

ECOLINGUISTICS: ITS ORIGIN AND ITS EVOLUTION IN THE 21st CENTURY

ECOLINGUÍSTICA: ORIGEM E EVOLUÇÃO NO SÉCULO 21

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ABSTRACT

Language was first linked with ecology by Carl and Florence Voegelin (VOEGELIN, 1964) and by Einar Haugen, an American scholar of Norwegian descent (1972). Haugen's comparison between biological and linguistic diversity and the interaction between languages are still topics of ecolinguistic research. However, when in 1990, Michael Halliday gave his talk "New Ways of Meaning: the Challenge to Applied Linguistics", a new research area was opened, with such topics as the role of language concerning the (biological) environment, the discourse about climate change, 'growthism' and the use of animals by humans. This paper will also deal with the way in which 'language and ecology' (now called ecolinguistics) took root in a great number of countries, among them Denmark, Germany, Austria, Australia and Brazil, where a researcher at the Universidade de Brasília made ecolinguistic ideas his own and developed them further (COUTO, 2007). This founder of Brazilian Ecolinguistics was also the mastermind behind creating an internet platform for Ecolinguistics, which is now managed by Arran Stibbe under the name 'The International Ecolinguistics Association'. Recent approaches to language ecology have become known under such titles as 'Ecosystemic Linguistics', 'Positive Discourse Analysis' and the study of 'greenwashing' in advertising. It is justified to speak of an 'evolutionary' development of Ecolinguistics in the 21st century. This evolution of Ecolinguistics will also embrace discourse connected with images and the role of ecological discourse on the internet. In the near future, we will also find Ecolinguists looking at language on the meta-level, on which they will enquire how Ecolinguistics can have an effect on human thought and action. Ecolinguistics will thus become the science of creating peace through language – a topic which another Brazilian scholar has already made his own (MATOS, 2017).

Keywords: Ecology. Ecosystem. Diversity. Growthism. Evolution. Brazilian ecolinguistics. Multimodality. Meta-level. Golden Age. Peace.

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RESUMO

A língua foi associada a ecologia pela primeira vez por Carl e Florence Voegelin (VOEGELIN, 1964) e por Einar Haugen (1972), um estudioso norte-americano de origem norueguesa. A comparação que Haugen fez entre diversidade biológica e diversidade linguística e a interação entre línguas ainda são tópicos de pesquisa ecolinguística. No entanto, quando Michael Halliday pronunciou sua conferência "New Ways of Meaning: The Challenge to Applied Linguistics" em 1990, abriu-se uma nova área de pesquisa com tópicos como o papel da língua para o meio ambiente (biológico), o discurso sobre a mudança climática, o "crescimentismo" e o uso de animais pelos humanos. Este artigo tratará do modo como "língua e ecologia" (agora chamada 'ecolinguística') se enraizou em muitos países, entre eles Dinamarca, Alemanha, Áustria, Austrália e Brasil, onde um pesquisador da Universidade de Brasília adotou ideias ecolinguísticas e as levou um pouco mais adiante (COUTO, 2007). Este fundador da ecolinguística brasileira foi o idealizador do que veio a ser uma plataforma para a ecolinguística na internet, agora dirigida por Arran Stibbe, sob o nome de "The International Ecolinguistics Association". Abordagens recentes à ecologia da língua têm sido conhecidas como "Linguística Ecossistêmica", "Análise do Discurso Positiva" e estudos de 'greenwashing' em propagandas. Parece adequado falar-se em um "desenvolvimento evolucionário" da ecolinguística no século XXI. Essa evolução da ecolinguística incluirá também discursos relacionados com imagens e o papel do discurso ecológico na internet. No futuro próximo, veremos ecolinguistas trabalhando com a ecolinguística em um metanível, indagando como a ecolinguística se tornará uma ciência para fomentar a paz pela língua – tópico que outro pesquisador brasileiro adotou (MATOS, 2017).

Palavras-chave: Ecologia. Ecossistema. Diversidade. Crescimentismo. Evolução. Ecolinguística brasileira. Multimodalidade. Meta-nível. Idade de Ouro. Paz.

ECOLINGUISTICS: ITS ORIGIN AND ITS EVOLUTION IN THE 21ST CENTURY

This paper will first give a short presentation of the origin and the early history of ecolinguistics. The main part of it will then be about what I call the evolution of ecolinguistics in the 21st century, to which its development in Brazil contributes very considerably.

1 THE ORIGIN OF ECOLINGUISTICS

As is well known, the term 'ecology' was first used by Ernst Haeckel (1866) for living beings (plants and animals) and was defined as "the study of the **interaction** between organisms and their living and non-living surroundings – including organisms of the same and of other species" (my translation; the original German text is quoted by Couto, 2007, p. 24). The two main ideas in ecology are thus "interaction in a system" – (in German: *Wechselwirkung*) and "diversity"; we find these ideas in all sciences which call themselves "ecological", for instance in connection with social community. **Amos Hawley**, as early as in 1950, wrote of human ecology (HAWLEY, 1950), when he studied the population density in cities. Ecology was also used with **culture**: In 1948, the famous author **T. S. Eliot** already wrote of an 'ecology of cultures': in his "Notes towards a

Definition of Culture" (ELIOT, 1948) he defended the Welsh, the Scottish and the Irish cultures in Great Britain, which he did not wish to be "superseded by English culture". He stated: "We have not given enough attention to the **ecology of cultures**" (ELIOT, 1948, p. 58). For Eliot, 'Culture' certainly included 'language', so that Eliot can be said to have had ideas which not much later were expressed more clearly be **(Ou "by"?)** other scholars.

The idea to use this term in connection specifically with **languages** first occurred to an American couple whose name was **Voegelin** (Carl and Florence) – a name which in German means 'little bird'. They used the term "linguistic ecology" in connection with the languages of a particular area. The Voegelins, in 1964, wrote about this in the following way: "In linguistic ecology, one begins not with a particular language but with a particular area, not with selective attention to a few languages, but with comprehensive attention to all the languages in the area" (VOEGELIN, 1964, p. 2). They applied this to their study of indigenous American languages in Arizona.

Let me say here that this part of my article relies very much on chapter I 4 of **Couto**'s book *Ecolingüistica* of 2007, in which Couto gives a survey of the history of Ecolinguistics, "Breve Histórico da Ecolinguística" and discusses the Voegelins, Adam Makkai, Einar Haugen and others. Nevertheless, I thought it important to mention the most important stages of this history here in a condensed way, before coming to the further evolution of Ecolinguistics.

