Abstract: Since the concept of ecology was first applied to language over 50 years ago, the field of ecolinguistics has developed into a thriving branch of linguistics that is more than ever closer to the pressing issues of our time. This article aims to trace the historical development of ecolinguistics, discusses the main trends in current research, and provides a brief projection of potential future developments. The first part includes an overview of research connected to Einar Haugen’s article “Ecology of Language”, published in 1972, which focuses on the interaction between languages in multilingual contexts. A large part of the article is then devoted to the role of language in dealing with environmental problems (e.g. aggravating or solving them), which is the biological understanding of ecology in the study of language inspired by Halliday’s 1990 talk “New Ways of Meaning: The Challenge to Applied Linguistics”. Ecolinguistics will certainly have an interesting future. It will take up topics such as climate change, which surprisingly has largely been excluded from ecolinguistic research until recently. Other topics that need to be dealt with are the negative effects of tourism, the migration of human, plant, and animal populations. Ecolinguists, in the future, will also expand their methodology towards multimodal research and study how non-European languages present the ‘environment’, or rather ‘con-vironment’.

Keywords: approaches; current developments; ecolinguistics; ecological discourse analysis; future; history; multilingualism

1 Introduction

In the past 50 years, ecolinguistics has changed from a small branch of linguistics – or, as some ecolinguists argue, a totally new perspective on the study of language informed by ecology taken by a few researchers only – into a field which is moving to the center of linguistic research. This applies both to its relevance to the most
pressing issues of our time, i.e. the degradation of our natural environment which has become a threat to our existence, and its position in linguistics: more and more researchers have started to adopt an ecological approach to the study of language and its use.

This article will first provide a brief background to the development of ecolinguistics, including early traces of ecological perspectives on language in various scholars’ work (Section 2). After that, it will outline the most important approaches within ecolinguistics and will then discuss selected topics that have been researched in the field in the last few years (Sections 3 and 4). It finally will provide an outlook on potential future developments in ecolinguistics (Section 5).

2 History

2.1 The beginnings

The establishment of the new field of ecolinguistics has most widely been connected to the Norwegian-American linguist Einar Haugen. Applying the ecology metaphor to language about 50 years ago, he defined the ecology of language as “the study of the interactions between any given language and its environment” (Haugen 1972: 325). For Haugen, the environment of language is the society that uses language and includes the social and psychological environment of language, yet not the physical environment. Nevertheless, he compares the ecology of language to the ecology between animals and plants in their environment.

Earlier traces of connections established between language and environment can be found in various writings, and precursors of the field can be traced throughout history. Thorough overviews of the historical background are provided by Couto (2014), LeVasseur (2015), Mühlhäusler (2003: Ch. 3), and Zhou (2021). For this article, however, a few brief points from linguists dealing with the notions of ecology and language should be mentioned.

In a talk given to the American Anthropological Association in 1911, Edward Sapir (2001 [1912]) discussed the influence of the physical environment (e.g. geographical aspects such as the topography of a country, its climate) on language and that of the social environment (religion, ethical standards, political organization, etc.). This environment is most directly reflected in the vocabulary of a language. However, Sapir pointed out that the physical environment only plays a role when it is has been made socially relevant. Trim (1959: 24) stated that “the study of variation within a speech community and its functions may be called linguistic ecology”. The American linguists Carl F. Voegelin, Florence M. Voegelin, and Noel W. Schutz Jr. applied the ecology metaphor to the language varieties of
Arizona (e.g. Voegelin and Voegelin 1964; Voegelin et al. 1967). The first usage of the term *ecolinguistics* is attributed to the French sociolinguist Jean Baptiste Marcellesi (1975). Four years later, Salzinger (1979) pointed to the importance of including the environment in which language was used and included psycho-, neuro-, and sociolinguistics in his definition (see Couto 2014: 124). In 1985, French linguist Claude Hagège used the term *écolinguistique* (‘ecolinguistics’) and suggested that it should be concerned with the relations between the physical world and the ecology of languages (Hagège 1985).

The second strand of the ecology of language originated in Halliday’s plenary talk at the 9th Congress of the AILA (International Association of Applied Linguistics) in Thessaloniki, Greece in 1990 (see Fill 1998). He emphasized the role of language in dealing with (aggravating or solving) environmental problems by pointing out the connection between language and ideologies such as growthism (see Section 5.1), speciesism, and classism. In this talk, Halliday made it clear that dealing with environmental issues should have a central place in applied linguistics, thus initiating the field of Ecological Discourse Analysis (EDA) in the widest sense, and taking a biological understanding of ecology in the study of language.

