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# **Ecolinguistics and Erasure: restoring the natural world to consciousness**

**Arran Stibbe**

## **1. Ecolinguistics**

One of the ways that disciplines evolve and new sub-disciplines are formed is through a declaration by certain scholars that something of great importance has been overlooked, or *erased*, by the discipline. For instance, Ferber (2007:265) claims that whiteness studies, in its concentration on race and privilege, has ‘erased’ gender; Barnet (2003) argues that technology has been ‘erased’ in cultural critique; Lutz (2009:611) that women’s writing is ‘erased’ in sociocultural anthropology, and Frohmann (1992:365) that the social dimension is ‘erased’ in cognitive information science. The declaration is accompanied by a demand that what has been erased is considered and incorporated in the discipline.

Closer to home, William Labov declared that the linguistics of his time had overlooked the embeddedness of language in society (although he did not use the term ‘erased’). He demanded that social aspects were incorporated into the discipline, and founded the new sub-discipline of sociolinguistics (see Labov 2001). Two things arose from this. Firstly, the discipline of linguistics could better explain language, since variation in language can only be understood with reference to social variables. But secondly, and equally importantly, it meant that linguistics could be applied practically to a range of social issues of pressing importance such as ethnic discrimination in schools and play a role in addressing these issues, something that Labov was evidently passionate about (see Labov 1987).

Ecolinguistics recognises that language is embedded in society, but goes further than that. It recognises, like Lakoff and Johnson (1999), that language is embodied, i.e., embedded in beings who have bodies. But it goes further than that too, in recognising that humans, human bodies, and human society are all embedded in larger natural systems – the complex interactions of humans, plants, animals, and the physical environment. The claim is that linguistics, or specifically Critical Discourse Studies, has been so focused on power relations between people, on sexism, racism and the multitude of other ways that some humans oppress other humans, that it has overlooked, or erased something of importance. And the relations of humans with other species and the physical environment are of great importance, since the continuation of all life depends on these ecological relationships. The environment *is* mentioned occasionally in passing – Fairclough (2004:104) wrote that ‘The unrestrained emphasis on growth also poses major threats to the environment’ – but ecological issues have rarely been taken up and analysed in sustained way within mainstream CDS.

Ecolinguistics is part of a larger ecological 'turn' within social science which includes ecopsychology (Fisher 2002), ecofeminism (Pandey 2011), ecocriticism (Garrard 2011), ecopoetry (Bryson and Elder 2002), and ecosociology (Stevens 2012). All of these sub (or super) disciplines incorporate ecological aspects partly to better understand the phenomenon in question and partly to enable the academic discipline to play an active role in address key socio-ecological issues. For ecolinguistics, some theorists (e.g., Boguslawska-Tafelska 2013) claim that an ecological perspective can help the discipline of linguistics come to a better overall understanding of how language works: that ecolinguistics can 'orchestrate all we observe about language and communication into one theory of language' (ibid 13). Others, writing from a 'language ecology' perspective (e.g., Bastardas-Boada 2005, 2003), claim that ecolinguistics can at least improve the theoretical understanding of how languages relate to each other and the place in which they are spoken. However, of most relevance to Critical Discourse Studies are studies which apply an ecolinguistic perspective to practical issues of pressing importance in the 21<sup>st</sup> century such as environmental justice, water scarcity, energy security, and, in general, the gradual destruction of the ecological systems that support life. This is not a separate and distant goal from mainstream CDS, since when ecological systems fail the ones who are hit first and hardest are the already oppressed groups that are a key focus of CDS. Ecological destruction, then, is part of oppressive relations between humans and other humans, influencing others at the most basic level of the ability to continue living. There is no need for the term 'ecolinguistics', in fact, since it should be a matter of course that linguistics considers the embedding of human societies in larger natural systems, but it exists because of the erasure of nature in mainstream linguistics, as a movement to re-mind linguists of something important which has been overlooked.

A large part of the ecolinguistics literature focuses the discourses of environmentalism and scientific ecology, treating these discourses critically and exposing hidden messages which may work against the goals of the institutions or disciplines which employ them (e.g., Alexander 2010, Harré et al 1999, Stibbe 2005). However, ecolinguistics is primarily about the *impact* that discourses have on the systems which support life, and so also analyses discourses such as those of consumerism, advertising or economic growth which have an impact, even if they are not specifically 'about' the environment or ecology at all (e.g., Halliday 2001, Hogben 2008, Slater 2007). Indeed, the failure to consider the environment in neoclassical economics *is* the problem with this discourse, and what makes it so ecologically destructive. Beyond critiquing destructive discourses, however, is the search for alternative discourses which are based on very different assumptions from the mainstream discourses of industrial civilisation. Bringhurst (2006), for instance, looks at Native American discourses, and Stibbe (2012) explores traditional Japanese discourses. The hope is to find ways of talking and thinking about the world that are useful in the current predicament that the world faces, either through adapting discourses from cultures around the world or creating new ones. This is a form of Positive Discourse Analysis (Martin 2006), since the aim is to find discourses that are positive and argue for their promotion rather than seeking out discourses to resist.