In 1972, Adam **Makkai** (born in 1935) published a paper on "a pragmo-ecological view of linguistic structure and language universals" (MAKKAI, 1972). Makkai, who was of Hungarian origin, but became an American citizen in 1963 and later taught in Chicago, was certainly one of the pioneers of looking at language ecologically. In 1993, he wrote the first book titled *Ecolinguistics* (MAKKAI, 1993) (subtitle: *¿Toward a new **paradigm** for the science of language?*). The term Ecolinguistics has an interesting history, which was described by Couto (2007, p. 49-51) and will be discussed below (see chapter 3).

I should mention here that Makkai was one of the first scholars to integrate into Ecolinguistics the ideas of **Wilhelm von Humboldt**. In a paper published in 1996 and written in German ("Die Welt als Bewusstsein und Paraphrase"), Makkai's subtitle mentions "die Sprachphilosophie Wilhelm von Humboldts und ihre Relevanz für die theoretische Sprachwissenschaft des 21. Jahrhunderts". He quotes extensively from Humboldt's book *Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwicklung des Menschengeschlechtes* (HUMBOLDT, 1836). Then Makkai writes (MAKKAI, 1996, p. 84, our translation): "Wilhelm von Humboldt was by no means a predecessor of Transformational Grammar, but probably the first predecessor of Ecolinguistics". As is well known, Wilhelm von Humboldt was a great defender of small languages; several times he went to the Basque Country (at the border of France and Spain) in order to investigate the language spoken there, which is the oldest language still spoken in Europe. Couto also writes about Humboldt in his *Ecolingüística* and discusses his sentence "Language is not an *ergon*, but an *Energeia*" (COUTO, 2007, p. 54), with which Humboldt expresses the dynamic power of language.

Humboldt also studied 14 South American languages, among them Guarani (a Tupi language), which is among the native languages of Brazil. The languages he studied are discussed in Humboldt (2011), eds. M. Ringmacher and U. Tintemann.

In this context, one should also mention his brother, **Alexander von Humboldt**, who spent five years in Latin America (It is not clear how long he was in Brazil). As a zoologist and botanist, he investigated the animals and plants on this continent, and he turned against destroying the forests in the Amazonas area. One lily he found in South America is named after him (*lilium Humboldtii*). The Humboldt brothers, in a way, embraced both areas of Ecolinguistics, 'language diversity',

saving languages etc. – Wilhelm, and 'language and the environment' – Alexander. It is remarkable that because of the Humboldts, in the first half of the 18th century, Brazil already played a certain role in language ecology.

Einar **Haugen** – now considered the founder of language ecology – was well aware of former uses of 'ecology' in connection with language. He has a whole paragraph about the Voegelins and mentions a number of scholars, who, without using the term 'ecology', "have been concerned with it in their work on language change and variability, on language contact and bilingualism, and on standardization" (HAUGEN, 2001, p. 58). Among the names he mentions are those of Uriel Weinreich, Charles A. Ferguson, William Labov, Joshua Fishman, Dell Hymes and Joan Rubin "to mention only a few" (HAUGEN, 2001, p. 59). Haugen's work is so well-known and also discussed by Couto (COUTO, 2007, p. 47) that I will not deal with it in detail. I would just like to quote a few sentences, which show how up-to-date Haugen was when writing in 1972:

[...] it seems to me that the term 'ecology of language' covers a broad range of interests within which linguists can cooperate significantly with all kinds of social scientists towards an understanding of the interaction of languages and their users. [...] Ecology suggests a dynamic rather than a static science, something beyond the descriptive that one might call predictive and even therapeutic. What will be, or should be, for example, the role of 'small' languages; and how can they or any other language be made 'better', 'richer', and more 'fruitful' for mankind? (HAUGEN, 2001, p. 59).

Haugen's main idea was the comparison between biological and linguistic diversity and thus the interaction between languages in the human brain and in an area (e.g. a country) – plus the interaction between languages and their environment (e.g. their cultural environment). It is interesting that this 'transferred' (almost metaphorical) use of ecology in connection with language was the first link between language and ecology – established by both the Voegelins and Einar Haugen.

Topics dealt within 'Haugenian Ecolinguistics' range from the link between biological and linguistic diversity to language minorities, endangered languages, language death and further to linguistic imperialism and individual and societal multilingualism.

The following authors should also be mentioned in this context, since in their titles the word 'ecology' appears in connection with language: William F. Mackey (MACKEY, 1980) ("The Ecology of Language Shift"), Harald Haarmann (HAARMANN, 1980) (*Multilingualismus: Elemente einer Sprachökologie*) and Norman Denison (DENISON, 1982) ("A Linguistic Ecology for Europe?"). The contribution to Ecolinguistics of these and other authors is discussed in section I-4 of Couto (2007, p. 47-63).

2 ECOLINGUISTICS IN THE 1990s

Twenty years after Haugen's talk (and paper), it was **Michael Halliday** who again connected language with ecology, but this time not in a transferred (metaphorical) way, but by addressing the way language has an influence on how we see and deal with our biological environment, e.g. with so-called 'resources' and with animals. Again, I will simply pick out a few sentences from his talk, which was given at Thessaloniki (Greece) in 1990 and was published at least twice (in 1990 and 2001 – quotations are from this reprint). Halliday died in April 2018, 93 years of age, and this paper is also written in remembrance of him.

Remarkably, particularly for us here in Brazil, Halliday began his talk in Thessaloniki with the following words (HALLIDAY, 2001, p. 175):

In 1984 in Brussels, Francisco Gomes de Matos opened the Sixth World congress [of Applied linguistics] by reviewing the history of previous congresses and assessing how far in those twenty years applied linguistics could be said to have progressed towards maturity. He referred to the first one in the series, the Premier Colloque International de Linguistique Appliquée held at Nancy in 1964, and noted the doubts then expressed by the organizers about holding a colloquium devoted to applied linguistics.

Halliday then lists a number of topics from previous congresses in Applied Linguistics, which were mentioned by Gomes de Matos. It has always struck me as particularly relevant that in the first sentence of Halliday's groundbreaking talk and paper, **Francisco Gomes de Matos** is quoted concerning the topics of Applied Linguistics. Halliday, as his title says ("New Ways of Meaning: the challenge to Applied Linguistics"), introduced a new topic into Applied Linguistics, namely how language deals with the relation between humans and the rest of creation. Starting from Benjamin Lee Whorf's view that "language does not passively reflect reality; language actively creates reality" (HALLIDAY, 2001, p. 179), Halliday discusses some consequences of this language impact for humans and their 'environment'. Among these are:

Our languages **construe resources** like air, water, soil, coal, iron and oil as **unbounded**. There are languages, e.g. the Hopi language, in which for water, soil, coal etc. always a certain measure has to be given – e.g. *a barrel of oil, a seam of coal, a reservoir of water* (HALLIDAY, 2001, p. 194).