### 2.2 Development of the field since the 1990s

Although most researchers prefer to work mainly within one of the two strands established before, some represent both perspectives (e.g. Fill 1993; Fill and Mühlhäusler 2001; Mühlhäusler 2003).

The earliest overview of ecolinguistics published by Fill (1993) reflects a very broad view of the field as it studies the (inter)relations between languages in their social and natural environment and the role of language in the relations between groups. Emphasis is placed on the concept of ‘interrelations’ on all levels – including language and conflict, language and gender. Furthermore, diversity and focus on the ‘small’ rather than the ‘big’ are characteristic of this view of ecolinguistics. In a subsequent publication, Fill (1998) attempts a definition and overview of the field which is slightly narrower in scope.

Trampe (1990) approaches the field from a language-world-system and holds that the paradigm of human ecology should be complemented by an ecolinguistic paradigm. Ecolinguistics should contribute to overcoming the ongoing ecological crisis.

A dialectical approach to ecolinguistics was developed by Bang and Døør (2007), known as the Odense School of Ecolinguistics (now University of Southern Denmark). The ecology of language developed in this tradition since the 1970s is
characterized by a holistic view informed by Marxist theory and Eastern philosophy (Daoism, Hinduism, Buddhism). A theoretical framework was developed to study the dialectic interrelations between language, ecology, and society. The concept of interrelation in this theory is defined by dialectics.

Mühlhäusler (2003) combined the metaphorical application of ecology to language with an ecocritical approach, providing an introduction to the linguistic tools which can be used for the analysis of environmental discourse. Among these tools are the lexicon, grammar, metaphor, and narratives. Recent developments in ecolinguistics promote a more unified view of conceptualizing ecolinguistics, on the one hand, yet also reflect more diversification, on the other.

Steffensen and Fill (2014) aim to unify the diverse field by identifying four approaches to the ecology of language. These are categorized into: 1) a symbolic ecology that studies the co-existence of languages in a given area; 2) a natural ecology that investigates how language relates to the biological and ecosystemic surroundings (topography, climate, fauna, flora, etc.); 3) a socio-cultural ecology that “investigates how language relates to the social and cultural forces that shape the conditions of speakers and speech communities”; and 4) a cognitive ecology that “investigates how language is enabled by the dynamics between biological organisms and their environment” (Steffensen and Fill 2014: 7). The development of ecolinguistics in China rather moves in the direction of diversification: Harmonious Discourse Analysis (HDA), for example, was specifically created to provide a Chinese perspective on ecolinguistics, arguing that Western-oriented approaches are not suited for the Chinese context (Huang and Zhao 2021: 2).

The following sections offer a brief outline of the two different strands established at the beginning.

3 The ecology of language

Research in the Haugenian tradition has mainly focused on the ecology of multilingualism or language contact in various areas in the world. The ecology of language contact in its widest sense addresses the diversity of languages, how this diversity has been formed, the development of minority and majority languages and the relationship between them, contact languages (pidgins and creoles), language continuity, change (language shift), extinction and revitalization, language planning. Questions such as why speakers adopt or even develop new languages and what contextual factors play a role in this process are part of the research in this field. Interest in this branch of ecolinguistics was particularly prominent in the 1980s, then waned in the subsequent decade before it received another impetus in the early 2000s. Renewed interest in this branch of
ecolinguistics was demonstrated by the foundation of the journal *Language Ecology* (published by John Benjamins) in 2017. However, the journal was discontinued as the last volume appeared in 2020.1

### 3.1 Multilingualism

Some early work in this field is represented by Mackey’s (2001 [1980]) study of language shift and Haarmann’s (1986) book on language in ethnicity. Denison (2001 [1982]) applied the ecology metaphor to the multilingual context of Europe. Mühlhäusler (1996) studied the language ecology of the Pacific, mainly Australia and the Pacific Rim. He demonstrated that the linguistic ecology of the region upheld linguistic diversity in the past when it was maintained by the widespread bilingualism and was a matter of choice rather than anything else. Linguistic diversity in the region has been declining over the last 200 years, in a process driven by the educational systems put in place under colonial rule.

Bastardas-Boada (2018) has written extensively on the aspects of language ecology pertaining to minoritized and majority languages as well as aspects of language planning over the last two decades, in particular. He (Bastardas-Boada 2002) proposes an ecological model based on complexity theory which takes into account ethical and socio-political considerations in language planning.

### 3.2 Ecology and language evolution

An ecological view of language evolution is provided by Mufwene (2001). His work throws new light on the development of creoles: he argues that the restructuring processes at work in the development of creoles are fundamentally the same as those in any other languages (or ordinary languages). Ansaldo (2009) builds on Mufwene’s (2001) work and focuses on the Asian context.