Ecolinguistics, then, is a discipline that arises out of erasure – the perception that mainstream linguistics has forgotten, or overlooked, the embedding of humans in the larger systems that support life. It analyses discourses such as consumerism which are destructive in encouraging people to consume too much, destroy resources and produce waste. It

analyses discourses such as those of environmentalism which attempt to deal with the ecological destruction but often contain hidden assumptions which may reduce their effectiveness. And it seeks alternative ways of thinking and talking about the world that are useful in addressing the overarching issues that humans face as the ecological systems which support life are damaged and become less able to do so.

The concept of 'erasure', however, goes far beyond the founding of the sub-discipline of ecolinguistics. The erasure of the natural world is something that occurs widely across a large number of the discourses that structure industrial civilisation. Detailed linguistic examination of erasure is a potentially useful, though underdeveloped, tool for Critical Discourse Studies in general, and ecolinguistic ones in particular. This chapter firstly contributes to the development of the concept of 'erasure' and then applies it across a wide range of discourses from those of neoclassical economics to haiku poetry. The aim is to illustrate what an ecolinguistic approach to CDS looks like in practice, and also to develop the analytic tool of erasure for future use in ecolinguistics and beyond.

## **2. The nature of erasure**

The concept of discursive erasure is frequently used in social science to denote the absence of something important - something that is present in reality but is overlooked or deliberately ignored in a particular discourse. Namaste (2000) uses the term to describe how transsexual people are represented as figurative tokens in the media rather than as embodied people living their lives, and how they are made invisible by social policies that have no recognition of their existence. In addition, they state:

Finally, and most powerfully, "erasure" can refer specifically to the very act of nullifying transsexuality – a process whereby transexuality is rendered impossible. As Ros and Gobeil elucidate, the use of "men" and "women" undermines the very possibility of a TS/TG [transsexual/transgender] position. Within this site, transsexuals cannot exist at all. (Namaste 2000: 52)

Young and Meyer (2005:1144) use erasure in this third sense in their analysis of the 'erasure of the sexual-minority person in public health discourse':

Men who have sex with men (MSM) and women who have sex with women (WSW) are purportedly neutral terms commonly used in public health discourse. However, they are problematic because they obscure social dimensions of sexuality; undermine the self-labelling of lesbian, gay, and bisexual people; and do not sufficiently describe variations in sexual behaviour.

It is not just forms of sexual identity that are analysed using the concept of erasure – French et al (2008) consider the 'material, discursive and political erasure of bank and building society branches in Britain', arguing that government discourses have ignored the issue of physical access to financial services despite its importance in financial exclusion. In a very different field, Everett and Neu (2000: 5) examine the discourse of ecological modernisation and argue that 'the intersection of ecological and social realms is ignored and issues of social justice are effectively erased...in other words "ecological modernisation" is a discourse of the status quo'.

The term 'erasure', then is used in a variety of ways to indicate that something important has been ignored, sidelined or excluded from consideration within a discourse. Erasure, however, is something intrinsic to the very nature of discourse. In representing and constructing areas of social life discourses will always be partial, will always bring certain elements together into a configuration while leaving out a whole universe of other elements. The concept of erasure only becomes meaningful when combined with its counterpart, which could be called *re-minding*. Re-minding is a linguistic act where an actor surveys the universe of elements that have been excluded from a particular discourse, declares that one of these elements is important, that the discourse is 'erasing' it from consciousness, and demands that the discourse brings it back to mind. Erasure, then is not so much a property of discourse, or a conscious act of exclusion and marginalisation by the group responsible for the discourse, but part of a discursive struggle where actors attempt to create discursive change by declaring that something of importance has been excluded. What that 'something of importance' is depends on the goals and interests of those who are doing the 're-minding'.

There are a variety of forms that erasure can take, and this chapter will focus on three main forms. The first, which will be called 'the void', is the most obvious and the one most frequently described in social science: 'something important' is entirely absent and not mentioned in a discourse at all. The second type draws from the work of Baudrillard, who describes the following hierarchy of representation:

- The image is the reflection of a profound reality.
  - The image masks and denatures a profound reality.
  - The image masks the *absence* of a profound reality.
  - The image has no relation to any reality whatsoever: it is its own pure simulacrum.
- (adapted from Baudrillard 1994: 6)

The first of these levels assumes a pre-discursive reality that is represented in a direct way – with no erasure. The third and fourth levels are of great interest for ecolinguistics, given that so much of what occurs in political and institutional discourse bears no relation to anything that exists within physical reality, but are not specifically erasure. It is the second level that is most useful here – 'The image masks and denatures a profound reality' since it suggests a form of erasure where 'something important' is represented in discourse, but in a distorted way as a 'mask' which erases its true nature. This second type of erasure, then, we will call 'the mask'.