Language creates **discontinuity** between ourselves and the rest of creation, because many words are reserved for humans, such as *think, act, do, assess*. Through this, Nature appears as passive (Halliday, 2001, p. 195). "The language makes it hard for us to take seriously the notion of inanimate nature as an active participant in events" (HALLIDAY, 2001, p. 194).

The grammar [!] "promotes the ideology of growth or growthism" (HALLIDAY, 2001, p. 196), i.e. the growth of anything human at the cost of nature or what we call the environment. The growth-word is always the neutral word: we say "how big?" – never "how small?", "how long?" – never "how short?". "The grammar of 'big' is the grammar of 'good', while the grammar of 'small' is the grammar of 'bad'. The motif of 'bigger and better' is engraved into our consciousness by virtue of their line-up in the grammar" (HALLIDAY, 2001, p. 194).

Halliday sums up his ecological critique of language with the following words: "we saw how deeply engrammatized are the motifs of growth versus shrinkage, of the unboundedness of our material resources, of the passivity of the inanimate environment and of the uniqueness of humankind instead of our continuity with creation" (HALLIDAY, 2001, p. 198). This critique is very serious, and consequentlyCouto discusses Halliday in his chapter "Ecolingüística Crítica" (COUTO, 2007, p. 337-346).

The word *ecological* occurs only once in Halliday's paper – but in an interesting way: "people who are ecologically aware", he writes, should become "the normal category of humans rather than eccentrics" (HALLIDAY, 2001, p. 193). However, Halliday addresses the main question in the field of ecolinguistics, viz. "Do linguistic patterns … affect the survival and wellbeing of the human

species as well as other species on earth?" (STEFFENSEN; FILL, 2014, p. 9). The final sentence in Halliday's paper has often been quoted: "[...] classism, growthism, destruction of species, pollution and the like – are not just problems for the biologists and physicists. They are problems for the applied linguistic community as well. I do not suggest for one moment that we hold the key. But we ought to be able to write the instructions for its use" (HALLIDAY, 2001, p. 199).

For an awareness of the role of language in the relation between humans and their environment, the term 'ecoliteracy' was coined in the 1990's. It was first used by David Orr in his book *Ecological Literacy: Education and the Transition to a Postmodern World* (ORR, 1992) and then taken up by Fritjof Capra in *The Web of Life* (CAPRA, 1995, 1999). Capra has founded a Center for Ecoliteracy in Berkeley (California), where young people are made aware of the role of language in our relation to the 'environment'.

3 THE TERM ECOLINGUISTICS

All these areas of study (Haugen's interaction between languages, and Halliday's pointing out the role of language in the destruction of species, pollution and climate change) are dealt with together under the name of 'Ecolinguistics', and here I would like to mention that it was a Brazilian scholar who found out when and by whom this term was first used. He found that Claude Hagège used it in 1985 in his book *L'homme de paroles (écolinguistique)*, Kurt Salzinger used it in 1979 in an article titled "Ecolinguistics: a radical behavior theory approach to language behavior" (SALZINGER, 1979). Henri Gobard (GOBARD, 1976) and Jean-Baptiste Marcellesi (MARCELLESI, 1975) mentioned it, but in 1974 already, Joe Darwin Palmer (PALMER, 1974) wrote an article "Language Ecology", in which he suggested a new discipline called Ecolinguistics. But the Brazilian linguist (his name is Hildo Honório do Couto) adds that Adam Makkai told him personally that Einar Haugen had suggested the word orally to him during a conference in Chicago in 1972 (COUTO, 2007, p. 49-51), and personal communication.

4 THE EVOLUTION OF ECOLINGUISTICS IN THE 21ST CENTURY

The main part of this article will now be about the evolution, as I call it, of Ecolinguistics in the 21^{st} century. The term evolution is, I believe, justified for the following reason: Up to now 'Evolution' in the sense of Darwin meant the survival of the fittest and the development of each species so that it became larger, more powerful and fitter to use more and more resources of the earth. At the end of the 20th century, however, it became increasingly apparent that this evolutionary development, as far as humans are concerned, was going too far and too fast. If it continued, humanity would sooner or later lose 'the web of life' - because of 'more people - less food', more and more parts of the world settled by humans, and as a result the rapid loss of other species, more and more CO₂ emissions, leading to what was called global warming and is now called climate change. Just in time – almost too late – the evolution turned into a new direction and created the ecological movement and, together with this, an ecological view of language now called ecolinguistics. Thus, the rise of ecolinguistics is part of human evolution, but not in the Darwinian sense of making everything bigger, but rather in the sense of preserving everything without extending it. Small is beautiful, the book by Schumacher (1973), is one icon of this new direction of the evolution, which was further supported by Halliday's critique of growthism. Evolution now no longer aims at making everything bigger, but has changed to qualitative rather than quantitative development.

5 THE EVOLUTION OF ECOLINGUISTICS IN DIFFERENT COUNTRIES

Before I come to the future directions and further evolution of Ecolinguistics, I would like to say a few words about how Ecolinguistics took root in a number of countries, and how, in each of these countries, its evolution went into a specific direction, see also: (COUTO, 2013).

I begin with my own country: In Austria, as early as in 1993, a German Introduction to Ecolinguistics was written (FILL, 1993; COUTO, 2007, p. 51) notes that this book appeared in the same year as the Introduction by Makkai, and in 1995 the first conference on Ecolinguistics took place. This was followed by an Ecolinguistics conference every five years, with participants from many countries, including Brazil! The scholars from the university of Graz developed Ecolinguistics further particularly in the sense of Haugen (investigating the minority languages, language endangerment etc.), but also in the sense of Halliday, in which my Graz colleague Hermine Penz investigates the discourse about Global Warming and Climate Change, and a scholar from Innsbruck, Reinhard Heuberger, looks at Anthropocentrism in language concerning animals. He has written several articles about how animals are represented in dictionaries (e.g. in the Concise Oxford Dictionary), where only their usefulness for humans is mentioned, for instance when the word *trout* is defined as follows: "a fish that lives in rivers, lakes etc. and is good to eat," or *pig* as "a farm animal that is kept for its meat" (HEUBERGER, 2003, p. 96). Notice, however, that in more recent editions of these dictionaries, and particularly in the internet dictionary *Wikipedia*, animals are no longer defined according to the use humans make of them, but from their 'habitat', related species, eating habits etc. Human use is now mostly put into a separate chapter, and the Wikipedia entry for pig even has a section on 'Prejudices' against pigs. Ecolinguistics may well already have had an effect on this level.