### 3.3 Linguistic and biological diversity

Some ecolinguists who apply the ecological metaphor to languages have compared linguistic diversity to the diversity of biological species. A close connection between cultural and linguistic diversity and biological diversity has already been established by Mühlhäusler (1996). It has been argued that the loss of

languages can be compared to the loss of natural species. When a language disappears the world view which is reflected by this language gets lost and results in the disappearance of this particular perspective on the world (Maffi 2001; Nettle and Romaine 2000; Skutnabb-Kangas 2000). Just like biological species, languages are dying off at a much faster rate today than ever before in history.

In connection with the debate on language loss, the topic of linguistic human rights has been brought forward. This issue has been a particular focus in the work of Skutnabb-Kangas and Philipson (Skutnabb-Kangas 2000; Skutnabb-Kangas and Philipson 2008). Linguistic human rights have been defined as the “rights that make it possible for a group or people to maintain its language and culture” (Skutnabb-Kangas 2000; Skutnabb-Kangas and Phillipson 2008: 4). They consist of expressive language rights (using language as a marker of identity) and instrumental language rights (using language as a means of communication).

### 4 Ecological discourse analysis

Human interaction with the environment is both mediated and influenced by language. EDA is the analysis of any type of discourse under the ecological framework (Alexander and Stibbe 2014). Although it has frequently been applied to studying environmental discourse, it is not restricted to the analysis of discourse that relates to the environment. One of the underlying assumptions of EDA is that highlighting the way that discourse may be inhumane or destructive will create more awareness of the role of language in dealing with the environment. This also includes the hope that discourses that are more harmonious with our natural surroundings will result in more ecologically conscious ways of dealing with the environment. According to Alexander and Stibbe (2014), EDA can be divided into two main strands: (1) the analysis of ecological discourse and (2) the ecological analysis of discourse. The first deals with “the ways humans use language to talk about ecology” (Alexander and Stibbe 2014: 105). It represents the strand of eco-linguistics which Fill and Mühlhäusler (2001: 6) in their definition of critical eco-linguistics identified as the text-critical one. The second strand takes into account that other discourses, too, have an impact on how humans treat the systems that support life. It includes the system-critical part discussed by Fill and Mühlhäusler (2001: 6) which was pioneered by Halliday’s (1990) “New Ways of Meaning: The Challenge to Applied Linguistics” mentioned above. In addition to his critique on growthism, he argued that the distinction between countable and uncountable nouns, for example, promotes a view of the world that considers natural resources denoted by uncountable nouns, such as water or oil, as unlimited. Halliday’s view of language reflects a position of linguistic relativity, yet he does not propose that
our perception of the world around us is confined by our language system, but rather that it strongly influences what the members of a speech community attend to and thus has a habitualizing effect (see Alexander and Stibbe 2014: 105).

4.1 Approaches

The ecological analysis of discourses has been approached from various perspectives, some of which are briefly discussed here.

Critical Discourse Analysis (CDA) has been applied to the analysis of environmental discourses since the late 1990s. CDA aims to unveil power relationships and ideologies in society and takes as its starting point a social or political problem (Fairclough 1995). Ecolinguists have extended this approach to deal with ecological problems. For example, Alexander (2009, 2018) has analyzed discourses of large international companies to unmask industrial practices which are destructive to the environment, such as marketing and greenwashing strategies.

Some recent work in EDA has adopted the approach of Positive Discourse Analysis (PDA). Instead of just exposing negative dominant discourses, it aims to look for alternative discourses: discourses of being rather than having, discourses that promote respect for nature rather than growth, and which inspire and hearten us (Stibbe 2018).

Multimodal Discourse Analysis (MDA) studies how meaning is created by the interplay of various modes such as spoken and written language, images (still and moving) yet also aspects such as color, layout of pages, etc. The different elements provide a repertoire from which communicators can choose to convey and construct meanings (Hansen 2018; Hansen and Machin 2015; Kress and van Leeuwen 1996, 2001; see also Stibbe 2015: 34). As in other areas of life, multimodality has been playing an increasing role in connection to discourses relating to the environment in recent years.

Corpus-assisted EDA applies corpus linguistic techniques to study ecological issues. Alexander (2009, 2018) used corpus linguistics in combination with CDA to unveil the detrimental practices of multinational corporations. Poole (2022) applies various corpus techniques to show how environmental degradation has been normalized in popular environmental discourses, which affects ecological well-being: For example, he analyses the evolving representation of wilderness, provides an eco-stylistic analysis of a literary text, etc. Researchers in this tradition frequently combine quantitative and qualitative methods.