Baudrillard's top level of representation, where discourses transparently and directly reflect a pre-existing reality is problematic, since the complexity of pre-discursive reality is far greater than the representational resources of humans. Instead, it is useful to think of discourses as always erasing what they are describing, but doing so to a greater or lesser extent. When discourses include mention of 'something important' but still manage to erase it by representing it in a vague, weak or abstract way, then this is the third type of erasure, which we will call 'the trace'. The image is of pencil marks being erased while a trace of their former presence remains in the indentations in the page. The 'trace' can be stronger or weaker depending on how vividly the expressions in the discourse evoke 'something important'.

Erasure happens at multiple levels. At the lowest level, 'something important' is erased from sentences and clauses through a range of linguistic devices including metaphors, metonymies, nominalisations, and hyponyms (as will be described shortly). If 'something important' is erased from multiple sentences then this starts to build up to erasure from the text as a whole. Texts, in turn, draw from discourses (characteristic ways of speaking and writing the world in particular areas of social life), and it is the erasure of 'something important' from the discourse that is the key concern, since discourses are what shape the society we live in. Analysis therefore starts on the lowest level, examining the sentences and clauses in a specific text, but also looks for larger patterns across the text as a whole and the discourse as a whole. As an illustration, analysis may start by looking at the erasure of the natural world in specific sentences in a neoclassical economics textbook, discover patterns of erasure across the book, then look at other books, reports and economics news articles and eventually gain insights into the erasure of the natural world within the discourse of neoclassical economics in general.

The relevant elements of erasure, then, are a) an area of social life such as economics or environmentalism, b) a discourse, which is a typical way of speaking about the world in that area which encodes a particular worldview c) 'something important', which is entirely missing from the worldview, or present only as a faint trace, or present in a distorted version, and c) an actor who declares that 'something important' has been erased and insists that it be brought back into the discourse.

### **3. The erasure of nature**

A large body of evidence (e.g., GEO 2012, MEA1 2005) reveals the increasing material erasure of the natural world by humans – forests are clear cut, rivers and oceans are polluted, species are made extinct, coral reefs destroyed, vast expanses of ice are melted. At the same time, and by no means coincidentally, those who are causing the most destruction are finding themselves distanced from the natural world, living increasingly within the discursively constructed world of the internet, television, games, books, reports, newspapers and museums. Discourses can erase the natural world not materially, but from consciousness. Not all discourses erase to the same degree though – some provide vivid images which encourage people to respect and protect the natural world, some provide just a faint hint of the natural world, while some omit it all together.

The analyses in this section put the model of erasure described in the previous section into action through exploring the discursive erasure of the natural world - the animals, plants and physical environment that interact together to form the ecological systems that life depends on. A full methodology would consist of discourse analysis of a large range of texts that are characteristic of a discourse, examining the forms of erasure across the texts, and revealing overall patterns of significance. This chapter, however, aims to give enough depth of analysis to reveal the technical workings of erasure in discourse but with enough breath to reveal the erasure of the natural world in a range of discourses.

### 3.1. The void: traditional economics

The first kind of erasure is 'the void', where the natural world is completely omitted by a discourse. Traditional neoclassical economic discourses are frequently accused of failing to consider the ecological embedding of human economies (e.g., Williams and McNeill 2005). The standard textbook, *Microeconomics* (Estrin and Dietrich 2012), for instance, contains no discussion of the dependence on and effect of human economic activity on the environment, animals, plants or ecology in its 554 pages, aside from occasional mention of externalities and a brief discussion of what it calls the 'so-called problem of pollution' (p491). The following extract from the textbook illustrates the erasure of the natural world:

It hardly needs pointing out that the goods and services that consumers purchase do not simply materialise out of the blue. In large measure they have to be produced...The essential fact about production is so obvious that it hardly needs stating: it involves the use of services of various sorts to generate output...Clearly the manner in which production is organised has important social and political as well as economic aspects. (Estrin and Dietrich 2012, p169)

In this extract the 'working up of facticity' (Potter 1996) is extremely high: 'it hardly needs pointing out...essential fact...obvious...hardly needs stating...clearly', as if the discourse was merely pointing out pre-existing truths rather than playing a role in constructing social reality. Something important is missing in this social construction though: goods are described as produced by 'services' without mention of what is destroyed, harmed or disturbed to make the goods, i.e., the animals, plants and ecosystems used in or affected by production. The term *production* is nominalised from 'x produces y', which even in its verbal form does not include what is destroyed to make y. It is only in the form 'x produces y out of z' that 'z' appears, although in this slot 'z' is most likely to be a mass noun like 'wood' rather than a count noun like 'trees'. The nominalised expression *production*, then, can erase the natural world without a trace. Williams and McNeill (2005:8) confirm that the above text is not just an isolated example:

Raw materials used as inputs in the production process, and any other services provided by the natural environment, were omitted from consideration altogether. Amazingly, they still are. First year economics students are still taught in almost all of the currently popular textbooks that businesses manufacture their products using only labour and machines!

