot to the image of a forest (while we can hear Monbiot’s voice-over) in which a tree trunk is foregrounded in a close-up shot level with the gaze of the viewer while the background is the deep green shadowy forest floor and undergrowth. After this, plant ecosystems are represented in successively fast-edited shots while Monbiot’s voice mentions them. These plant ecosystems are viewed in panoramic shots from above, which enhances their vastity and beauty. Visually, therefore, trees and plants are seen as individual participants forming complex collective ecosystems in which the network of relations is fundamental. The tension (Fill, this volume) arises between these edited images and the extended verbal metaphor of the tree as a human-made mechanism (‘machine’, ‘tool’, Example 16) to repair (‘fix’) another complex mechanism, the climate that ‘is breaking down’ (Example 15). In a video promoting Natural Climate Solutions, this tension is probably meant to give salience to trees and plants as agents of positive action. However, the implications of these verbal metaphors are that the climate crisis is represented as a linear problem solution that can be repaired as a human-made mechanism. Trees are a solution without the negative side effects of human artefacts (‘it costs very little’ and ‘builds itself’, Example 16). These metaphors reinforce the interpretative frame that human artefacts are powerful and effective to counteract a human-made crisis,⁹ which is not aligned with the promotion of natural solutions.

The second short video is one of the official BBC trailers for the five-documentary series *The Green Planet* (TGP2022); the series, presented by the world-famous documentarist David Attenborough and produced by the BBC, was broadcast in spring 2022. The analysis only focuses on the ensemble of the written captions, the soundtrack and moving images edited using clips from the series episodes. The written text appears subdivided into sections in different edited shots of the trailer; it is rendered salient by its central position and the contrast of the white block capitals superimposed on the dark or colourful moving images, as shown in Example 17:

17. 'THERE IS A SECRET WORLD / THAT IS ALMOST HIDDEN FROM US / BREATHING LIFE / INTO OUR WORLD.'

Towards the end, the series title (THE GREEN PLANET) appears in the centre of the shot enclosed in a circle while small leaves are sprouting in time lapse towards the title; title and leaves are bright against the dark brown soil in the background: this gives them salience and connects them conceptually as the vector of the leaves points towards the series title within the circle that looks like a water drop. The soundtrack of the trailer (music and sounds) evokes the environments in which plants live; sounds are associated with the movements of the plants filmed in time lapse. The filming techniques magnify both moving images and sounds to recreate for the viewer plant movements that are mostly imperceptible to humans. Thus, the 'secret world that is almost hidden to us' (Example 17) is verbally represented as powerfully active through the transitive use of the process 'breathe': 'breathing life into our world' implies a near divine power of giving life. The multimodal correlation between moving images, soundtrack and written captions orients the interpretation towards recognizing the powerful energy of plants in creating living habitats for themselves and animals (human and non-human). The magnifying techniques of moving images and sounds, and time lapse video recording, bring plant organs, shapes and action to human perception and comprehension (the complexity of time perception is beyond the scope of the present chapter; see Adam 1990, 1998). Thus, the metaphorical and literal expression 'breathing life into our world' is instantiated by the ensemble of soundtrack and moving images within a multimodal orchestration that orients the viewers towards an attitude of recognition, marvel and awe.

7.4 Concluding remarks and scope for further research

Plant representation in ecolinguistics is vastly underexplored even though plants are at the core of all ecosystems. This chapter has raised some methodological issues within a vast field that needs investigation and critical reflection.

The data analysed reveal tension between the purposes of the texts and their discursual realizations. In agenda setting and widely influential 2030ASDG2015 plants are backgrounded, as are non-human animals, due to the emphasis of the report on basic human priorities and rights, which, however, would profit from a better alignment between humans and the lifescapes they belong to.

RLL2021 and WHF2021 posit the relevance of plants at their core since their purpose is taking action against the deterioration of ecosystems and positively promote their protection through plants. In the two reports plants are mostly represented as resources related to human needs and framed as means to repair ecosystems damaged by humans. In the institutional discourse of the two reports, there is a disalignment between the relevance of plants per se and as resources to repair the effects of human-inflicted climate crisis. However, there are instances, especially in WHF2021, that reveal the overwhelming power and energy of plants: it is mainly expressed through images and drawings and only partly in written discourse.

