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E-waste. An Ecocritical Discourse Analysis

Abstract: The way in which environmental discourse is constructed in the media contributes to shape the attitudes that people have towards ecological issues, especially when it comes to pollution and climate change. The BBC plays a pivotal role in this process because of its global influence in the generation of consensus and common knowledge. E-waste, i.e. electronic waste, is one of the major environmental threats because of its toxic components and limited recycling possibilities. The paper aims at analysing the discursive strategies employed in fourteen articles about e-waste published on the BBC News website. Ecocritical Discourse Analysis is adopted in order to assess to which extent the BBC contributes to the maintenance of the status quo by framing the threat posed by e-waste as a resource for corporations to make new profits and create new job opportunities. By analysing linguistic features such as framing, metaphors, appraisal and facticity patterns, erasure, and salience, the paper demonstrates how e-waste is represented so as to make it functional to Western economic ideology rather than as a mainly environmental danger to the planet.

Keywords: *BBC news, ecocritical discourse analysis, ecolinguistics, environmental discourse, e-waste*

Introduction

In the 2008 Disney animated movie *Wall-e*, the earth has become a wasteland covered in trash and inhabited by robots in charge of the garbage disposal left behind by humans after the destruction of the ecosystem that supports human life on the planet. Robots, as such, are both waste and waste collectors, albeit with feelings – indeed the protagonist, Wall-e, falls in love with Eve, a 'female' robot. In the film, the catastrophic future of the planet and the fate of humanity are light-heartedly problematized, and the post-apocalyptic setting is only the background for a fairy tale. Nevertheless, *Wall-e* should be praised for awakening the ecocritical awareness of the viewer, and can be listed among the Hollywood blockbusters that draw inspiration from environmental issues.

Although fictionalised, the future envisaged in the film might become a reality, at least as far as the collection and disposal of waste is concerned. Indeed, our postmodern and globalised lives depend more and more on electronic devices that are 'doomed' to become e-waste, i.e. electronic waste, once their batteries are exhausted or their mechanisms broken. Even though when we buy them we are not used to considering them as waste, these items are very difficult to recycle and their components are potentially extremely harmful to the environment. Moreover, consumerism nurtures an endless desire

for new gadgets, which has prompted societies to favour new products over refurbished and repaired ones. Unlike general waste, old and unwanted electronic devices often end up in dumps thousands of miles away from the countries in which they have been sold. Consequently, e-waste is both a danger to the environment and a threat for geopolitical relations because its management – from production to disposal – strengthens the unbalanced polarisation between Western and non-Western countries.

The way in which e-waste is discursively represented in the media is responsible for the attitudes that people – and consumers – have towards the environment since the media "do not merely reflect the people, but dictate terms of reference to society".[1] Unlike some specialised publications, mainstream media frequently endorse the position of governments and corporations, especially when it comes to products that are deemed necessary for our everyday lives. The BBC plays a pivotal role in this process because of its global influence in the generation of consensus and common knowledge[2] and because international audiences rely on the information it provides to create their own 'vision' of the world. This paper aims at analysing the discursive strategies in a corpus of texts about e-waste published on the BBC News website. Ecocritical Discourse Analysis is adopted in order to assess to which extent BBC News contributes to the maintenance of the status quo by representing e-waste as an environmental problem that can be solved by means of new technologies and the creation of new job opportunities, which fails to unsettle Western economics discourse.

E-waste on the BBC News website

For this analysis, a corpus of fourteen articles has been retrieved by using the keyword "e-waste" in the search engine of the BBC News website. The articles cover a time span of four years, from January 2012 to January 2016.[3] The search produced five extra results, which have been excluded here either because the content was not relevant or because the entry was about a video or a picture gallery only. Five articles date back to 2012, three to 2013 and two to 2014, 2015, and 2016 respectively, which shows a regular – albeit infrequent – pattern in the coverage of the topic. While all of them deal with e-waste both as a threat to the environment and human health and as a recycling issue, some focus on a specific geographic area – in particular Ghana, Kenya, China, Taiwan, and India – or report on policies adopted by European and American governments, corporations, and non-profit organisations.

The articles have been published in four main sections, namely "Technology" (6 items), "Business" (3 items), "World" (3), and "Science and Environment" (2). One would probably expect that the hazardousness of e-

[1] Timothy Doyle and Aynsley John Kellow, *Environmental Politics and Policy Making in Australia* (South Melbourne: Macmillan Education Australia, 1995), 147.

[2] Richard J. Alexander, *Framing Discourse on the Environment: A Critical Discourse Approach* (London: Routledge, 2008), 109.