Ecosystemic Linguistics is an approach developed by the Brazilian ecolinguist Hildo Honório do Couto (2018). According to this approach, the linguist should be an ecologist who studies language phenomena rather than just applying the
ecology metaphor to language. Language is viewed as a process of interaction that consists of the following three types: person-person interaction (communication), person-environment interaction (reference), and structural interaction (grammar). Ecosystemic Discourse Analysis, emerged inside Ecosystemic Linguistics, takes the stance that life comes first and suffering should be avoided in its analyses (Couto 2018: 150–153; Couto et al. 2021).

More recently, Chinese ecolinguists (Huang 2017; Huang and Zhao 2021; Zhao and Huang 2021) have developed Harmonious Discourse Analysis (HDA). This approach is rooted in traditional Chinese philosophies of harmony, which takes “human-orientedness” as the general assumption and follows three principles (i.e. the principle of conscience, the principle of proximity, and the principle of regulation) (Huang 2017). By examining language-related ecological problems in discourse, HDA aims “to present the various relations of humans with other ecological participants and to promote harmonious relations via language” (Huang and Zhao 2021: 16). This approach can be applied to the analysis of Chinese and non-Chinese texts in a variety of context (Zhao and Huang 2021). It is also worthy of note that Wei He, another Chinese ecolinguist, further develops the Hallidayan approach and defines EDA as an independent paradigm (He 2021). Under the guidance of the ecosophy “diversity and harmony, interaction and co-existence” (He and Wei 2018; He and Liu 2020), He et al. (2021) extends the experiential, interpersonal, textual, and logical metafunctions within the framework of Systemic Functional Linguistics (SFL) and provides a systematic framework of eco-grammar for EDA (see the book summary by Cheng [2022] and the brief introduction in Zhang [2022]).

### 4.2 Categories of analysis and methods

EDA focuses on the levels of the lexicon and grammar such as the distinction into Agents, Participants, and Circumstances (Alexander 2009; Goatly 2001 [1996]), yet also aspects such as rhetorics, metaphor, and framing, or narrative and stories (Harré et al. 1999; Mühlhäusler 2003; Stibbe 2015). In addition, evaluations and appraisal patterns, patterns of factivity, and identities have been investigated to reveal the underlying stories (Stibbe 2015).

One of the most accessible aspects to be studied is the lexicon. Ecolinguists have pointed out that there is a discrepancy between the words used and what they aim to represent. Three aspects have been highlighted with terms related to the environment (Mühlhäusler 2003: 68–72): 1) semantic vagueness as, for example, in ‘sustainable’ may cause some puzzlement as to what exactly the term means; 2) semantic underdifferentiation, e.g. ‘growth’, does not distinguish between the
many different meanings of the word/process; and 3) misleading encoding mis-
represents what actually happens (e.g. ‘to clear land’ which actually means
‘removing native vegetation’). In addition, the underlying ideology of both sci-
entific and everyday words has been emphasized (Harré et al. 1999; Mühlhäusler
2003; Penman 2001 [1994]). In addition, it has been demonstrated that the un-
derlying concepts (e.g. uncertainty) are interpreted differently by scientists and the
general public (Penz 2022). Aspects of word meaning such as connotations that
favor exploitation (e.g. the term development), euphemism (e.g. timber harvesting),
and pejorative terms used to talk about the environment (e.g. waste, weed) are also
highlighted (Schultz 2001 [1992]).

A range of methods has been applied in EDA. These may be qualitative or
combine qualitative and quantitative methods of discourse analysis, e.g. by
applying corpus-based analysis. In recent years, the study of visual communication
or a combination of all modes of environmental communication has been added
to the methodological repertoire. This is why semiotic and multimodal approaches
have been gaining ground in the field (Hansen 2018; Stöckl and Molnar 2018).

EDA has been applied to a variety of environmental topics, some of which will
be discussed in the following subsections. Recently, an ecolinguistics bibliography
has been made available by Robert Poole which provides a representative overview
of publications relating to various topics even though some of the authors listed
may not see themselves as ecolinguists.2

4.3 Selected topics

4.3.1 The representation of nature

The question of how nature is represented in language has been of interest to EDA
for many years. In particular, metaphors have been a focus as they are tools that
guide our perception of the environment and our interaction with it (Harré et al.
1999; Mühlhäusler 2003). They are frequently used to frame topics in a certain way
and highlight a particular aspect of a phenomenon while backgrounding others.

