

LEARNING AND UNLEARNING SUSTAINABILITY**Words That Create and Words That Inhibit a Sustainable Mindset.****Raluca IGREȚ¹****Abstract:**

There is an emerging debate and study on how language use in policy and public discourse contribute to the view of being apart and above nature, which further leads to unconscious behaviors towards life-providing ecosystems and hinder sustainability efforts. The challenge is to use language in a manner that can trigger a conscious understanding of the human–nature interrelationship into policy discourse. The paper offers an overview of literature at the crossroads of sustainability policy, sustainability communication, cognitive sciences and linguistics. It sets a theoretical and conceptual ground for policy analysis at the level of language and offers guidelines for linguistic and discourse analysis of policy texts. Terms potentially inhibiting effective communication and conscious delivery of a sustainable mindset in policy discourse are exemplified following sustainability policy discourses.

Points for Practitioners:

The paper grounds a multidisciplinary theoretical framework for language analysis in policy research by highlighting text as valuable data. It aims to contribute to the creation of a linguistic database of sustainability policy lexicons to build dictionaries for policy analytics projects and raise an overall consciousness of the impact language has on policy perceptions and practices.

Keywords:

sustainability language; linguistic analysis; policy discourse; conscious policy language.

¹ PhD student @ Doctoral School of Administration and Public Policies, Babeş-Bolyai University (UBB), Cluj-Napoca, Romania, e-mail: ralucaigret@fspac.ro

1. Introduction

Since the Brundtland Report of the World Commission on Environment and Development (WCED) was released in 1987 introducing the concept of sustainable development (SD) and a common vision for the future, sustainability has become a top policy goal and a buzzword within various public discourses. For the past three decades, whole new sets of language and terms have gradually entered the public vocabulary. Nowadays, the concept of sustainability stands as a powerful entity and a driving force to actions shaping recent history and future layouts, in all aspects of human activity.

To create and foster sustainable plans or strategies, communication and language use play a vital role in how these are understood, integrated, implemented, and multiplied within our social and mental layers. In planning and developing sustainable strategies, it is necessary for people to express themselves internally and externally by using transparent communication: simple, direct, and precise (Genç, 2017), with integrity towards life. In short —using language consciously, one that enables a relation of coherence between what we speak, think and convert into action. A language that is equally accessible to policy makers and citizen alike.

After fails on respecting promises and policy goals of the Kyoto-Protocol (1997) or more recently, The Paris Agreement (2015), systematic reviews of the literature generate the understanding that the failure to follow the sustainability agenda is due to economic, political and communication factors (Howes et al, 2017). The paper will address the later by looking at how sustainability is being communicated, using language as the core research arena. An overview of how the language we speak can influence the way we perceive the world and our behavior on the sustainability path is explored from the perspectives of policymaking, communication sciences, cognitive science and linguistics. A narrower focus is given to sustainability-related language used in policy documents and debriefings, with examples of terms potentially inhibiting effective communication and conscious delivery of meaning honoring life in policy discourse.

2. Context: Learning and Unlearning Sustainability

The worrying predictions for the future of mankind before the end of the last Millennium, the sensations for a welcomed change, the awareness on the impacts of economic development, rapid urbanization, and human activities upon nature and social environments—have all made academia, authorities, private and public spheres to embrace sustainability and SD. It soon became the ‘*must have*’ theoretical basis, language, goal and framework to be integrated in the practices and discourses of all international organizations, national governments, private and third sectors. This optimistic wave was much needed considering the increasing concerns over the effects human activity has on the world by engaging and promoting economic development at the expense of life (Ward & Dubos, 1972 in Keiner, 2006), challenging scenarios of an inhabitable Earth.

It was only towards the end of the 1980s, beginning of the 1990s, that sustainability and SD were formally legitimized within the policy discourse starting with the publication of ‘*Our Common Future*’ known as Brundtland Report (1987) and gaining momentum within the Rio UN Conference on Environment and Development (UNCED) in 1992.

However, within the academia world, sustainability was understood as an existing idea since the beginning of the modern environmental movement in the 1960s (Elkington & Trisoglio, 1996) and popularized by the Club of Rome’s report on “*The Limits of Growth*” (Meadows et al, 1972). These periods are still part of the industrial society, while the origins of sustainability ideas lie within the traditional societies and indigenous communities whom, for thousands of years, based their lives on sustainability principles claimed nowadays in contemporary discussions by policy and decision-makers. Is it possible to reach a consensus without a guiding concept, without creating a strict discipline or one that is up for debate? Is sustainability creating barriers of understanding by becoming a discipline with strict rules, measures, indexes and indicators? Or rather, the language used determines

misunderstanding, confusion, misleads our actions and limits our imagination? These are the birthing research questions for looking at sustainability policies from a language perspective.