[3] All articles have been last accessed on 31 January 2016 at www.bbc.com/news. For space reasons, they will be hereafter mentioned by their title and date of publication within the text. When quotations from the articles follow the title, they are in inverted commas without any further reference. When the source is not stated in the text, references are made in the notes.

waste would be covered mainly in the Science and Environment section; on the contrary, the majority of the texts discuss it as a business-related or technological issue, which is quite telling about the perspective conveyed by BBC News. Furthermore, it is only in 2015 and 2016 that e-waste has appeared in the Business section. Technology, on the other hand, is the most pervasive category with two articles in 2012, two in 2013, and one in 2014 and 2015 respectively.

At first glance, hence, it is possible to state that, while the world has become more and more concerned with the possibly catastrophic consequences of pollution and the global rise of temperatures, BBC News has gradually constructed the discourse on e-waste as a profit-oriented enterprise. Moreover, when reporting on environmental issues, the BBC often aims at impartiality to subtly weaken or dismiss ecocritical voices that are not in line with mainstream discourse, while it overtly endorses economics discourse on growth and development:

> When climate change is reported on, the BBC has been accused of an 'over-diligent search for due impartiality' ... because of the tendency to bring climate change deniers in to 'balance' the voices of scientists; but when it comes to glowing reports of increases in economic growth or profits, there is no search for balance.[4]

[4] Arran Stibbe, *Ecolinguistics: Language, Ecology and the Stories We Live By* (London: Routledge, 2015), Kindle edition.

Also in the articles collected for this paper, environmental discourse is often framed so as to maintain the status quo of western economies and turn ecological 'problems' into profitable 'solutions'.

Methodology: Ecolinguistics and Ecocritical Discourse Analysis

Ecolinguistics critically focuses on the ways in which language is used to shape our relation to the environment and ecology, especially by means of linguistic structures that reinforce and justify human control over nature. Indeed, rather than considering human beings as part of the ecosystem, modernity has often represented nature as a resource. Since the natural world is socially constructed and named through language, "linguistic behaviour works as a powerful insidious vehicle in creating and maintaining hierarchies of power, perpetuating the devaluation and control of others".[5] According to Stibbe, ecolinguistics is about "critiquing forms of language that contribute to ecological destruction, and aiding in the search for new forms of language that inspire people to protect the natural world".[6] Such criticism aims at challenging the anthropocentrism of language[7] and promoting "an environmentally more correct biocentric" one.[8]

When it comes to environmental discourse in the media, Ecocritical Discourse Analysis successfully contributes to the study of the representations

[5] Mary Kahn, "The Passive Voice of Science: Language Abuse in the Wildlife Profession", in Alwin Fill and Peter Mühlhäusler, eds., *The Ecolinguistics Reader: Language, Ecology and Environment* (London: Continuum, 2001), 241.

[6] Stibbe, *Ecolinguistics*, Kindle edition.

[7] See, among others, Valentina Adami, "Culture, Language and Environmental Rights: The Anthropocentrism of English", *Polemos*, 7.2, (2013), 335-355; Matthias Jung, "Ecological Criticism of Language", trans. by Alwin Fill, in Fill and Mühlhäusler, eds., *The Ecolinguistics Reader*, 270-285.

[8] Fill and Mühlhäusler, "Introduction", in Fill and Mühlhäusler, eds., *The Ecolinguistics Reader*, 5. Such language is also called 'greenspeak'. For further references see Rom Harré, Jens Brockmeier and Peter Mühlhäusler, *Greenspeak: A Study of Environmental Discourse* (London: Sage, 1998).

[9] Arran Stibbe, "An Ecolinguistic Approach to Critical Discourse Studies", *Critical Discourse Studies*, 11.1 (2014), 117-128. Ecocritical Discourse Analysis is sometimes called Ecological Critical Discourse Analysis. See Andrew Goatly, "Green Grammar and Grammatical Metaphor, or Language and Myth of Power, or Metaphors We Die By", in Fill and Mühlhäusler, eds., *The Ecolinguistics Reader*, 203.

[10] Mühlhäusler, *Language of Environment, Environment of Language* (London: Battlebridge, 2003), 197.

of its participants, i.e. nature, human beings, corporations, etc., and their underlying power hierarchies.[9] Such approach, thus, allows the analyst to demonstrate how "[t]he environmental news that travels around the globe is not neutral but reflects existing ideology of a few powerful Western nations".[10] This paper mainly draws on the method outlined by Stibbe in *Ecolinguistics: Language, Ecology and the Stories We Live By* (2015), which builds on linguistic theories such as Critical Discourse Analysis, frame theory, appraisal theory, identity theory, fact construction, and theories of erasure and salience in order to unmask the ideologies embedded in environmental discourse and compare them to what he calls 'ecosophy', i.e. the ethical framework of scholars and ecolinguists.