The list that the microeconomics textbook gives of the important aspects of how production is organised consists of 'social and political as well as economic aspects'. This erases, by total omission, the ecological aspects of production. If the ecological systems that support life are erased from economic discourse then they cannot be taken into account in economic decisions, with significant implications for how the natural world is exploited.

Ecological economics, on the other hand, is a discipline which explicitly challenges the discourse of conventional economics. The textbook *Ecological Economics: principles and applications* states that:

to the extent that nature and the environment are considered at all [in conventional economics], they are considered as parts or sectors of the macro-economy...Ecological

economics, by contrast, envisions the macroeconomy as part of a larger enveloping and sustaining Whole, namely the Earth, its atmosphere and its ecosystems. (Daly and Farley 2004:15)

The discourse of ecological economics is an attempt at 're-minding' – bringing animals, plants and ecosystems back into consideration through statements such as the following:

we cannot make something from nothing hence all human production must ultimately be based on resources provided by nature. (Daly and Farley 2004:67)

Ecological economics is still based on the discourse of economics though, and tends to bring the natural world into an economic frame (using Lakoff's 2009 concept of 'frame') rather than placing economics within an ecological frame. The following example is typical:

The structural elements of an ecosystem are stocks of biotic and abiotic resources (minerals, water, trees, other plants, and animals) which when combined together generate ecosystem functions, or services. The use of a biological stock at a nonsustainable level in general also depletes a corresponding fund and the services it provides (Daly and Farley 2004: 107).

The terms *stocks*, *resources*, *depletes*, *services* and *funds* combine together to strongly activate the economic frame. The terms *biotic*, *abiotic*, *ecosystem* and *biological* activate an ecological frame. However, the economic frame is primary since the economic words form the head of noun phrases while the ecological terms are merely modifiers (biotic resources, ecosystem services, and biological stock).

Treating the living world in the same discursive way as a stock of objects removes (from consciousness) what is unique about life such as interaction and interdependence, which ironically is what ecology is all about. This could be considered a form of the second type of erasure, 'the mask', where animals and plants have been erased and replaced with a distorted version of themselves (the stock of biological resources).

### **3.2. The mask: animal product industries**

Intensive animal agriculture and the discourses which justify, sustain and construct it, is of particular interest to ecolinguistics because of the scale of negative environmental impacts caused by factory farming (see WSPA 2008). To create a system which treats animals inhumanely and is environmentally destructive requires work to be done by discourse to erase animals as living beings and focus narrowly on economic factors instead (Stibbe 2001, 2003). A key device is metaphor, and the following are stark examples from the 1970s:

The breeding sow should be thought of as, and treated as, a valuable piece of machinery whose function is to pump out baby pigs like a sausage machine (Walls Meat Company manager in Singer 1990:126)

If the sow is considered a pig manufacturing unit then improved management at farrowing on through weaning will result in more pigs weaned (US department of agriculture in Singer 1990:126)



These metaphors explicitly encourage the reader to think of pigs as machines and manufacturing units, creating conceptual blends (Turner and Fauconnier 2002). The resulting pig-machine blend or pig-manufacturing-unit blend can be thought of as a 'mask' – a distorted version which erases actual pigs as living beings.

The pork industry no longer uses strong metaphors like those above, perhaps because they are so frequently quoted by activists such as Singer in denouncing the industry. Instead the Pork Industry Handbook uses expressions like *structurally sound*, *boar power*, *water intake*, or *sow breakdown* referring to the animals, which more subtly establishes a pig-is-machine metaphor (Stibbe 2003:384). Another metaphor that works towards erasing pigs is the following example from the Pork Industry Handbook, which entirely redefines the 'health' of a pig:

Quote 1) Health is the condition of an animal with regard to the performance of its vital functions. The vital functions of the pig are reproduction and growth. They are vital because they are major contributors to the economic sustainability of the pork production enterprise. (Pork Industry Handbook in Stibbe 2003:380)

In this example, individual pigs as beings are erased by the metaphorical construct of the 'pork production enterprise'. The term 'vital functions' which would usually be functions like circulation and an immune system that are essential for the life of an individual animal has been redefined narrowly as the functions that keep the enterprise profitable. The metaphorical creation of the 'pork production enterprise' as a living being with vital functions obscures or 'masks' the individual animals.