5.1 WOMEN DOING RESEARCH IN ECOLINGUISTICS

Since I mentioned Hermine Penz (who co-edited the *Routledge Handbook of Ecolinguistics*). I would like to stress that Ecolinguistics is by no means a masculine or male-dominated science. We have already seen that at the very beginning **Florence Voegelin** took part in the research about native American languages which led to the first use of ecology in connection with languages. **Rachel Carson** with her book *Silent Spring*, (CARSON, 1962) was one of the first to thematize ecological problems (her book is also discussed by Couto in his *Ecolingüística*). Brigitte Nerlich in England, Tove Skutnabb-Kangas in Denmark, and quite a few women scholars in Brazil are working on ecolinguistic topics, among them Elza Nenoki do Couto and Maria Célia Dias de Castro. Many talks at previous conferences in Brazil were given by women, and in IV EBE at Fortaleza, more women than men were taking part. There is also a female ecolinguist in Coimbra (Portugal), who took part in the Graz conference of 2000. Her name is Adelaide Chichorro Ferreira (see below), and there is an Italian lady (Francesca Zunino, see below), who even organized a conference on Ecolinguistics (at Asti, Italy). The Routledge Handbook (FILLI; PENZ, 2017) has several female authors (admittedly under 50%), but Ecolinguistics is probably a science with more women doing research than in other sciences. This could be another topic on the meta-level: Women and men in ecolinguistic research - their topics, methods and theories.

5.2 BRAZILIANS TAKING PART IN AUSTRIAN CONFERENCES

At least in two of the ecolinguistics conferences which took place in Austria, Hildo Honório do Couto and Roberto Lestinge took part. In 2010 Hildo Honório do Couto (Universidade de

Brasília) gave a talk on "What is the Environment of Language?" More recently, in the 'Ecolinguisticum' at Graz, in 2015, do Couto gave a talk on "Ecological Discourse Analysis". In this talk, he mentioned, among others, Naess' Deep Ecology, Taoism and Gandhi's philosophy of life. Ecological ideology looks for harmony, not conflict as in Marxist and Western world views. Using language should aim at avoiding conflict, or putting an end to it, and do Couto embraced "Positive discourse analysis", not just Critical discourse analysis.

Another Brazilian who (by correspondence) took part in one of our conferences was Manoel Soares Sarmento, who was then professor at Universidade Estadual do Sudoeste da Bahia. In our proceedings *Colourful Green Ideas* (SARMENTO, 2002), he published a contribution about "Ecolexicography – Ecological and Unecological Words and Expressions". In this short paper, he asked several questions, among them the following: "How can a word contribute to ecologizing a language?", "What should a lexicographer, a language planner, a grammarian (and others) do with words which play an unecological role in our world"? (SARMENTO, 2002, p. 490). Another Brazilian, Roberto Lestinge, who also came to Graz, will be mentioned again later in connection with Ecolinguistics and television.

5.3 GERMANY AND OTHER COUNTRIES

In **Germany**, the main representative of Ecolinguistics is **Peter Finke**, whose paper in the *Routledge Handbook* (FINKE, 2017, p. 406-419) is titled "Transdisciplinary Linguistics: Ecolinguistics as a Pacemaker into a New Scientific Age". Finke sees Ecolinguistics as a study which transcends traditional areas of research and teaches us to "abandon the ivory tower of isolated disciplines", as he writes (FINKE, 2017, p. 408). Finke understands Ecolinguistics as showing language as the link between Nature and Culture (FINKE, 2017, p. 411). He no longer sees Ecolinguistics as a discipline of linguistics, instead he steps onto the meta-level, where the question can be asked: What is the impact of Ecolinguistics on the human mind and consequently on human action concerning Nature and Culture? This meta-level will be topicalized below (see section 7.3).

One of Finke's pupils, **Wilhelm Trampe**, wrote his doctoral dissertation as early as in 1988 about "Aspects of an Ecological Linguistics"; it was published as Trampe (1990). Now he specializes in topics such as the Language about agriculture and the treatment of animals in language and discourse (TRAMPE, 2017). He was also one of the first to write about ecosystemic linguistics (TRAMPE, 1996).

Quite early, Ecolinguistics set foot in **Denmark**, where Jacob L. Mey (now more than 90 years of age), J. Chr. Bang and J. Døør are still teaching at the University of Southern Denmark. In 2008, a conference took place at Odense, organized by the main representative of Danish ecolinguistics, Sune Vork Steffensen, who created the "Extended Ecology Hypothesis (EEH)" (STEFFENSEN, 2017, p. 400). For Steffensen, this extended Ecological hypothesis redefines the object of study of ecolinguistics: it "suggests a research agenda for ecolinguistics that allows for the study of large-scale discursive phenomena through the study of how such phenomena affect (a) the human agents embedded in an extended ecological niche, and hence (b) the bio-ecology that conditions our existence" (STEFFENSEN, 2017, p. 400). Another scholar who taught in Denmark (in Copenhagen) is **Robert Phillipson**, who became famous for his books about *Linguistic Imperialism* (PHILLIPSON, 1992, 2009), in which he turned against using only one language in Europe, viz. English, and advocated multilingual education. See also Phillipson e Skutnabb-Kangas (2017). Since two of the pillars of Ecolinguistics are **diversity** and **interaction**, ecolinguists should be multilingual and not centering on English.

Australia is another country in which Ecolinguistics has outstanding representatives. **Michael Halliday** (1923-2018), was teaching in Sidney. Apart from Halliday (see above, chapter 2), **Peter Mühlhäusler** is perhaps the best-known among Australian ecolinguists. See, for instance, Mühlhäusler (2003, 2017) and also Harré, Brockmeier and Mühlhäusler (1999). Born in Germany, he is now at the University of Adelaide, after having studied at Oxford (England), Stellenbosch (South Africa) and at the Australian National University. Together with Joshua Nash, he has written about pidgins and creoles and has worked extensively on the revival of South Australian Aboriginal languages. One of his main interests is the Pitkern-Norf'k language, which is still spoken by the descendants of the mutineers of the Bounty (NASH, MÜHLHÄUSLER, 2014). Mühlhäusler also gained merit about ecolinguistics by co-editing the *Ecolinguistics Reader* (FILL; MÜHLHÄUSLER, 2001), a book which begins with articles by Edward Sapir and George Steiner and contains all the groundbreaking texts written before 2000 (by Haugen, Mackey, Finke, Weinrich, Halliday, Goatly and others).