Analysis and results

The analysis has been carried out according to the following categories: a) ideologies and discourse, b) frames, framing and metaphors; c) evaluation and appraisal patterns; e) identity; f) convictions and facticity patterns; g) erasure and salience.

Ideologies and discourse

[11] Stibbe, *Ecolinguistics*, Kindle edition.

Stibbe differentiates between destructive, ambivalent and beneficial discourses and points out that "[m]ainstream 'green' discourses are often ... *ambivalent discourses*, in that they contain some aspects which align with the analyst's ecosophy and some which oppose it".[11] This is also the case of the BBC News coverage of e-waste since the hazardousness of toxic electronic components is often discussed within a frame that does not question the economic system of the countries where such devices are bought. As a matter of fact, the economic advantages related to e-waste production and recycling are constantly paired with the ecological threat caused by the rising amount of disposed items.

[12] Ibid.

One of the features of ambivalent discourses is about "solutions to environmental problems in small activities such as recycling, which individuals can accomplish without reducing the overall consumption of society".[12] For example, in the article "Can technology help tackle the world's waste crisis?" by business reporter Padraig Belton (12/01/2016), WeRecycle manager Dr Jenna Jambeck is portrayed smiling in front of a dump. She "wants people to 'feel a moment of joy when recycling'" and praises the advantages of 'smart' bins that reward users – especially children – with a smiley face whenever an item is placed in the correct compartment. By quoting her authoritative voice, the journalist represents recycling as an amusing activity enjoyed by both children and adults, and implicitly places them on the same level. In so doing,

recycling becomes a sort of game in which people do not necessarily need to feel responsible for their consuming choices. Moreover, the reporter introduces the topic by stressing how "you are charged for your un-recycled waste", which triggers a discourse according to which recycling should be done to avoid paying extra fees rather than for purely ecological reasons. In other words, the text places the benefits of recycling on the individual rather than the social level, and does not question the production of gadgets that will soon turn into e-waste.

In the article "Taiwan tests recycling's limits with bus stops out of bottles" by technology reporter Katia Moskvitch (01/03/2013), consumers' attitudes are even justified as if they were a harmless habit: "people here [Taiwan] love gadgets, and love to change them regularly". By reporting that "'[the recycling factory] will rise from trash' says the smiling young man", the journalist presents recycling in positive and reassuring terms, while ethical reasons are mostly avoided: "Lack of space and raw materials compels Taiwanese companies to recycle and make the world a bit greener". Also in this case, environment-friendly measures are taken only because of economic reasons.

Another feature of ambivalent discourse is that of hiding "agency to disguise blame for ecological destruction".[13] For example, the article "Toxic waste 'major global threat'" by Siva Parameswaran from BBC Tamil Service (20/11/2013) opens with the following sentence: "More than 200 million people around the world are at risk of exposure to toxic waste, a reporter has concluded." Here, the agent, i.e. the producers of such toxic waste, is omitted, while potential casualties are given a predominant spot by syntactically placing them as the subject of the clause. Later on, the same pattern is repeated by focusing on environmental destruction: "In some places the damage caused to the land is so huge that it cannot be reversed, so the only option is to move people away and seal the contamination". Again, no agency is mentioned, and instead of questioning the original cause of such catastrophe, the 'sink metaphor', i.e. the disposal of hazardous materials in a sort of safe sink,[14] is offered as a solution.

Building on the theory of ideology as a form of social cognition,[15] Stibbe defines it as a set of beliefs that "exist in the minds of individual people, but are also shared among a group".[16] The ambivalent discourse in the BBC News articles conveys a 'story' according to which globalisation and western economies are seldom overtly identified as the cause of e-waste production and environmental destruction. Quite on the contrary, e-waste is treated as an economic resource for corporations and governments, while environmental protection is mainly presented as an individual choice based on the ethical values of single citizens and consumers. The texts gloss on the fact that such choices are nevertheless conditioned by overarching social and economic

[13] Stibbe, *Ecolinguistics*, Kindle edition.

[14] Mühlhäusler, *Language of Environment*, 135.

[15] See, among others, Teun van Dijk, *Discourse and Knowledge: A Sociocognitive Approach* (Cambridge: Cambridge U. P., 2014).

[16] Stibbe, *Ecolinguistics*, Kindle edition.

structures, with the possible exceptions of the articles "Where many of our electronic goods go to die" (08/01/2016), in which journalist Edwin Lane advocates the engagement of companies and governments along with a "more ethically-minded" consumer and human behaviour, and "Computer Aid demands greater e-waste accountability" (13/03/2012), in which Dave Lee concludes by quoting Gladys Muhunyo, Computer Aid's director of Africa programmes, who claims that "more still needed to be done to educate the public about the issue at the time they were buying a new device" and that "[t]he people who produce the gadgets need to make gadgets that are durable".