The following examples are from other intensive animal industries and illustrate how metonymy is used to erase animals:

- (a) Catching *broilers* is a backbreaking, dirty and unpleasant job.
- (b) [There is] susceptibility to ascites and flipover . . . in the female *breeder*
- (c) There's not enough power to stun the *beef*...you'd end up cutting its head off while the *beef* was still alive.
- (d) Exciting times for *beef* practitioners (examples of industry discourse from Stibbe 2001:153)

In (a) live birds are named and referred to by a cooking method, in (b) by their function, in (c) cows are referred to by their dead flesh, and in (d) veterinarians specializing in bovine medicine are called 'beef practitioners' rather than 'cow practitioners' (Stibbe 2001:154).

There is also a range of ways that industry discourse erases animals by using vocabulary that is typically used for objects and applying it to living beings: *damage* instead of *injury* in the expression 'bird damage', *product* instead of *bodies* in 'product is 100% cut-up', *destruction* and *batch* in 'Isolation of salmonella will result in the destruction of the flock slaughter of the batch' and *harvest* in 'an automatic broiler harvesting machine' (Stibbe 2001:155). This results in an animal-object blend that acts in the same way as machine metaphors to distract attention away from animals and living beings.

Glenn describes how advertising is used in the external discourse of the animal product industry to erase from consumers' minds the grim conditions that animals are kept in in factory farms:

Advertisements' representations of "speaking animals" who are selling the end "products" of the brutal processes they endure in the factory farm system serve . . . a dual discursive purpose. The first purpose is to sell products, and the second role is . . . to make the nonhuman animal victims disappear. (Glenn 2004: 72)

In general, the creation of 'masks' to disguise the nature of animals in the meat industry could help those involved in the agriculture industry distance themselves from the impact of intensive confinement methods of farming on animal wellbeing and the environment, and focus only on economic aspects instead.

### 3.3. The trace: ecological discourse

Ecological discourse is, of course, all about animals, plants and the physical environment. It would seem strange at first to analyse how it erases the natural world, but erasure is not a binary all/nothing phenomenon and can occur to different degrees. Of particular importance is 'the trace' – when discourses represent the natural world but do so in a way which obscures, leaving a faint trace rather than a vivid image. This section briefly examines five reports that are characteristic of a particular type of ecological discourse - public facing summaries of the state of ecosystems for policymakers. The reports are *Ecosystems and Human Well-being: General Synthesis* (MEA 1: 2005), *Ecosystems and Human Well-being: Biodiversity Synthesis* (MEA2: 2005), *The UK National Ecosystem Assessment* (NEA: 2011), *The Economics of Ecosystems and Biodiversity* (TEEB: 2010) and the *Impacts of Climate Change on Biodiversity, Ecosystems and Ecosystems Services* (NCA: 2012). For convenience these will be referred to simply as MEA1, MEA2, NEA, TEEB and NCA respectively.

The reports were selected as representing an influential discourse that potentially shapes how scientists, policy-makers and the general readers of the reports respond to major issues that humanity is facing. The focus of the analysis is the degree to which animals, plants, and the natural world are erased in the discourse of the reports. To understand why this is important it is useful to give quotes from three of the reports themselves:

- 1) birds of all kinds, butterflies, trees such as oak, beech and birch, mammals such as badgers, otters and seals...are of great cultural significance and...undoubtedly have a huge hold over the popular imagination (NEA:19)
- 2) Recognising value in ecosystems, landscapes, species and other aspects of biodiversity...is sometimes sufficient to ensure conservation and sustainable use. (TEEB: 11)
- 3) Ultimately, the level of biodiversity that survives on Earth will be determined not just by utilitarian considerations but to a significant extent by ethical concerns, including considerations of the intrinsic values of species. (MEA1 : 58)

In other words, people are more likely to respect the natural world and work towards preserving it if they value it deeply for its own sake at an ethical level, and they feel strongly about things they can concretely imagine such as butterflies, oak, badgers, and seals. We

would therefore expect the outward facing discourse of ecology to try to encourage this respect by vividly representing the myriad of species of plants and animals in ways which capture people's imagination and stimulate an ethical response.

This section will argue that despite the quotations above and some explicit statements such as 'biodiversity and ecosystems also have intrinsic value' (MEA 2), the discourse of the reports erases animals and plants and the natural world, turning them into a faint trace that is unlikely to arouse people's imagination or care. The question is whether the discourse paints a picture of humans as part of a living world teaming with a diversity of animals and plants, or a lonely world where humans are surrounded only by 'natural capital', 'biological stock' and 'biomass'; by trees or 'cubic meters of timber'?