Sustainability and SD have made substantial progress in being integrated and adopted in the mainstream decision-making by main international organizations like United Nations (e.g. 1972, 1987, 1992, 1997, 2002, 2012, 2015), European Union (e.g. A sustainable Europe for a better World, 2001) or World Trade Organization's founding background (e.g. Marrakesh Agreement, 1994). Current literature still claims that these concepts, their strategies, directions, and efforts lack a common understanding and serve us rather wishful thinking (Guerra & Schmidt, 2016). The wide perception on sustainability is of something having to do with the environment but from economic considerations (Atkinson, 2000). Although SD has been formally conceptualized as a holistic approach following three dimensions—environmental, economic and social, also known as the '*triple bottom line*' (Elington, 1994)—many critiques point to its heavy economic focus (Hove, 2004; Karoly, 2011; Smythe, 2014; Parker, 2014). The accent put on economic growth in discourses of SD tells a story about economic growth as being a core value to our society (Stibbe, 2015). Thus, the environmental concerns are rather seen as economic externalities that need to be integrated further within the bigger picture of economic development. This rings incompatible with the laying grounds of the sustainability agenda (i.e. limits of growth), while increasing social disparities and nature destructions are incompatible with sustainable living.

Concerns over changes in climate patterns have intensified, as societies seem to have made little progress in becoming sustainable or eager to reach a consensus regarding the sustainability '*project*' or SD agenda. These concerns can be understood under the increasing informed and perceived crises in the natural world and built-environment alike. Criticizing literature raises red flags on the terms still being misunderstood, its appeal being inflated, overused, misused and abused (Karoly, 2011).

Even if continuing differences persist between how industries, environmentalists, civil society groups and governments understand sustainability (Eden, 1994), the agenda has entered international law, strategies, indicators and implementation activities, although aware of the lack of consensus over its meaning and common direction (Elkington & Trisoglio, 1996). The ambiguity of the terms '*sustainability*' and '*SD*' make it interpretable for various actors according to their different interests (Fritsch, Schmidheiny & Seifritz, 1994). The question that Keiner addresses regarding the future of sustainability is "*if SD truly represents the contemporary 'general interest?'*" (Keiner, 2006, p. 2).

More recent literature tries to look beyond sustainability and comes with alternatives that challenge entire mindsets, calling for an upgrade to complex thinking and systemic causation or non-linear thinking (Espinosa & Walker, 2011; Wells, 2013; Lakoff, 2014). As feelings of change coming were felt before the beginning of the last Millennium, similar feelings of more change reveal at the horizon. *Paradigmatic shifts* (e.g. Carson, Burns & Calvo, 2009), *Gaia theory and interconnectedness* (Lovelock, 2000; Harding, 2010) *transformational change* (e.g. Wuppertal Institute, 2015), *regenerative development* (e.g. Gibbons et al, 2018), *general systems theory* (e.g. Stichweh, 2011, Luhman, 2013;), *complex networks* (e.g. Estrada, 2011; Newman, 2010; Massip-Bonet & Bastradas-Boada, 2013), *mindfulness* (Raglan & Shulkin, 2014; Karelaia & Reb, 2015; Barbaro & Pickett, 2016, Wasler & Brink, 2020), *quantum thinking* (Favre et al, 2016; Dyck & Greidanus, 2016), *fractal thinking* (Kitzbichler et al, 2009)—are all examples of ideas challenging linear thinking, which is still much present in sustainability discourses through direct causation arguments, yearly goals and thresholds (Lakoff, 2004). But rather than embracing a new concept, we can pause engaging into a new set of vocabulary. Instead, we have the opportunity to rethink, relearn, and take a conscious look at how we may have taken concepts for granted and how the language we already use activate, program, inhibit or alter values and beliefs that determine our daily behaviors, actions and judgments in understanding life and sustainable living on this magnificent planet.

3. Sustainability Discourses

Sustainability is meant to wrap all aspects of life (i.e. holistic view) and is thus evocative in all facets of social realities, regardless of its higher or lower aspects of manifestation. The current general discourse is one we all seem to experiment: "*rapid change, deep disturbance, having little idea in*

which direction we are moving, no reliable roadmap to follow, little belief in progress, and much anxiety about the dangers that lie ahead” (Cowley, 2003 apud Keiner, 2006, p. 4). However, could this be just a narrative that has gained greater attention than others? Could we have gotten used to and thus internalized a language of crisis, danger, urgency, apathy, guilt, fear, doom and overwhelm? What other narratives are circulating and how are these formed? Can we create policies for the future if the most embraced narrative is one of a grim perspective?

A profound change of mindsets is much needed in order to make way for policies for the future. As our mindsets are directly linked to our thoughts and our thoughts to language, the words we use may have a greater power than we tend to believe. Language and power are two stances frequently put together, popular in the works of sociologist Pierre Bourdieu who is stressing that “*every linguistic interaction, however personal or insignificant it may seem, bears the traces of the social structure that it both expresses and helps to reproduce*” (Bourdieu, 1991, p.7). He thus underlines that language builds our realities though the meaning attached to each word we use, which together convey a certain narrative, the dominant meaning structuring our daily lives and strengthening it with each use.