Frames, framing and metaphors

According to Stibbe, frames are "mental structures through which we understand reality"[17] which become framings whenever an area of life is conceptualised by means of a cluster of linguistic items from another area of life not directly associated with it. When we say that nature conservation is a commercial transaction, for example, we are framing the target domain, i.e. nature conservation, through a source frame triggered by words belonging to economics discourse. Being commonly used in everyday language, framings are culture-bound and easily identified by the speaker. On the other hand, reframing "is the act of framing a concept in a way that is different from its typical framing in a culture".[18] Describing climate change as a security problem, for instance, is a form of reframing because the environment is not commonly linked to security. An example of this type of reframing is contained in the article "US to build $120m rare earth research institute" by technology reporter Katia Moskvitch (11/01/2013), where a project to mine rare earths in several areas of the United States is discussed. Although the US Department of Energy is aware that "there are no really good environmentally friendly methods available to mine and recycle rare earths", the scheme has been founded in order "to reduce ... dependency on China" and "avoid a supply shortage that would threaten our clean energy industry as well as our security interests". Not only is security mentioned in relation to the environment, but a potentially dangerous method is put forward to foster the production of low-carbon resources, which – as stated by Daniel Danielson, the US assistant secretary for renewable energy – require earths to be manufactured. The oddity of such operation is not questioned in the text; on the contrary, the security issue is strengthened by the claim that "rare earth elements are also used for military applications". The article ambiguously omits the percentage of rare earths needed for such applications, and the reader is not provided with a straightforward explanation of the real reasons behind the project.

[17] Ibid.

[18] Ibid.

Environmental discourse is characterised by several frames, among which the Moral Order Frame and the Problem Frame are particularly frequent. In the former, non-western countries are portrayed as children that can reach adulthood only by following the 'lesson' of western societies. In this frame, 'developed' and 'developing' are commonly used to label a dichotomy in which western values are considered morally superior. Such frame is so pervasive that it has been rooted in hegemonic discourses and taken for granted to justify Eurocentric and neo-imperialistic ideologies:

> The word 'development' and its derivatives are used without much thought of what they really mean. In particular, the distinction between 'developed' countries and 'developing' countries carries an imperialistic insinuation that sensible (or inevitable) evolution is for developing countries to become like developed countries. This insinuation is particularly dangerous because it has been the unthinking propaganda of both the developed countries and the developing countries.[19]

The data present a few examples of the Moral Order Frame. In "[e]ven in the developing countries, they're after the smartphone"[20] and "the developing world grows more industrial and urban",[21] for instance, industrialisation, urbanisation and the consumption of electronic devices are implicitly considered as the goal to be achieved by 'developing' countries in order to 'grow up'.

Furthermore, the data show that BBC News tends to frame e-waste as problematic by means of trigger words such as 'problem', 'solution, 'crisis', 'help', etc. Since the Problem Frame entails a solution which nullifies the problem, Stibbe points out that "[i]f climate change can be 'solved' then there is no need to create resilient societies that can adapt to the harmful impacts that climate change has already started having".[22] In other words, the real causes of the problem are not exposed since a solution that will not alter the status quo can always be found. Hence, instead of demanding a change in western consuming habits, this frame reassures the reader by focusing on a positive solution.

BBC News often describes e-waste as a problem, e.g. in "an enormous and growing problem"[23] and "calls for greater efforts to be made to control the problem".[24] Also the hazardousness of toxic fumes leaching in the soil and spreading in the air is recognised: "[i]n some places the damage caused to the land is so huge that it cannot be reversed" (ibid.) and "where workers can become ill from the toxins, such as lead, mercury, and arsenic".[25] However, the articles often focus on a solution that relies on new technologies in order to turn the problem into a business opportunity, and frames nature as part of an economics discourse which "fail[s] to incorporate important moral and ethical concerns that humans have for nature".[26] When BBC News titles "Can

[19] Beth Schultz, "Language and the Natural Environment", in Fill and Mühlhäusler, eds., *The Ecolinguistics Reader*, 110.

[20] Jonathan Keane, "Bin diving: The start-ups that want your electronic junk" (17/04/2015), http://www.bbc.com/news/business-32339196.

[21] Padraig Belton, "Can technology help tackle the world's waste crisis?" (12/01/2016), http://www.bbc.com/news/business-35279854.

[22] Stibbe, *Ecolinguistics*, Kindle edition.