Returning to the discourse of the reports, it is possible to describe a number of linguistic ways that animals and plants are erased and describe a hierarchy of erasure, from the most vivid to the most obscuring. The most vivid representations of nature are the photographs – birds (TEEB, NEA), butterflies (NEA, MEA2), bees (NEA), fish (MEA2), trees (TEEB, NEA) and a hippo (TEEB), all close-up and personal, with animals sometimes looking out at the viewer in what Kress and van Leeuwen call a 'demand' picture (one which demands a relationship between viewer and subject). The images are two dimensional and static, so erase some features of the actual animals and trees (as all representations do), but still provide detailed images of individual animals and trees in a photorealistic way, forcing them into the minds of viewers.

The statement 'trees such as oak, beech and birch, mammals such as badgers, otters and seals' (NEA: 19) also represents the trees and animals quite vividly since the species are concretely imaginable (the 'basic' level in Lakoff's 1987 terms). Still, nothing about the word 'oak' conveys the myriad of shapes of the actual trees, their colours, smells, textures or the complexity of their forms, so there is (as always) some erasure. These two forms of representation (photographs and specific species names) show the minimum amount of erasure, but are actually rare within the documents – the primary ways that animals, plants and the natural world are represented consist of much stronger forms of erasure.

The first stronger form of erasure occurs when superordinates replace the names of species: *birds* (NEA:23), *mammals* (NEA:23), *amphibians* (MEA2:4) and *fish* (MEA 1: 4); then *plants* (MEA2:11) and *animals* (MEA2:11); then *species* (NCA:1); then *flora* (NEA:48) and *fauna* (NEA:48), right up to *organisms* (MEA2: 1). These progressively get more abstract and less imaginable – from *badger* which brings to mind many characteristics of a particular kind of animal to *organism* which erases all but the feature of being alive. Still higher up the ladder of erasure/abstraction are the terms *biodiversity* (MEA2:1), *components of biodiversity* (MEA2: 2), *assemblages of species* (NCA:1), *ecological complexes* (MEA2: 2) and *ecosystems* (TEEB: 7). These represent the coming together of a diversity of animals and plants but the imaginable individuals are buried deeply within the abstractions.

Terms such as *badger*, *mammal*, *species*, *organism*, *fauna* and *biodiversity* still remain within the semantic domain of living beings, however, which is as expected since the hyponymy relations between them are part of the semantics of the words themselves. However, as Fairclough (2003:130) describes, texts can set up their own relations of hyponymy 'on the fly', and in doing so can place living beings as co-hyponyms of inanimate objects. The expression 'extraction of timber, fish, water and other resources' (NCA 2) sets

up timber, fish and water as equivalent co-hyponyms under the superordinate category of 'resources' – a category which includes both living beings and non-living materials. This erases the distinctiveness of living beings – draining the life out of them by including them in a list of resources along with inanimate objects. The expressions 'soils, air, water and biological resources' (TEEB p10), 'terrestrial, marine and freshwater resources' (NEA: 20), and 'trade in commodities such as grain, fish, and timber' (MEA 1: 59) carry out a similar function. Even biodiversity is set up as a resource in 'biodiversity and other ecological resources' (NCA: 1). The expression 'our ecological resources' (NCA: 1) uses the pronoun 'our' to erase the other lifeforms we share the planet with by turning them into human possessions rather than beings in their own right.

The complex noun phrase 'provisioning services such as food, water, timber and fibre' (MEA2: 1) erases animals and plants firstly by turning them into co-hyponyms of 'provisioning services', and secondly by burying them within mass nouns (food, timber and fibre). They are still there, but only as a trace. The process of 'massification' is a strong form of erasure, so trees become 'timber' (NEA:7), then 'fuel wood' (TEEB:17), then 'cubic meters of timber' (TEEB:12), then 'wood biomass' (NEA:18), and at the top level of erasure '27 million tonnes per year of...biomass imports' (NEA:38). When trees, plants and animals are represented in mass nouns, they are erased, becoming mere tonnages of stuff.

Another massification term is 'natural capital'. The expression 'forests and living coral reefs are critical components of natural capital' (TEEB:7) starts off with the concretely imaginable forests and reefs but then turns them into the unimaginable mass term 'capital', which later becomes 'stocks of natural capital' (TEEB:7). TEEB is explicitly about the economics of ecosystems, so it is not surprising that it draws from the discourse of ecological economics mentioned above. However, the other documents also contain similar expressions, e.g., 'the value of the UK's natural capital is not fully realised' (NEA:47), 'ecosystem assets' (NEA:73), 'natural capital assets' (MEA 2: 6), 'biological resources' (MEA 2: 7), and 'stocks of natural ecosystem resources' (NEA: 4).