Great Britain is also a country in which Ecolinguistics plays an important role and in which new approaches to it have been created. In England, it was Arran Stibbe who on the suggestion by Couto created the "International Ecolinguistics Association" (IEA), through which a world-wide community of Ecolinguists (now more than 400) arose. In his latest book *Ecolinguistics: Language, Ecology and the Stories we Live by* (STIBBE, 2015), he criticizes these stories we live by – unlimited economic growth, consumerism, success and the human domination of Nature. Suzanne Romaine (ROMAINE, 2017) and Brigitte Nerlich are also Ecolinguists doing research in England.

In the USA, such new topics as "Ecolinguistics and Language planning" (KAPLAN, 2017) and "Religion, Language and Ecology" (LeVasseur, 2017) have recently been added, and Salikoko Mufwene, who is distinguished professor at the University of Chicago, has researched language evolution from an ecological point-of-view (MUFWENE, 2001). He also looks at different kinds of language contact, viz. pidgin and creole languages (MUFWENE , 2017). The Voegelins, Einar Haugen and Adam Makkai (the latter two were not of American origin but were teaching in the USA) have already been mentioned as pioneers of thinking of language ecologically (see chapter 1). Whether the Presidency of Trump will harm ecolinguistic research in the USA is not yet clear. I fear it will!

Spain: The best-known representative is Albert Bastardas-Boada, who wrote for instance about biological and linguistic diversity (BASTARDAS-BOADA, 2002). He is Professor in Barcelona and accordingly has a project which includes the investigation of Catalan (BASTARDAS-BOADA, 2017).

The following have also done interesting work in various areas of Ecolinguistics: In **Portugal** (Coimbra), Adelaide Ch. Ferreira compared Portuguese with German (FERREIRA, 2002); in **Italy,** Francesca Zunino (STIBBE; ZUNINO, 2008, p. 165-181) even organized a conference on Ecolinguistics (at Asti, in June, 2012), and several graduates from Udine have recently written a collection of papers called "Ecolinguistic Stories of Resilience" (BAILO *et al.*, 2018).

6 ECOLINGUISTICS IN BRAZIL

The evolution of Ecolinguistics in this century could not have taken place without Brazil, which has played a particularly great role in this evolution, especially with its initiator **Hildo Honório do Couto**. This presentation attempts to mention the most important events and items, but it certainly cannot be complete.

Honório do Couto, after studying in Cologne and Berlin, got in touch with ecolinguistic ideas during a post-doctoral stay at the City University of New York (1997-1998). After taking part in several symposia and conferences on Ecolinguistics, he published the first fundamental survey of ecolinguistics titled Ecolingüística: estudo das relações entre língua e meio ambiente (COUTO, 2007). This book not only describes the history and the different topics of Ecolinguistics, it also for the first time makes a distinction between 'Endoecology', 'Ethnoecology', 'social Ecolinguistics' and 'Ecology of languages'. This is the book on which chapter (1) of this paper is based.

Couto (2007, p. 42) also clarifies the terminology concerning the following:

Ecolingüistica - the general term about the study of language and environment;

Ecologia Lingüística – the study of language and ecological topics, could also be called "Environmental Linguistics";

Ecologia da língua – the study of the relations between language and our social, mental and physical environment;

Ecologia das línguas: The study of the interrelations between languages, including pidginization and creolization as well as language endangerment and language death.

Couto has written many other publications on Ecolinguistics, e.g. a paperback which appeared in 2009: Linguística, Ecologia e Ecolinguística: Contato de Línguas (COUTO, 2009). He also wrote extensively about Creole languages (COUTO, 1994) and about A Língua franca Mediterrânea (COUTO, 2002), a book which interestingly [for this author] contains a section about Oswald von Wolkenstein, the medieval Tyrolean writer (COUTO, 2002, p. 44). With his innumerable publications about ecolinguistic topics, he is certainly the most prodigious ecolinguistic author in the whole world. His contribution to the Routledge Handbook is about a central topic, viz. "Ecosystemic Linguistics" (COUTO, 2017).

Couto was also the mastermind behind creating an internet platform for Ecolinguistics, which is now managed by Arran Stibbe (Gloucestershire, GB). He also created an ecolinguistic website and a journal called Ecolinguística: Revista brasileira de ecologia e linguagem (ECO-REBEL), available online. The first issue contains an article by the present author translated into Brazilian Portuguese (FILL, 2015, p. 1).

Couto is also the initiator of the Brazilian encounters of Ecolinguistics (EBE). On his initiative, a number of symposia and conferences on Ecolinguistics have taken place in Brazil, most prominently the Encontro Brasileiro de Ecolinguística in August, 2016, at the Universidade de Brasilia. The latest one in Fortaleza (2018), at which this paper was given as an introductory talk, was number IV. The programs of all these meetings show how many Brazilian researchers have already taken up Ecolinguistics and concern themselves with topics of language and ecology.

On the website of EBE I found the logo "Ecolinguista sum: Linguistici nihil a me alienum puto", a quotation after the Latin author Terentius, who wrote "Homo sum, humani nihil a me alienum puto". I will come back to this at the end of this paper.

Couto is the main initiator of "Ecosystemic Linguistics", which starts from the central concept of ecology, viz. the ecosystem. An ecosystemic linguist is an ecologist studying language phenomena, not a linguist "studying them by borrowing concepts of ecology and using these concepts as metaphors" (COUTO, 2017, p. 150). For Couto, "language is interaction, not a thing" (COUTO, 2017, p. 150). He also distinguishes between Exoecology of language, which studies "the interactions between language and its users, their territory, and between and among languages, as well as the ten subjects Haugen, Fill and others have suggested" (COUTO, 2017, p. 155), and Endoecology (studies what is traditionally called its 'structure' and 'grammar'), (COUTO, 2017, p. 157).

According to Couto, Ecolinguistics is not simply a branch of linguistics, but rather a way of looking at the world and of bringing harmony into our world – a thought which has by now found its way into the research of other countries, among them India and China. In China, there have already been a number of conferences on Ecolinguistics, in which this idea of bringing harmony into our world was at the center. We will probably hear more about Chinese Ecolinguistics in the future, as we will about Brazilian Ecolinguistics.

Couto's initiative has led many other Brazilians to study Ecolinguistics. At the conference in Fortaleza (IV EBE), the author has made contact with a number of them, who have for instance been helpful to bring about his participation in the conference or who helped him concerning the talks given in Portuguese. His personal contacts with Roberto Lestinge, Mario Soares Sarmento and Francisco Gomes de Matos have already been mentioned. Lestinge and Gomes de Matos will appear again towards the end of this paper.