Different representations of nature in history have been studied by Verhagen
(2008). He identifies metaphors that promote an anthropocentric worldview, and
metaphors that promote a biocentric view of nature. The former is expressed, for
example, in the metaphor of nature as scala naturae (‘ladders of nature’): this
views nature as a Chain of Beings in a Stairway of Nature, where each species is
given a proper place in a fixed hierarchy. Variations on this metaphor are ‘nature as

machine’, or ‘nature as factory’, all of which justify the exploitation of nature by human beings. Metaphors that promote a biocentric worldview aim to construct the earth as an active subject rather than a passive object that is acted on. These include, among others, ‘nature as mother’ (used throughout history, re-emerging more recently as the Gaia Theory), ‘nature as web’ (referring to the interdependence of all beings). Harré et al. (1999) have also studied metaphors for nature from the Middle Ages until today. Döring and Zunino (2014) analyzed the metaphorical representation of nature-culture (flora, fauna, and inhabitants) in the New World (America) from the perspective of the Old World (Europe). Other studies have investigated to what extent nature is represented as an actor in different types of text. Goatly (2018) demonstrated that nature is depicted as far more active in the nature poetry of William Wordsworth than in The State of the World 2012, a text produced by the environmental research institution Worldwatch Institute.

4.3.2 Semantic engineering and greenwashing

The terms semantic engineering and greenwashing have been applied for attempts (of corporations, industries) to present a company’s environmental practices or products/services in a more ecologically responsible light while disseminating false, vague, or misleading information to consumers (Alexander 2009; Stöckl and Molnar 2018). ‘Eco-advertising’ is closely related, yet may just be used to promote a green lifestyle rather than covering up activities that are detrimental to the environment (Stöckl and Molnar 2018). Alexander (2009) has shown how environmental issues are misrepresented by oil-producing companies, in particular. He has demonstrated how transnational corporations have influenced the definition of environmentalism and sustainability and have framed these in terms of market economics. This is accomplished by the use of ‘purr’ words (positive-sounding words), over- and underlexicalization and a number of rhetorical strategies which are used to present these companies as ecologically concerned. In times of energy and climate crises it is clearly also worthwhile to take a critical look at the greenwashing strategies that are employed by various other energy providers, in particular nuclear energy corporations who promote nuclear power as the solution to climate change.

4.3.3 The representation of animals in discourse

The discursive representation of animals is a fairly new topic in ecolinguistics. This growing field of research studies how animals and the interaction between humans and (other) animals are represented in language. Animals are mainly represented according to their various relationships with human beings. In this
context, the terms anthropocentrism and anthropomorphism have been applied and criticized. The former is the tendency to classify the world around us (including animals) according to its usefulness to human beings. This is reflected in words such as *meat breeds, milk cows, honey bees, working animal, hunting dog, watch dog* (Fill 2015; Trampe 1990, 2018). The latter refers to the practice of applying human emotions, perceptions, activities, etc. to animals, e.g. *a friendly dog* (Cook and Sealey 2018; Fill 2015; Heuberger 2018). While suggestions for changing terminology towards more transparent representations of how animals are treated (e.g. *animal-incarceration* for *animal farming*) have been refuted by most linguists working in this field, the critical study of discourses about human-animal relationships and attempts to promote discourses which reflect more life-sustaining views have been on the rise in recent research (Stibbe 2012). Questions such as the importance of sustaining and providing more space to wildlife again have already been taken up by the media and will be of interest to ecolinguists, too.

### 4.3.4 The discourse of genetic engineering

The discourse of genetic engineering has been analyzed with regard to word choices of various actors involved in the debate (e.g. genetic modification vs. genetic engineering), has studied styles of argumentation and metaphors in the debate, and shows how language is used to manipulate people’s views. Alexander’s (2009) analysis of the Monsanto website which promotes genetically engineered seeds for farmers reveals that the company applies the frame of beneficial technology for farmers and for the world food supply. Cook (2004) is the most comprehensive study to date in the field and demonstrates how the discourse relating to genetically modified organisms in the US and the UK is constructed. Cook identified metaphors of warfare and invasion, such as *GM warriors, the biotech war*. In addition, he pointed to several frames in the discourse of genetic engineering, among them the frame of a deep conflict between science/technology/progress and the public. The use of modals and (other) linguistic expressions of uncertainty relating to threats and promises constituted another category of analysis.

### 4.3.5 Climate change discourse

Climate change has become a dominant topic in environmental discourses worldwide, yet among ecolinguists, only a few researchers so far have dealt with the issue. Ecolinguists have studied media representations, in particular, metaphors and framing (Kuha 2018; Penz 2018) as well as narratives/stories (Stibbe 2015). More recently, the perceptions of the local population affected by climate
change have been added (Döring and Ratter 2018). A multimodal approach is taken by Hansen (2018) who studied visual representations of the issue. The scholar who has published most widely on climate change communication is Brigitte Nerlich.3 The topics she and her co-authors address include lexical aspects such as lexical formations arising from the debate on reducing carbon in the UK (Nerlich and Koteyko 2009), and analyses of media representations, in particular news discourse (Nerlich et al. 2012). She even argues that climate change communication can be considered its own field and emphasizes that the relationship between climate change communication and behavioral change also needs to be included (Nerlich et al. 2010). The issue of different conceptions of uncertainty in climate change and the difficulty of communicating these to the general public has been discussed by Penz (2022). Differences in the interpretation of uncertainty may also impede actions to prevent climate change on the level of individuals but also society.