There are also representations which contain traces of animals and plants by mentioning the places where they live, but not the dwellers themselves: 'urban greenspace amenity' (NEA:51) includes trees and plants as the merest of traces in the 'green' of 'greenspace'. The terms 'living and physical environments' (NEA:4) and 'environmental resources' (TEEB:20) represent animals and plants as part of an all-encompassing environment surrounding humans rather than existing in their own right. The expressions 'a biome's native habitat' (MEA2 : 2) and 'the diversity of benthic habitats' (MEA2: 8) represent what Chris Philo and Chris Wilbert (2000) call 'beastly places', though without the beasts. Likewise 'seasonally grazed floodplains' (NEA2: 23) contains a trace of animals, for who else is doing the grazing? And a hint of plants, for what else is being grazed? The word 'types' takes the erasure up a level in expressions such as 'aquatic habitat types' (NEA:10).

Another way that animals and plants are erased is through being referred to metonymically by the function they are serving within an ecosystem: 'pollinators', 'primary producers', 'dispersers', or the slightly more vivid 'pollinating insects' (NEA:19). Fish are erased through taking the place of a modifier in noun phrases such as 'fish catch' (MEA1: 103), 'fish stocks' (MEA 1: 6), 'fishing technology' (NEA: 55), 'fish consumption' (MEA 1: 103) and 'fish production' (MEA 1 :17). When fish are modifiers of other nouns, they have been

pushed to the periphery, the clause being about something else. And the erasure is taken even further with the expression 'fisheries' (MEA2: 5), where the fish themselves remain in the morphology of the word, but just a trace within a large commercial operation. Fish are also erased by metaphor in the expression 'commonly harvested fish species' (MEA2: 3) or 'The fish being harvested' (MEA1: 15), since they are made equivalent to plants rather than being treated as animals.

The overall pattern across the reports is clear: there are visual illustrations and vivid expressions towards the top of the hierarchy of erasure (e.g., badgers, oaks, otters) but these are few and far between. For the most part the reports erase the animals, plants, forests, rivers, and oceans even though they are what the reports are all about, and even though four of the five reports acknowledge that people are encouraged to protect the natural world if they find intrinsic value within it. An expression like 'ecosystem structural elements such as biomass' (NCA: 1) is still referring to animals and plants, but they remain only as the faintest of traces, and certainly not as something of intrinsic value.

#### **4. Re-minding**

Re-minding is the opposite or counterpart of erasure – if erasure pushes 'something important' out of consciousness then re-minding is an attempt to bring it back into consciousness. Critical Discourse Studies can themselves be a form of re-minding. By critiquing the erasure of 'something important' in a particular discourse they draw attention to what is missing, and by detailing the linguistic ways that it has been erased they provide those who produce the discourse with ways to un-do the erasure. The following quotation comes from an animal products industry journal *Poultry Science* and is a response to critical discourse analysis of industry discourse:

Scholars (Stibbe, 2003; Linzey, 2006) have suggested that industry discourse characterizes animals in ways that objectify them and obscure morally relevant characteristics such as animal sentience....Although an analysis of discourse may seem odd and irrelevant to animal and poultry science, this type of examination is illuminating...It may be necessary to reconsider several aspects of animal production relative to ideology, discourse, and practice...a real ethic of care and respect for animals must be embodied not just in our practices but also in the internal and external discourse of animal agriculture. (Croney and Reynnells 2008)

In this case, the discourse analysis reminds the industry of the erasure of animals in its own discourse and prompts a response calling for changes not only in the language used by the industry but also in its practices.

Similarly, there has been a positive reaction to discourse analysis of ecological reports by conservationists and ecologists. A leading author of the Millennium Ecosystem Assessment, on receiving a critical discourse analysis of the assessment, commented that 'I very much appreciate this type of analysis and also think that the conclusions are quite correct...ideally in the future assessments might be able to provide a better balance' (in Stibbe 2012: 100). The balance in question is between making a case for politicians and finance ministers in the language they are most familiar with and representing the natural world vividly in ways that inspire people to value it for its own sake.

Another form of re-minding consists of seeking out alternative discourses which represent animals, plants and nature in vivid and direct ways with the minimum of erasure. The conservationist Wain (2007: 1) shows concern about the erasure of nature in conservation discourse, describing 'the invasion of misguided targets and measurement in conservation, and the associated vacuous management culture which can sever the link with real wildlife and real places.' Instead, he recommends a specific book which draws from an alternative discourse:

Cue another recent book which makes the real thing vivid—Jim Crumley's *Brother Nature*. Crumley takes us up-close to ospreys, kites, wild swans, beavers, and even bears. He reveals the savage beauty of nature in the landscapes of his beloved Highland edge. (Wain 2007: 1)

Recommending particular books could be considered a form of ecocriticism (Garrard 2011) – the branch of literature that provides ecological criticism of books and other cultural artefacts. Of more interest for a discourse analysis approach, however, is analysis of the wider discourses that specific books draw from, revealing the linguistic techniques which enable the discourse to represent animals, plants and the natural world vividly in ways that encourage people to care about them.