7 NEW ORIENTATIONS AND FUTURE DIRECTIONS OF ECOLINGUISTICS

With 'Ecosystemic Linguistics' (COUTO, 2017), 'Positive Discourse Analysis' (STIBBE, 2017), the study of 'greenwashing' in advertising (STÖCKL; MOLNAR, 2017), and 'physiocentric language' (HEUBERGER, 2017), Ecolinguistics is already undergoing an 'evolutionary' development in the 21st century, and this development will continue and will put Ecolinguistics on a level where otherwise only religious beliefs can be found.

The next development that will take place will be that **discourse connected with images** will be investigated from an ecological point-of-view. The *Routledge Handbook* already has a paper titled "Using Visual Images to Show Environmental Problems" (HANSEN, 2017). Hansen writes that visual communication was for some time neglected as an object of study, because of an emphasis on text focused research. However, he notices a rise and consolidation of visual environmental communication research, with several publications listed in Hansen (2017, p. 180). Hansen shows how images of Nature and Industry can heighten the effect of a text about environmental problems caused by humans (HANSEN, 2017, p. 182). The examples he gives (HANSEN, 2017, p. 182) are the picture of a nuclear power station and one of an 'iceberg graveyard', which shows the effect of climate change.

7.1 MULTIMODAL APPROACHES

Since discourse connected with images (also called **multimodal** discourse) will be a more and more important topic of Ecolinguistics, I would like here to discuss a specific example concerning the human treatment of animals, where text is combined with image.

The example is one I found in an Austrian newspaper (*Kronenzeitung*, October 26, 1997) advertising meat (beef). The lines of the text are written within a picture, and they very well illustrate what Arran Stibbe calls "animals erased" (STIBBE, 2015, p. 155, our translation). This **text** reads as followstradução nossa:

Austria's best recipe: Take some clear Alpine air Some juicy meadows And serve with lots of love. This makes your beefsteak perfect. Beef from Austria – you know what you eat! The animals, whose meat is served "with lots of love" are not mentioned at all. The **picture** shows a beautiful landscape, but no animals. What we have here is an extreme case of real 'Greenwashing'. In both the text and the picture the animals are erased, only their flesh (now called beef) is shown 'deliciously' spread out without any indication about where it comes from. A similar advertisement for meat in the same newspaper contained the phrase "enjoy without repentance"; this is anthropocentric, since it does not mean repentance about killing animals, but the humans who eat the meat should not have a bad conscience concerning putting on weight, since the meat is reduced to very little fat. These text-picture combinations discussed are more than 20 years old, but one could easily find more recent examples of 'greenwashing'.

Since I have taken an example concerning animals and meat, I would like to say that in Brazil, too, the meat industry tries to make 'meat production' look green, e.g. by calling a beef production plant 'Spa Bovino'. Thus, it is suggested that the cattle live in a wellness resort (HARTMANN, 2018, p. 158) and are therefore happy. The beef 'produced' there is consequently called 'sustainable'. However, this is a topic which has to be investigated by Brazilians themselves.

For the study of text plus picture from an ecological point of view, the term "eco-imagistics" has been suggested.

7.2 TELEVISION AND INTERNET

In addition to text with pictures, TV programs could also be investigated, e.g. programs about animals or about topics such as climate change. A Brazilian ecolinguist, some years ago, gave a talk at one of the meetings organized in Graz with the title "Environmental discourses on Brazilian and Spanish Television: a study in inter-cultural communication". This Brazilian was Roberto Lestinge, who is currently in Italy. Hermine Penz writes concerning climate change: "Ecolinguistic studies of climate change discourse need to be extended to include a greater variety of genres and voices. [....] Multimodal approaches combining verbal and visual communication are becoming of increasing interest to researchers" (PENZ, 2017, p. 289).

Another topic which is awaiting more precise treatment is the role of ecological discourse on the internet. Many of the texts investigated by ecolinguists are already copied from the internet, and there are websites on ecolinguistics, e.g. the Brazilian one. But perhaps the so-called social media (including Facebook) are not yet directed towards ecological topics. As Penz writes: "The internet will probably continue its development into a site where people from various groups of society will voice their concerns, engage in interaction and debate on issues such as climate change. This site should be used by climate scientists and stake holders to engage with the general public" (PENZ, 2017, p. 289).

7.3 ECOLINGUISTICS ON THE META-LEVEL

Finally, I would like to return to the topic of 'Ecolinguistics on the meta-level', which was already touched upon briefly above (see 5.3, about Peter Finke). Ecolinguistics will increasingly find **itself** a topic being investigated ecologically. Researchers will try to find out how Ecolinguistics can have an effect on human thought and action and how Ecolinguistics can do something against the lack of food in some 'developing' countries. Thus Ecolinguistics will set foot in politics and begin to influence political decisions. It is to be hoped that Ecolinguistics will thus become the science of creating peace through language – a topic which one Brazilian scholar has already made his own. His name is Francisco Gomes de Matos; he calls himself a Peace Linguist and keeps

sending his rhymed reflections around the world. Here are a few lines from some of them, see also: (MATOS, 2017, p. xi):

Instead of riding waves of hostility Sailing on seas of global serenity. Instead of increasing urban pollution, Bringing about fruitful evolution Instead of railing about global decay, Showing how 'language' waves problems away.

Language is creative, we might like to point out It helps our imaginative projects to carry out. Language is ecological, we might want to state; It is environmentally inspiring we advocate. Language is (inter)-cultural, we might substantiate; **Peace** and dignity across cultures, we appreciate.

One could say that with thoughts like these, Ecolinguistics could lead us back into the golden age or bring about a new Golden Age. On the Brazilian internet site we have seen an ecologized quotation from Terentius ("Ecolinguista sum. Linguistici nihil a me alienum puto"). Let us now remember another Latin author, Publius Ovidius Naso, who in his *Metamorphoses* writes as follows about the Golden Age (OVÍDIUS, 1998), lines 89-93:

Aurea prima sata est aetas, quae vindice nullo sponte sua sine lege fidem rectumque colebat poena metusque aberant, nec verba minantia fixo aere legebantur, nec supplex turba timebat iudicis ora sui, sed erant sine vindice tuti.