[23] Dave Lee, "Computer Aid demands greater e-waste accountability" (13/03/2012), http://www.bbc.com/news/technology-17354860.

[24] Siva Parameswaran, "Toxic waste 'major global threat'" (20/11/2013), http://www.bbc.com/news/science-environment-24994209.

[25] Belton, "Can technology".

[26] Stibbe, *Ecolinguistics*, Kindle edition.

technology help tackle the world's waste crisis?", the problem – technology – becomes the solution, i.e. new technologies: "[b]ut could technology, which helped create much of this waste, also help deal with it?". Business reporter Padraig Belton oddly opts for the verb 'to help' to describe the problem. Instead of choosing a neutral verb, e.g. 'to cause', or a phrase like 'which is responsible for', Belton creates a parallelism between problem and solution in which technology is the helpful and harmless answer to the risks humanity will probably have to face. Only at the end does the reporter criticise the production systems: "For that we'll need a fundamental rethink about the way we manufacture things and the material we use". However, due to its position in the text, the short statement is discursively presented as a weaker option.

The article "Old laptop batteries could power slums, IBM says" by Dave Lee (05/12/2014) describes e-waste as an opportunity to alleviate poverty as it discusses how discarded electronic devices can be turned into power suppliers in some Indian urban areas. The technology reporter introduces e-waste as "a major problem, particularly in the developing world, where the majority of the West's unwanted technology ends up", and disguises it as an economic opportunity with humanitarian benefits for the poor: "UrJar [a new device] has the potential to channel e-waste towards the alleviation of energy poverty, thus simultaneously providing a sustainable solution for both problems". The article conveys the idea that the main goal of IBM researchers is "to help the approximately 400 million people in India who are off grid", although it is quite clear that for the American corporation the real aim is not poverty reduction, but cheap e-waste disposal strategies.

Also in this case, the problem becomes the solution since it is subtly suggested that the more e-waste is produced, the more energy poverty is alleviated. In other words, the economic system based on the production of potentially dangerous electronic devices is not criticised, but, on the contrary, already entails the solution to the problems it has caused. As a matter of fact, the option of renewable resources to power Indian slums is dismissed on the basis of economic reasons: "Options such as solar power are considerably more expensive and logistically more cumbersome at the moment". Nowhere is stated that such options would guarantee India's energy independence and force western corporations to recycle their e-waste elsewhere.

The reporter concludes by quoting Keith Sonnet, chief executive of Computer Aid, a UK-based charity organisation: "Refurbishing has definitely a more positive impact on the environment and we should encourage more companies to adopt this practice". Whereas there is no doubt that refurbishing is better than dumping, it is not clear what "a more positive impact on the environment" exactly means. Indeed, the fact that discarded batteries are re-used to produce power may positively affect a percentage of Indian population,

but the actual impact of these devices on the environment would not be erased. By disguising the interests of IT companies as those of the environment, this type of discourse further disconnects people from nature because it justifies a system in which the environment is seen as a resource separate from human beings. Helping poor people does not equal helping the environment, and the parallelism between the two subtly reinforces their separation.

Environmental discourse often relies on metaphors, which are a specific type of framing based on a conceptual distance from the target domain. In the data, e-waste is described as a massive flow of water in the idiomatic expression "stem the tide"[27] and as a "motley crew of toxins".[28] In both cases, the rising amount of e-waste is portrayed as something unpredictable and difficult to control. However, since tidal power is a renewable source of energy, the first metaphor is ambivalent since it evokes the catastrophic force of nature along with the possibility of exploiting it. Similarly, the phrase 'motley crew' reminds of stories of hordes of pirates and barbarians who can eventually be defeated and controlled by (Western) civilisation.

Using the frame of e-waste as a resource, the authorless article "Microwaves and dishwashers dominate e-waste mountains" (19/04/2015) contains the metaphor of 'e-waste as a mine': "[w]orldwide, e-waste constitutes a valuable 'urban mine', a large potential reservoir of recyclable materials". Such metaphor is in line with the idea of representing e-waste as business rather than a danger. Elsewhere, electronic goods are metaphorically compared to organisms that after being exhausted "go to die" in African and Asian dumps.[29] Although personification is a common figure of speech, in this case the metaphor of 'electronic devices as organisms' strengthens the polarisation between the places in which these goods are consumed and those in which they are discarded since the 'afterlife' of e-waste becomes an elsewhere that apparently does not affect western societies.