The topics discussed here provide only a glimpse of current EDA; ecolinguists have also investigated issues such as food and health, (nuclear) energy, and waste, to name but a few.

5 The future of ecolinguistics

The future of ecolinguistics will certainly be on various levels. From climate change to linguistics, ecolinguistic aspects of war and peace, several new topics will be dealt with. Mühlhäusler (2020: 4) has listed a few, among them “the negative effects of tourism” and “ecological changes brought about by digital technology”. One level on which the future of ecolinguistics will be is “Ecosystemic Linguistics” (Couto 2018: 150), in which the biological and the linguistic ecosystems are dealt with. However, there will be more than just those mentioned by Mühlhäusler and Couto. Let us begin with a topic not dealt with by many researchers in the first few decades of ecolinguistics: climate change.

5.1 Climate change

Despite the research on climate change or global warming mentioned above, this topic is as yet not at the center of ecolinguistics. In this section, it will be shown

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3 Nerlich probably does not see herself as an ecolinguist even though she has co-published with Döring, among others, who view themselves as representatives of the field.
how the language of growthism is implicated in this process and that an awareness of this implication may help find possibilities for mitigation.

One of the most significant causes of climate change is that all countries, all companies, and even all individuals want to grow. In advertising (whether TV, radio, newspapers, or social media) we always hear the word *more*. People want to get more for their money, firms want to produce more, and customers want to have more in their shopping bags. Everything should grow – an attitude which Halliday (2001 [1990]: 192) called “growthism”. If we wish climate change to be reduced, we should make people aware of this attitude of growthism, which is contained in our languages and in our thinking. As early as 1990, Halliday wrote about the consequences of growthism. In his talk at the AILA conference in 1990, Halliday states:

> We are using up the capital resources – not just the fossil fuels and mineral ones, which we could […] do without, but the freshwater supplies and the agricultural soils, which we can’t live without. And at the same time as we are consuming, we are also destroying. We are destroying many of the other species who form part of the planet’s life cycle; and we are destroying the planet itself, through global warming and general poisoning with carbon dioxide and methane; through ozone depletion; through acid rain; and most of all by increasing our population at a rate of almost a hundred million new people a year […] (Halliday 2001 [1990]: 192)

Halliday suggests that we should define ‘growth’ as ‘failure to shrink’, thus making *shrink* the positive term and label ‘growth’ as *negative shrinkage* (Halliday 2001 [1990]: 193). Halliday also quotes the famous book title *Small is Beautiful* by Schumacher (1985 [1973]) (see also *The Limits of Growth* by Meadows et al. [1972]). Yet, all producers – whatever the product – are proud when they increase their output. Halliday (2001 [1990]: 193) already gives examples of this, such as “unmatched growth rates” and “business climate improving”. He writes that our world-view is constructed by these expressions, which we find for instance in headlines.

It will be the task of ecologists to make language users, and particularly people in power, aware of this growthism which is contained in our consciousness and thus also in our language use.

### 5.2 Weapons and warfare

A topic also connected with growthism is warfare, in particular with respect to the production of weapons for warfare. For a time, certain countries produced as many weapons as possible in order to warn other countries, because they thought that having more weapons would deter other countries from aggression. Most wars had their origin in a nation – or the leaders of that nation – wanting to have more power, and particularly a larger territory where this power could be executed. *Allzeit Mehrer des Reiches* (‘Always be multiplier of the empire’) was one of the
slogans of the Roman-German empire. Every empire had to be enlarged, as a song sung in Nazi-Germany illustrates: *Heute gehört uns Deutschland, morgen die ganze Welt* (‘Today we own Germany, tomorrow the whole world’). Most wars in Antiquity and in the Middle Ages had their origin in the wish to increase the empire (cf. Halliday 2001 [1990]). Both the First and the Second World Wars had their origins in the wish of leaders to enlarge the territory over which they ruled. “Military expenditure and conflict” is a topic also mentioned by Mühlhäusler (2020: 4).