This passage describes the Golden Age of our earth in the distant past, when there was a world without fear and punishment, a world of safety, which did not need jurisdiction. Then Ovid writes something that concerns what today we call 'the environment' (OVÍDIUS, 1998), lines 94-95:

Nondum caesa suis, peregrinum ut viseret orbem montibus in liquidas pinus descenderat undas ...

Ovidius here really thinks 'ecologically', when he writes that in the Golden Age pinetrees were not yet felled on the mountains to build ships from their wood, which sailed into other parts of the world. But the main thing is that in the Golden Age there was no fear, neither punishment, no threatening words were to be read, but people were safe without judges, because they did not yet need a law to tell them how to do what was right. Cities did not have to be protected with walls and trenches, no helmets and no swords were needed and no soldiers to create peace.

Ovid then goes on to say that it was not yet necessary to force the earth to yield food, because the earth of its own accord gave enough food for everyone: "per se dabat omnia tellus" (line 102).

A vision into the not so distant future would show that Ecolinguistics could be a linguistics of peace and thus one of the forces to bring about such a Golden Age.

Let me end this paper with ecological wishes for Brazil and the whole world.

REFERENCES

BAILO, V. B. *et al. Ecolinguistic stories of resilience*. 2018. Disponível em: http://ecolinguistics-association.org/journal. Acesso em: 25 jan. 2018.

BASTARDAS-BOADA, A. Biological and linguistic diversity: transdisciplinary explorations for a socio-ecology of languages. *Diverscité Langues*, Québec, v. 7, 2002.

BASTARDAS-BOADA, A. The ecology of language contact: minority and majority languages. *In*: FILL, P. (ed.). Routledge handbook of ecolinguistics. New York: Routledge, 2017. p. 26-39.

CAPRA, F. *Ecoliteracy:* the challenge for education in the next century. Berkeley: Center for Ecoliteracy, 1999.

CAPRA, F. The web of life. New York: Harper Collins, 1995.

CARSON, R. Silent spring. Boston: Houghton Mifflin, 1962.

COUTO, H. H. do. *A Língua franca Mediterrânea*: histórico, textos e interpretação. Brasília: Oficina Editorial do Instituto de Letras da UnB, 2002.

COUTO, H. H. do. *Ecolingüística*: estudo das relações entre língua e meio ambiente. Brasília: Thesaurus, 2007.

COUTO, H. H. do. Ecosystemic linguistics. *In*: FILL, P. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 149-161.

COUTO, H. H. do. *Linguística, ecologia e ecolinguística*: contato de línguas. São Paulo: Contexto, 2009.

COUTO, H. H. do. O crioulo portuguès da Guiné-Bissau. Hamburg: Helmut Buske Verlag, 1994.

COUTO, H. H. do. O que vem a ser ecolinguistica, afinal? *Cadernos de linguagem e Sociedade*, Brasília, v. 14, n. 1, 2013. Disponível em: http://periodicos.unb.br/index.php/les/article/ view/9179/6892. Acesso em: 13 set. 2018.

DENISON, N. A linguistic ecology for Europe? Folia Linguistica, v. 16, n. 1/4, p. 5-16, 1982.

ELIOT, T. S. *Notes towards a definition of culture*. London: Faber and Faber, 1948. Disponível em: https://archive.org/details/in.ernet.dli.2015.52649. Acesso em: 12 maio 2018.

FERREIRA, A. C. "Beitrag zu einem 'Haussprache-wörterbuch' Deutsch-Portugiesisch. *In*: FILL,; PENZ, H.; TRAMPE, W. (ed.). *Colourful Green Ideas*. Bern: Peter Lang, 2002. p. 275-297.

FILL, Alwin. Ecolinguística: a história de uma ideia verde para o estudo da linguagem. *Ecolinguística: Revista Brasileira de Ecologia e Linguagem (ECO-REBEL)*, v. 1, n. 1, 2015. Disponível em: http://periodicos.unb.br/index.php/erbel/article/view/15123. Acesso em: 22 jun. 2018.

FILL, A. Ökolinguistik: eine einführung. Tübingen: Gunter Narr Verlag, 1993.

FILL, A.; MÜHLHÄUSLER, P. (ed.). *The ecolinguistics reader*: language, ecology and environment. London: Continuum, 2001.

FILL, A.; PENZ, H. (ed.). The Routledge handbook of ecolinguistics. New York: Routledge, 2017.

FINKE, P. Transdisciplinary linguistics: ecolinguistics as a pacemaker into a new scientific age. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 406-419.

GOBARD, H. L'Aliénation linguistique: analyse tétraglossique. Paris: Flammarion, 1976.

HAARMANN, H. *Multilingualismus II: Elemente einer Sprachökologie*: Tübingen: Gunter Narr Verlag, 1980.

HAECKEL, E. Generelle morphologie der organismen: allgemeine grundzüge der organischen formenwissenschaft, mechanisch begründet durch die von Charles Darwin reformierte Deszendenztheorie. Berlin: G. Reimer, 1866. 2 v.

HALLIDAY, M. A. K. New ways of meaning: the challenge to applied linguistics. *Journal of Applied Linguistics* 6, 1990, p. 7-36. Reprinted in FILL, A.; MÜHLHÄUSLER, P. (ed.), 2001, p. 175-202. [All quotations are from this reprint].

HANSEN, A. "Using visual images to show environmental problems. *In*: FILL, A.; PENZ. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 179-195.

HARRÉ, R.; BROCKMEIER, J.; MÜHLHÄUSLER, P. *Greenspeak*: a study of environmental discourse. Thousand Oaks: SAGE, 1999.

HARTMANN, K. Die grüne Lüge. Weltrettung als profitables Geschäftsmodell. München: Blessing, 2018.

HAUGEN, E. The ecology of language. *In: The Ecology of Language. Essays by Einar Haugen* (ed. Anwar S. Dil). Stanford: Stanford University Press, 1972. p. 325-339. Reprinted in FILL, A.; MÜHLHÄUSLER, P. (ed.). 2001, p. 57-66. [All quotations are from this reprint].

HAWLEY, A. H. Human ecology: a theory of community structure. New York: Ronald Press, 1950.

HEUBERGER, R.. "Anthropocentrism in monolingual English dictionaries: an ecolinguistic approach to the lexicographic treatment of faunal terminology". *Arbeiten aus Anglistik und Amerikanistik*, v. 28, n. 1, p. 93-105, 2003.

HEUBERGER, R. "Overcoming Anthropocentrism with Anthropomorphic and Physiocentric Uses of Language?" *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 342-354.

HUMBOLDT, A. von. *Reise in die Aequinoctial-Gegenden des neuen Continents*. Stuttgart: G. Cotta, 1859. Disponível em: https://www.e-rara.ch/zut/wihibe/content/pageview/7211837. Acesso em: 5 fev. 2018.