In the video *Nature Now*, tension arises between the promotion of natural solutions for the climate crisis and the discourse framing trees and nature as machines and tools, while images offer the complexity of natural plant environments as collective connections in ecosystems. It is in *The Green Planet* trailer that the multimodal orchestration between modes (written captions, sound and moving images) offers its viewers a coherent (if surprising) representation of plants as active and independent collectivities of participants who allow our world to exist through their action of 'breathing life' into it. It is an evocative and memorable representation of a scientifically sound concept.

In this study, ecolinguistics and critical multimodal studies have been adopted as frameworks; further reflection is needed on the analytical framework to be adopted for a variety of genres and text types. Some principles and categories were drawn from Social Actor Analysis and adapted to the aims of the study. Some categories used in the analysis of plant representations need adaptation: the notions of 'collectivity' and 'genericity' in plants acquire new meaning due to their close interrelation among themselves and with the lifescape; the concepts of 'individual' and 'collectivity' intertwine and overlap; categories such as 'generic' and 'specific' change their meaning when representing plants; the verbal and multimodal representation of action and movement (processes), existence, animacy, agency and time, among other variables, need to be reassessed. In visual representation, for instance, a panoramic view from above gives the viewer the sense of vastity and power of the collective being called 'forest', rather than the impression of human domination from above. The 'body' of plants tends to be partly (or mostly) hidden to human sight or perception and so are the relationships among plants, and among plants and animals. This gives drawings and diagrams in reports the key role of revealing what we cannot otherwise perceive. Capra writes: 'Because living systems are nonlinear and rooted in patterns of relationships, understanding the principles of ecology

requires a new way of seeing the world and of thinking – in terms of relationships, connectedness, and context – that goes against the grain of traditional Western science and education’ (Capra 2007: 4).

This study confirms the necessity of investigating a variety of different genres and subgenres multimodally in order to reflect on ways of representing the world of plants for a variety of cultural contexts, communicative purposes and for different discourse communities. Public response to different multimodal texts would also contribute to revealing human reactions to plant representation.

Stibbe (2012: 150 et passim) writes that animals and plants are presented as agents and sensors in haiku just by leading their lives; in Japanese this is captured in the concept of ‘*sonomama*: the way things are’. In the texts analysed in this chapter, plant action and agentivity are often instantiated through the way they lead their life acting on their environment. Studying the way plants are represented multimodally in discourse can help us establish a relation with beings who are extremely different from us, and adapt our methodological frameworks to understand – and, ultimately, represent – them better.

Whereas critical discourse studies (including multimodal critical discourse studies) are generally concerned with expressing solidarity with the powerless and at-risk individuals and groups, this contribution focuses on a powerful and widespread group of diverse living beings on the planet. Some plants will most likely survive and regenerate life after a human-inflicted, pollution-driven animal mass extinction. Rather than erasing, neglecting, backgrounding, disempowering plants from our discourses, we would need to explore the extraordinary energy they share with the lifescape and learn from that. Latour (2014: 15–16) writes: ‘The point of living in the epoch of Anthropocene is that all agents share the same shape-changing destiny, a destiny that cannot be followed, documented, told, and represented by using any of the older traits associated with subjectivity or objectivity. [. . .] Living with a world that has not been previously deanimated will make a great difference for the Earthbound.’

Notes

- 1 I am deeply grateful to the scholars who kindly read parts of this chapter, discussed issues and offered me their encouragement and feedback. Among them, Barbara Cauzzo read an early draft of this chapter; Alwin Frank Fill, Barbara Adam, Federica Pedriali and Matt Drury offered me suggestions and ideas; Emile Bellewes gave me

detailed comments on the final draft of the chapter. I also thank the anonymous reviewers for their observations.

- 2 The capital letter is used only when present in the literature it refers to. The category adaptation used in this study is without capital letter to indicate that the investigation is ongoing and categories will be further refined.
- 3 Quotes from the data are identified with title initials, date of publication and page numbers of the open access texts.
- 4 Keywords in corpus linguistics are the statistically more frequent words in one corpus as compared to a reference corpus (Baker 2006: 125; Poole, this volume).
- 5 Emile Bellewes noticed that ‘there is almost a co-agency that happens or a joint process whereby the human is the instigator and the plant continues the growth as the agent of its own development’ (personal communication).
- 6 The LOB corpus was used as reference corpus.
- 7 https://www.unccd.int/sites/default/files/documents/2021-10/211018_RestoringLi fetotheLand_Report%20%282%29.pdf.
- 8 Examples refer to video time stamps in minutes and seconds.
- 9 See the ‘machine’ metaphor in Adam (1990: 76 et passim).

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