In "Computer Aid demands greater e-waste accountability" by Dave Lee (13/03/2012), corporations are compared to citizens: "more could be done to ensure that technology companies were 'good corporate citizens'". The sentence employs the corporate citizenship metaphor, which is often found in business discourse.[30] From an Ecocritical Discourse Analysis point of view, it can be considered as a variant of the 'corporation is a person' metaphor, in which companies are described as the Senser participant in charge of mental processes like choosing, considering, wishing, etc. Such metaphor relies on metonymy and hyponymy since the term 'corporation' substitutes its owner, and firms and people are placed on the same level as hyponyms of a general term. Such metaphorical device, however, is seldom environment-oriented because "the discourse of neoclassical economics not only sets up the corporation as a person, but as a particular kind of person: one self-centredly

[27] Belton, "Can technology".

[28] Keane, "Bin diving".

[29] Lane, "Where many of our electronic goods", http://www.bbc.com/news/business-35244018.

[30] See Jeremy Moon, Andrew Crane and Dirk Matten, "Can Corporations Be Citizens? Corporate Citizenship as a Metaphor for Business Participation in Society", *Business Ethics Quarterly*, 15.3 (2005), 429-453.

[31] Stibbe, *Ecolinguistics*, Kindle edition.

seeking to push up profits, sales or growth whatever the impact on the environment".[31]

Moreover, this metaphor is problematic because it contributes to conceal responsibility. Hence, the phrase "good corporate citizens" is quite ambivalent because despite the efforts made by companies to reduce environmental damage, their primary goal is still making profits. Such ambiguity is subtly constructed in the article, which extensively quotes Tom Davis, Computer Aid's chief executive, and Anja French, its director of communications. Indeed, while Davis thinks that "the richest companies in the world, who profit tremendously from IT, have an ultimate responsibility to deal with the consequences of all the things they've brought to us", the reporter cites French's words about Nepal refusing donations of electronic devices due to their potentially dangerous components: "If all countries were to do that they would cut themselves off from receiving technology from other countries, which would be a shame". By including the two quotations, the author highlights the fact that IT companies should be deemed responsible for e-waste production, but at the very same time does not question the idea that electronic devices and IT accessibility could actually be part of the problem. Quite on the contrary, the fact that Nepal declined the offer is described as a shame, which dismisses its concerns about the risks of refurbished devices.

Evaluations and Appraisal Patterns

[32] See, among others, M.A.K. Halliday, "New Ways of Meaning: The Challenge to Applied Linguistics" in Fill and Mühlhäusler, eds., *The Ecolinguistics Reader*, 175-202; James R. Martin and Peter R.R. White, *The Language of Evaluation: Appraisal in English* (London: Palgrave, 2005).

Building on appraisal theory,[32] Ecocritical Discourse Analysis focuses on the positive and negative ways in which something is linguistically described in a text. Also in environmental discourse, marked words, which are usually negative, may lead to positive appraisals. One of the most common appraisal patterns is that of economic growth being good, which can be found in the BBC News coverage of e-waste as well. In the texts, however, the appraising items 'rise' and 'grow', which are often positive, trigger negative appraisals when associated with e-waste. As a matter of fact, the clauses "as the developing world grows more industrial and urban, and the amount of waste we produce continues to rise"[33] present a positive appraisal pattern as regards the economic development of non-western countries, and a negative one when it refers to e-waste. Also the verb 'to reduce' tends to be associated with negative appraisals; however, when it collocates with environment-threatening items, it triggers positive evaluations: "[r]educe potential damage to natural infrastructure by reducing water, land, and air pollution"[34] and "to reduce energy consumption and harm to the environment".[35]

[33] Belton, "Can technology".

[34] Richard Black, "Rio revisited: Glass half-full?" (24/07/2012), http://www.bbc.com/news/science-environment-18967011.

[35] Anon., "Ghana bans second-hand fridges" (31/12/2012), http://www.bbc.com/news/world-africa-20877804.

Appraisal patterns are often based on pairs of contrasting words such as big and small, new and old, up and down, etc., in which the first term usually

expresses positive appraisals. This is particularly true in economics discourse, where, for instance, "[n]ew technologies"[36] are positively described, while "old handsets and PCs"[37] are not. When it comes to solutions to the e-waste problem, moreover, the amount of money to invest plays a fundamental role; hence, cheap is better than expensive, as the following example shows: "using discarded batteries is cheaper than existing power options" in opposition to "[o]ptions such as solar power are considerably more expensive".[38] Here, the appraisal pattern reinforces the discourse according to which economic factors come first in the decision-making process about environmental protection.