HUMBOLDT, W. von. Über die Verschiedenheit des menschlichen Sprachbaus und ihren Einfluss auf die geistige Entwicklung des Menschengeschlechts. Berlin: Königliche Akademie der Wissenschaften, 1836. (Facsimile: Bonn, Ferdinand Dümmler, 1959).

HUMBOLDT, W. von. *Wilhelm von Humboldts Südamerikanische Grammatiken*. Paderborn: Schoeningh Verlag, 2011. (Amerikanische Sprachen des Editionsprojektes Wilhelm von Humboldt: Schriften zur Sprachwissenschaft, v. 5).

KAPLAN, R. B. Ecolinguistic aspects of language planning. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 89-105.

LEVASSEUR, T. Religion, language and ecology. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 420-433.

MACKEY, W. F. "The ecology of language shift. *In*: NELDE, P. (ed.). *Sprachkontakt und Sprachkonflikt* (= *Zeitschrift für Dialektologie und Linguistik*, Beiheft 32, p. 35-41). Wiesbaden: Franz Steiner, 1980.

MAKKAI, A. A pragmo-ecological view of linguistic structure and language universals. *Language Sciences*, v. 27, p. 9-23,1972.

MAKKAI, A. *Ecolinguistics: toward a new paradigm for the science of language*. London: Pinter Publisher, 1993.

MAKKAI, A. Die Welt als Bewusstsein und Paraphrase. Zur gesamtökologischen Fundierung des menschlichen Sprachverständnisses mit besonderer Berücksichtigung der Sprachphilosophie Wilhelm von Humboldts und ihrer Relevanz für die theoretische Sprachwissenschaft des 21. Jahrhunderts. *In*: FILL, A. (ed.). *Sprachökologie und Ökolinguistik* (Tübingen: Stauffenburg), 1996. p. 77-91.

MARCELLESI, J.-B. Basque. Breton, catalan, corse. flamand, germanique d'Alsace, occitan: l'enseignement des 'langues régionales'. *Langue Fran^Çaise*, Lyon, v. 25, p. 3-11, 1975.

MATOS, F. G. de. Ecolinguistics through rhymed reflections: a plea to humankind. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017.

MUFWENE, S. Language evolution from an ecological perspective. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 73-88.

MUFWENE, S. The ecology of language evolution. Cambridge: Cambridge University Press, 2001.

MÜHLHÄUSLER, P. *Language of environment*: environment of language: a course in colinguistics. London: Battlebridge, 2003.

MÜHLHÄUSLER, P. What creolists can learn from Ecolinguistics. *In*: FILL, Alwin.; PENZ, Hermine. (eed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 135-148.

NASH, J.; MÜHLHÄUSLER, P. Linking language and the environment: the case of Norf'k and Norfolk Island. *Language Sciences*, v. 41, p. 26-33, 2014.

ORR, *D. Ecological literacy: education and the transition to a postmodern world. Albany: State University of New York Press*, 1992.

OVIDIUS, P. N. Metamorphoses. Berlin: de Gruyter, 1998.

PALMER, J. D. Language ecology. TESOL Quarterly, v. 8, n. 3, p. 225-232, 1974.

PENZ, H. 'Global Warming' or 'Climate Change'? *In*: FILL, A.; PENZ, H. (eed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 277-292.

PHILLIPSON, R. Linguistic imperialism. Oxford: Oxford University Press, 1992.

PHILLIPSON, R. Linguistic imperialism continued. New York: Routledge, 2009.

PHILLIPSON, R.; SKUTNABB-KANGAS, Tove. Linguistic imperialism and the consequences for language ecology. *In*: FILL, Alwin.; PENZ, Hermine. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 121-134.

ROMAINE, S. *Language endangerment and language death*: the future of language diversity. *In*: FILL, Alwin.; PENZ, Hermine. (eed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 40-55.

SALZINGER, K. Ecolinguistics: a radical behavior theory approach to language behavior. *In*: AARONSON, Doris.; RIEBER, Robert. W. (ed.). *Psycholinguistic research: implications and applications*. New York: Lawrence Erlbaum, 1979. p. 109-129.

SARMENTO, M. S. Ecolexicography: ecological and unecological words and expressions. *In*: FILL, A.; PENZ, H.; TRAMPE, W. (ed.). *Colourful Green Ideas*: Papers from the 2000 conference in Graz and from the 2001 symposium in Passau. Bern: Peter Lang, 2002. p. 487-492.

SCHUMACHER, E. F. *Small is beautiful*: a study of economics as if people mattered. Vancouver: Hartley & Marks, 1973.

STEFFENSEN, S. V. The microecological grounding of language: how linguistic symbolicity extends and transforms the human ecology. *In*: FILL, A.; PENZ, H. (eed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 393-405.

STEFFENSEN, S. V.ork; FILL, A. Ecolinguistics: the state of the art and future horizons. *Language Sciences*, v. 41, p. 6-25, 2014. Special issue.

STIBBE, A. *Ecolinguistics*: language, ecology and the stories we live by. London: New York, Routledge, 2015.

STIBBE, A. Positive discourse analysis: rethinking human ecological relationships. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 165-178.

STIBBE, A.; ZUNINO, F. Boyd's forest dragon or the survival of humanity: discourse and the social construction of biodiversity. *In*: DÖRING, M.; PENZ, H.; TRAMPE, W. (ed.). *Language, signs and nature*: ecolinguistic dimensions of environmental discourse. Tübingen: Stauffenburg, 2008. p. 165-181.

STÖCKL, H.; MOLNAR, S. Eco-advertising: the linguistics and semiotics of green (-washed) persuasion. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 261-276.

TRAMPE, W. Euphemisms for killing animals and for other forms of their use. *In*: FILL, A.; PENZ, H. (ed.). *The Routledge handbook of ecolinguistics*. New York: Routledge, 2017. p. 325-341.

TRAMPE, W. Ökologische Linguistik. Grundlagen einer ökologischen Wissenschafts- und Sprachtheorie. Opladen: Westdeutscher Verlag, 1990.

TRAMPE, W. Ökosysteme und Sprache-Welt-Systeme". *In*: FILL, A. (ed.). *Sprachökologie und Ökolinguistik*. Tübingen: Stauffenburg Verlag, 1996. p. 59-75.

VOEGELIN, C. F.; VOEGELIN, F. M. Languages of the world: Native America Fascicle One. *Anthropological Linguistics*, v. 6, n. 6, p. 2-45, 1964.