Another place to search for alternative discourses is traditional cultures from around the world. Stibbe (2007), for instance, analyses the discourse of nature haiku and describes a range of discursive devices which bring animals, plants and the natural world strongly into the consciousness of readers and encourage respect and consideration. The devices include avoidance of metaphor, giving plants and animals agentive roles, using the adverb 'also' to draw out identities between humans and animals, and using specific species names (e.g., sparrow) rather than abstractions. It is worth comparing probably the most famous haiku of all by Basho:

furuike ya / kawazu tobikomu / mizu no oto  
an old pond / a frog leaps in / sound of the water

with a made-up equivalent in environmental discourse:

an old freshwater habitat / a biotic component leaps in / sound of the aquatic resource

The first strongly brings nature into consciousness by using the highly imaginable basic level (frog), making the frog the agent of an active material process, and creating multisensorial images (both visual and audial). The second erases – pushing nature out of mind through metaphor and abstraction. That is not to say that economic textbooks or environmental reports should be written in haiku, rather that some of the patterns of linguistic features used in the discourse of haiku could be adapted and applied to create a better balance between abstraction and imaginable specifics.

One final way of 're-minding' is to go beyond critiquing existing discourses, and beyond searching for currently existing alternative discourses and instead creating new alternative discourses. David Abram's work attempts to do that. Abram is concerned the impact of written language in severing our connection with (i.e., erasing) the natural world. He states:

There can be no question of simply abandoning literacy, of turning away from all writing. Our task, rather, is that of taking up the written word, with all of its potency, and patiently, carefully, writing language back into the land. Our craft is that of releasing the budded, earthy intelligence of our words, freeing them to respond to the speech of the things themselves - to the green uttering-forth of leaves from the spring branches. (Abram 1996:273)

This writing carries out a dual purpose of calling for writing to reflect and evoke rather than erase the natural world, and demonstrating what one form of this kind of writing might look like.

## 5. Conclusion

Discourses are ultimately limited in their power to represent and construct the social world. The models at their heart are simplifications which leave out a whole universe of possibilities in their construction of a narrow part of social life. There are many discourses which focus on humans as they interact with other humans but entirely ignore the interaction of humans with other animals, plants and the physical environment. For some of those discourses, the narrow focus is appropriate and necessary, but for some it is dangerous. If economic discourses overlook the embedding of humans in the natural world then this is dangerous because certain forms of economic activity undermine the conditions necessary for the continuing survival of human societies (as well as their economies, of course). But there are deeper and more complex types and forms of erasure, which this chapter just began to explore. There is erasure when the natural world is mentioned in a discourse but in a distorted way which draws attention from its true nature, opening it up for exploitation. When animals, plants, forests and rivers are turned into machines, objects, biological resources or stocks of natural capital then this shuts down ethical considerations of the intrinsic value of what is being destroyed. Then there is erasure where a trace remains, a subtle hint, rather than a strong and vivid image – animals are still there in abstract terms like *biotic component* or *fauna*, and trees and plants are still there in *timber* and *flora*, but only in a faded form.

Re-minding is the task of bring the natural world back into consciousness – seeking out the key discourses where the erasure of the ecological embedding of humans is dangerous, and seeking to intervene in those discourses. This cannot rely just on conscientization - on making people aware that assumptions in dominant discourses are oppressing them and encouraging them to resist. Ecological issues are somewhat different to those typically analysed in Critical Discourse Studies because there is a time and space gap between oppressive acts (overconsumption, ecological destruction and waste) and the suffering caused to groups of humans. Also many of those harmed first from ecological destruction are not human at all but other animals and lifeforms without a voice. However, those responsible for destructive discourses *are* human, which means that there will be some with a sense of ethics who do not want to cause harm to other animals, forests, rivers and to humans in the future. A well evidenced argument for why it would be beneficial for a particular discourse to stop erasing the natural world, together with detailed linguistic description of how the erasure takes place in the discourse could help persuade and provide practical help to those who are in a position to change the discourse. Encouraging destructive discourses to erase the natural world a bit less is only a starting point, however.

Ideally the aim is to lead to greater discursive change where a wide range of discourses begin vividly representing the natural world in ways which inspire people to take actions which protect and preserve it.

Ecolinguistics, then, is an attempt to re-mind linguists that human language is embedded in human society, and that human societies are embedded in, and entirely dependent on, larger natural systems. Practically this leads to a range of lines of enquiry, the primary one being a form of Critical Discourse Studies that aims towards the goal of protecting the systems that support life. One useful tool within Critical Discourse Studies is the framework of *erasure* and *re-minding*, and this chapter has developed these concepts and applied them illustratively to a range of discourses from an ecolinguistic perspective. Overall, it is time to consider the natural world across the whole range of activities that we, as humans, take part in, because if the natural world is ignored, is erased from discourse, it will be physically erased, and so, ultimately, will we.

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