In the BBC News articles, the prosodic pattern of appraisal choices, i.e. the tone established by appraisal patterns across a text, contributes to the polarisation between e-waste production and recycling, in which the former is bad, while the latter is good. BBC News discursively constructs e-waste as something bad that can be turned into something profitable thanks to technology, while recycling is always positively appraised by representing it as something enjoyable or a way to avoid extra taxes. Moreover, for industries and governments, it means new profits and energy-independence respectively. However, recycling is never appraised as something good for the environment per se, but only because it has positive consequences on individuals or the economy. Such appraisal choices are in line with a tendency to juxtapose human beings to nature as if the former were separate from the latter. The appraisal patterns in environmental discourse, thus, can be considered as a form of 'doublespeak', i.e. "the obfuscation of language in order to deny or shift responsibility".[39] Put simply, if recycling e-waste is good, the production of e-waste cannot be considered as bad.

Identities

Ecocritical Discourse Analysis focuses on how identity is represented in relation to the environment in labels and linguistic structures which can also be destructive, i.e. in opposition to the ecosystem. Building on the study of pronouns in Critical Discourse Analysis, especially the us/them dichotomy, ecolinguistics further explores how pronouns are employed to create in-group and out-group ecological identities. The pronoun 'we', in particular, establishes a bond between writer and reader and strongly influences the self-perception of the latter as a member of the community the former is speaking to/from.

In the data, 'we' is always used to refer either to humanity in general or to a target reader who is assumed to share a western standpoint. In most cases, the two overlap resulting in a westernisation of humankind. Indeed, the BBC News readership is part of a globalised world in which, especially as far as economics discourse is concerned, common knowledge is shaped and sustained by Western

[36] Belton, "Can technology".

[37] Moskvitch, "US to build".

[38] Dave Lee, "Old laptop batteries could power slums, IBM says" (05/12/2014), http://www.bbc.com/news/technology-30345221.

[39] Kahn, "The Passive Voice", 243. For further references to doublespeak see William Lutz, *Doublespeak* (New York: Harper and Row, 1989).

values. Whereas in the sentence "[w]e are in danger of turning that fictional future [a post-apocalyptic world covered in waste] into a reality",[40] the pronoun 'we' includes every human being, in "[b]ut as the developing world grows more industrial and urban, and the amount of waste we produce continues to rise" (ibid.), 'we' refers exclusively to the 'developed' world. The same is to be found when the possessive adjective 'our' or the object pronoun 'us' are employed, e.g. "[w]here many of our electronic goods go to die"[41] and "[t]he success of grassroots events like this highlights the fact that many of us are still unsure what to do with our old devices".[42] Furthermore, the implied opposition between the West and the rest of the world is made explicit in the sentence "[e]ven in the developing countries, they're after the smartphones" (ibid). Not only are these countries defined by means of the Moral Order Frame, but Western models are considered as neutral and desirable. The term 'even', moreover, reinforces the binary opposition based on the superior/inferior dichotomy and seems to mock non-Western countries in their pursuit of gadgets that symbolise western lifestyle.

The lack of an inclusive ecological identity in the texts is strengthened by the quite frequent use of functionalisation, which is a strategy where "social actors are referred to in terms of an activity".[43] In a world dominated by global economy, this results in a discourse where people are seen as consumers, buyers, workers, etc. Indeed, the data show several examples of functionalisation with a predominant occurrence of 'workers' and 'consumers', while the agents, i.e. manufacturers and producers, are seldom mentioned. Furthermore, the potential victims of toxic components in Ghana and China – those who live near or on the dumps where e-waste is disposed – are often labelled as 'workers' since the recycling industry employs them in spite of the lack of safety measures. Functionalisation here clashes with an ecological representation – and perception – of identity, and functions within the texts as a means to reinforce a profit-oriented ideology.

Convictions and Facticity Patterns

Facticity influences the reader's convictions about whether a description in a text is true, false, certain or uncertain by means of facticity patterns, i.e. clusters of linguistic devices such as modals, quantifiers, hedges, presuppositions, calls to expert authority, and technical terms. From an Ecocritical Discourse Analysis point of view, facticity is about whether environmental discourses are codified in a text as if they were neutral and independent from the author, i.e. true enough to become common knowledge or hegemonic discourse.

In its coverage of e-waste, BBC News often relies on calls to expert authority to present the content of its articles as true. This is even more so

[40] Belton, "Can technology".

[41] Lane, "Where many of our electronic goods".

[42] Keane, "Bin diving".