There are a few philosophers who have written against growthism. One of them is Ernst Friedrich Schumacher, who in his book *Small is Beautiful: A Study of Economics as if People Mattered*, writes that growth up to a certain point is possible, but limitless general growth is dangerous. He quotes Mahatma Gandhi, who said “the earth offers enough to satisfy the needs of humans, but not human greed” (Schumacher 1985 [1973]: 19). According to Schumacher (1985 [1973]: 21), for economists, economic growth is the most important thing, and even rich societies never have enough. The rich are not more peaceful than the poor, since they wish to become even richer. Constancy and steadiness would be the basic qualities for attaining peace (Schumacher 1985 [1973]: 20).

Schumacher’s arguments about the real causes of war are so convincing that the present authors totally agree with him. He (Schumacher 1985 [1973]: 34) writes that most humans surround themselves with richness, power, and some pleasure creating activity – instead of turning towards wisdom, education, and culture.

This agrees with what the present authors believe to be true: education and culture are the aims that all people should have – instead of richness and growth. More education would also be a ‘strategy’ which would slow the population growth in those countries where this ‘growth’ causes serious problems connected with the shortness of food and the wish to emigrate.

### 5.3 Eco-imagistics

In his article “Using Visual Images to Show Environmental Problems”, Anders Hansen (2018: 179) writes that “visual communication research has for some time been the neglected poorer relative of text focused communication research”. In more recent years, however, this topic has been taken up by various scholars. Hansen (2018) defines such research as follows:

> Visual environmental communication research can be defined as research concerned with theorizing and empirically examining how visual imagery in the broadest sense (photographs, film, scientific/graphical representations using charts and graphs, maps, models, drawings […] ) communicates and conveys/constructs messages about the environment. (Hansen 2018: 180)
Hansen (2018: 181) distinguishes three image categories in the visual representation of the environment: 1) images of nature/the environment; 2) images of industry technology; and 3) images focused on people (with or – more often – without any visual focus on nature/the environment). As examples of these categories, Hansen (2018: 182) gives a picture of an “Iceberg graveyard” (nature), of a power station (industry technology), and of the heads of delegations at the 2015 United Nations climate change conference at Paris. Hansen (2018: 187) prints a photograph of “Stilt houses, coping with climate change”. These houses stand on pillars in a pond, which shows that even in ancient times people had to take measures to react to the climate.

“Photographs and other visual representations influence agenda processes in ways that are distinct from the contribution of textual content” (Hansen 2018: 191). Perhaps the most important topic in this context is how text and picture interact, supporting each other or, in some cases, contradicting each other. In Fill (2007: 137) five types of text-picture-connection are distinguished:

1) Text describes a picture not printed.
2) Text and picture give the same information in their respective form.
3) Text and picture supplement each other: either the text or the picture gives additional information.
4) Text and picture contradict each other.
5) Text and picture do not seem to have any connection – are irrelevant to each other (Fill 2007: 137).

In types four and five, tension arises between the two forms of giving information, which frequently give new insights – on the metalevel. As an example, we might turn to René Magritte’s famous painting of a pipe, which bears the text Ceci n’est pas une pipe (‘This is not a pipe’). This evokes the view that in art there are more dimensions than one. Kress and van Leeuwen (1996) write in their book Reading Images: The Grammar of Visual Design:

Just as grammars of language describe how words combine in clauses, sentences, and texts, so our visual ‘grammars’ will describe the way in which depicted people, places and things combine in visual ‘statements’ of greater or lesser complexity and extension. (Kress and van Leeuwen 1996: 1)

Concerning ecological topics, types four and five (see above) will be rare, but one to three are frequent. It could be investigated how often they occur in presenting environmental topics. Fill (2007: 139–140) gives three examples of text picture combinations in advertising. In one case (Fill 2007: 140, quoted from Mühlhäusler 1999: 174), a picture of mountains and glaciers is used to advertise mineral water – with the words “Our Factory”.
To sum up, we have here a topic which will bring a new dimension into ecolinguistics. In addition, films, TV shows, and social media content will have to be investigated, so that ecolinguistics will have additional sections which can be called ‘eco-imagistics’, ‘eco-televistics’, and so on.

5.4 Ecolinguistics and non-European languages

So far, ecolinguistics has focused on European languages, particularly English. However, in ecolinguistics we should also consider the languages of other continents, e.g. those of Africa. Nigeria has about 500 languages, the most important of these being the following: Edo, Hausa, Idoma, Igbo, Central-Kanuri, and Yoruba. These are the national or official languages. One future topic of ecolinguistics could be to investigate how these languages present what is called the environment. From the war/peace point of view, it would also be interesting to investigate these languages concerning growthism and contrasting words, for example to study whether polarization such as the contrast between good and evil actually exists in these languages. Another interesting aspect would be the origins of animal names as these may be different from European ones. Some animal words in Yoruba are obviously onomatopoeic, in so far as they try to render the sounds that the animals produce, e.g. Pepeye – duck; kezekeze – donkey. European animal names are frequently based on Latin (e.g. English ass, German Esel – Latin asinus) or at least related to those in Latin because of their shared Indo-European origin. Nevertheless, onomatopoeic origins also exist in European languages, such as in cuckoo, yet they are rare.