[43] Theo van Leeuwen, *Discourse and Practice* (Oxford: Oxford U. P., 2008), 42.

especially in the texts published in 2012 and 2013, in which several authoritative voices are quoted, e.g. "Anja French, the charity's director of communications, told the BBC",[44] "says an investigative US writer based in Shanghai",[45] "Mr Minter says" (ibid.), "Mr Ofosu-Ahenkora says",[46] "Oxfam UK chief Barbara Stocking, for example, saying",[47] "said David Danielson, the US assistant secretary for renewable energy",[48] "said Prof Ekberg" (ibid.). As far as modals are concerned, when it comes to the solutions to the e-waste problem, the data show a lower degree of certainty due to a predominant use of 'could' and 'should, which, however, does not weaken the solidity of the overall discourse. Facticity, moreover, is strengthened by the frequent use of technical terms taken from scientific reports and popularised in the texts. They are most commonly employed in the descriptions of new recycling technologies and the effects of toxins on people and nature. In one case the text is followed by a glossary of rare earths.

Erasure and Salience

Erasure focuses on participants who are "suppressed, backgrounded, excluded or erased from texts".[49] Ecocritical Discourse Analysis is particularly concerned with the erasure of nature and the suppression of people as agents in the manipulation and exploitation of the environment. Whereas e-waste has a central position in the texts, workers in African and Asian dumps are never in the foreground. As a matter of fact, backgrounding is a form of erasure in which participants, especially some social groups, are marginalised by mentioning them in a second moment. Among the linguistic devices through which erasure is achieved, transitivity and passivation are employed also by BBC News to refer to workers: "where workers are sometimes exposed",[50] "to protect workers",[51] "slowly poisoning the workers",[52] "where workers can become ill".[53] Taking into account that in any process described in a clause there are at least two participants, i.e. the actor and the affected, in these examples, workers are always the affected, being either the subject of passive clauses or the object of transitive verbs.

Stibbe defines salience as "a story in people's mind that an area of life is important or worthy of attention".[54] Among the linguistic features of salience, impersonalisation, individualisation and homogenisation are particularly relevant in this analysis since the way in which participants are portrayed in the texts contributes to their visibility as human beings. When it comes to the process of e-waste production and disposal, impersonalisation is often used, which leads to the dehumanisation of social actors and, in the case of manufacturers, the concealment of their responsibility. On the other hand, individualisation occurs especially with authoritative voices that are quoted to

[44] Lee, "Computer Aid demands".

[45] Katia Moskvitch, "Unused e-waste discarded in China raises questions" (20/04/2012).

[46] Anon. "Ghana bans".

[47] Black, "Rio revisited".

[48] Moskvitch, "US to build".

[49] Stibbe, *Ecolinguistics*, Kindle edition.

[50] Anon., "Electronic waste: EU adopts new WEEE law" (19/01/2012).

[51] Keane, "Bin diving".

[52] Lane, "Where many of our electronic goods".

[53] Belton, "Can technology".

[54] Stibbe, *Ecolinguistics*, Kindle edition.

support the discourse constructed in the texts. Chief executives, scientists, experts, non-profit organisations, etc. are often called by name and their social role is always recognised as salient. On the contrary, the communities that are directly affected by e-waste, especially workers in e-waste dumps, are seldom named and fall into a homogenous category of silenced people, with the exception of David Nderitu, a Kenyan boy who makes jewellery out of computer circuit boards.[55] Homogenisation, as a matter of fact, "reduces the salience of the individual as a unique being, and instead represents them as one of a set of equivalents".[56] By avoiding to identify them by their names, these people are dehumanised and marginalised within the very same discourse on the e-waste problem that deeply affects their lives. Their participation is erased and it is not a mistake that they are placed in the background of the text, since "salience can be built up by foregrounding participants in clauses" (ibid.). The data show how salience is preferably given to participants that belong to the western world or that adopt and promote its models in non-Western countries. As such, the discourse codified by BBC Media is still predominantly Eurocentric.

Conclusions

The data analysed in this paper show how environmental discourse on e-waste is constructed by BBC News as an economic and technological issue by framing the threat it poses as a resource for corporations to make new profits and create new job opportunities for the communities living near e-waste dumps in some African and Asian regions. By analysing linguistic features such as framing, metaphors, appraisal and facticity patterns, erasure, and salience, it has been demonstrated that BBC News does not omit the hazardousness of disposed electronic devices, but makes it functional to Western economic ideology.

From a diachronic point of view, moreover, the data prove how there has been a shift from articles that focus on specific 'stories' by extensively quoting several authoritative voices to texts that ambivalently present e-waste as a general problem with a positive solution for global economies and non-western populations. Similarly, the frequent use of the pronoun 'we' in the 2015 and 2016 articles may be interpreted as a tendency towards a more radical polarisation, which is anything but a good sign for the future of the ecosystem, i.e. nature and human beings as connected parts of the same environment.

[55] Anon., "Kenya: Boy lifted out of poverty by e-waste jewellery" (30/01/2014).

[56] Ibid.

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