It would be worthwhile studying to what extent animal names in non-European languages are anthropocentric and contain the use humans make of the relevant animal, as many German animal words do (Tragtiere ‘pack animal’, Reittiere ‘animal used for riding’, Schlachttiere ‘Slaughter animal’, Jagdhunde ‘hunting dog’, etc.). The same is true of plants, which in German are frequently named after the use humans make of them (Speisepilze ‘edible mushroom’, Gartenblumen ‘garden flower’, Glücksklee ‘four-leaf clover’). In non-European languages, there are probably other types of word origins for plants.

In connection with the topic of growthism, it is frequently stated that in Chinese sociolects and dialects, instead of contrasts (e.g. ‘war against peace’), ‘as well as peace’ or ‘also named war’ are used. Work remains to be done to explore these usages.

Indigenous languages of America also show ways of representing the environment that deviate from those of ‘Western languages’. In some of these cultures,
animals play a different role from the one they have in what Whorf called Standard Average European (SAE) languages (see Carroll 1956).

In non-European cultures, the position of humans with regard to animals is a different one from that in Europe (Precht 2016: 198–212), e.g. in China or India. Fill (2021) writes about the aborigines in Australia:

The aborigines in Australia say that they do not own the territory, but the territory owns them! They do not believe in possessing ground, and therefore there are no wars between the different groups. However, they have myths about previous times in which individuals (these could be humans or animals!) traveled around, met other groups, and fought with them. But from these fights, they believe, a number of things arose, e.g. rivers, beaches, rocks, trees. (Fill 2021: 4)

Ecolinguists should investigate this culture more thoroughly – in particular concerning the role animals play in the aboriginal attitude towards the environment.

Some Native American cultures thank the animals for providing food for humans, and they apologize for having to kill them. The position of the Inuit towards animals is discussed by Riches (1995). Kuhnlein and Humphries (2017) also describe rites of indigenous peoples in the northern USA, in which they celebrate animals which they have hunted and whose meat they eat.

Stibbe, too, writes about how animals are viewed by indigenous people, and he discusses “the distinctive linguistic patterns that they use to, for example, ascribe personhood to animals, plants, forests, and rivers, thereby encouraging respectful and mutual relationships with them” (Stibbe 2012: 173). The condition of animals is also discussed in Singer’s book with the telling title Animal Liberation: A New Ethics for Our Treatment of Animals (2009 [1975]), although he ‘restricts’ this liberation to animals kept on farms.

Non-European cultures would certainly provide new topics for ecolinguistics, particularly as concerns the treatment of animals and plants, but also how their languages treat our use of the so-called environment. Are there languages that have a word for what in English is called the ‘con-vironment’ and in German Mitwelt – thus emphasizing that humans are part of Nature? Do these languages also use euphemisms for our treatment of animals and do they also use what is called ‘distancing’ in order to express similar processes between animals and humans differently? In European languages, the same qualities and processes have different names concerning humans and animals: humans ‘eat’, animals ‘graze’ or ‘feed’ (German: essen vs. fressen), women are ‘pregnant’, female animals ‘gravid’, humans ‘inhabit an area’, animals ‘occur’, or ‘are frequent’. It would be worth investigating whether indigenous languages in America and Australia also use this distancing process or whether they are what is called ‘physiocentric’ and thus treat animals linguistically the same as humans.
6 Conclusion

This paper has attempted to briefly outline the development of ecolinguistics in the last 50 years, focusing on the main approaches and themes, and has discussed selected topics in current research. Ecolinguistics has always valued diversity in the approaches and methodologies used in the field; nevertheless, some distinct strands have become apparent. The main distinction could be made between the ecology of language and EDA. Each of these spans a variety of topics that have been of interest to researchers with more or less continuity over the past few decades.

This survey of ecolinguistic topics also sheds light on those areas that have been dealt with either not at all or only in a very restricted way. It is hoped that this part of the paper shows that, to date, ecolinguistics has by no means reached its limits, but that several interesting topics still await investigation. In addition, it has been shown that ecolinguistics may extend and reach a new dimension by including the topic of “language, war, and peace”. In future times, there will be professorships in ecolinguistics at many universities, and students will find new topics which they will study with enthusiasm.

References