McNalle and Basile (2013) push forward the need for a new narrative for sustainability, one grounded in how humans make decisions and how conscious they are of the world they live in. They emphasize how these decisions are affected by the narratives developed by opinion leaders and public discourses. In asking why the magnitude of global warming and its potential for undermining life support systems does not mobilize to decisive action, McNalle and Basile (2013) identify some possible reasons, among which interesting to mention for the focus of this paper are:

- (i) We are telling a story that doesn't make sense to both developed and underdeveloped nations.
- (ii) Temporally and spatially distant and disconnected issues compete for attention with immediately felt physical needs, professional demands, economic necessities, or social obligations.
- (iii) Appeals to future generations have limited potential to mobilize people, as humans are hardwired to respond to the danger in front of them, not the danger on the horizon.
- (iv) People experience insulation from the environment (at least in the developed world), which makes it difficult to imagine the big-picture of environmental changes across large timeframes.

University of Glasgow's Arts Lab's studies on the theme of ‘*Discourses of Sustainability*’ find a close connection between language and society, a two-way relationship shaping each other. They discuss about how biological changes and changes in the physical environment carry a two-way relationship of effects on language practices, respectively effects of language use on the society, their interconnections and potential disconnects (University of Glasgow - Arts Lab, 2019). Recently, in 2020, following the ongoing experience of Covid-19 pandemic, they further discuss about sustainability discourses in a series of Zoom talks regarding how the pandemic emphasizes the need to reframe our thinking around the sociolinguistic connections between nature, environmental sustainability and diversity (University of Glasgow - Arts Lab, 2020).

Talking about sustainability and SD discourses means recognizing the role of language, textual forms, discursive practices and their social effects. Studies on the discourses of sustainability have gained greater attention in the past two decades. A discourse can be defined in its most complex form as “*an ensemble of ideas, concepts and categorizations that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities*” (Hajer, 1995, p.44). As these ideas, concepts and categorizations are defined by means of language, it is pertinent to say that language is a vehicle for dictating and shaping our perceptions of our mental and social realities. Bourdieu (1991) expands the role of language beyond a means of communication to a medium of power, observing that people who learn how to control language also learn how to manipulate discourse.

Conrad (2012) distinguishes between two phases of the SD discourse: (1) first until about the year 2000, a period in which questions of conceptual matter, analytical structures, promotion and potential implementation strategies were rolling in the foreground; and (2) after 2000, a phase of defining indicators, concrete implementation strategies and measures to overcome barriers. The 1990s

and 2000s made way to a wide array of scientific and policy-related publications on substantiation, critique and different perspectives of the concept of SD with global gatherings (debates, conferences, etc.) and the establishment of organizations and programs such as UN Commission on Sustainable Development, UN Millennium Declaration, Agenda-21 programs.

In researching how sustainability is governed from a discourse-institutional approach, Genus (2014) considers sustainability discourses and sustainability language as being under-theorized and undervalued for their potential insights on how SD discourses shape behavior and human interaction. As Conrad (2012) points out, the SD discourse is a worldwide discourse “*which reflects a global fundamental search for an ecologically and socially sustainable development model of modern civilization solving the problems generated by modernity itself*” (Conrad, 2012, p.2).

By questioning the future of sustainability, Keiner (2006) doubts the integrity of the SD concept, as both scientific and academic literature show evidence for actions and behaviors being quite divorced from the visions of sustainable living. He concludes that the origins of these inconsistencies are due to divergent value systems coming from how it is being communicated. The present paper is departing and extending beyond this view towards identifying aspects of our policies (i.e. seen through language use) that rely on principles, structures, modes of operation, modes of thinking that are incompatible with the vision layer of sustainability. As such, inconsistencies in implementing sustainability policies are seen as a matter of cognitive ability coded by language and looks for potential language use that infers values and beliefs incompatible with sustainability. Thus, language is approached as a vehicle of values and beliefs and this research aims to sketch the ‘*outdated*’ unsustainable layers of cognition inhibiting a full embrace of sustainable life.

4. Communicating Sustainability and Language Use

Interesting and playful, many new observers and researchers on the sustainability agenda turn their attention to how it is being communicated (see Lakoff, 2014; Stibbe, 2015). In their research, Koon, Hawkins and Mayhew (2016) observe how literature points to policy discourse as the grand arena where struggles over ideas, meaning and competing interpretations for the right perspective or correct approach take place. This communicative aspect is highlighting the key role language has in the policy process.

In researching how public issues are framed into policy discourse and further communicated, Frameworks Institute (2005) outline that policy communication needs to be based on the understandings that: (1) people are not blank slates; (2) communication is interactive; communication resonates with people’s deeply held values and worldviews; (3) communication is frame-based; (4) when communication is inadequate, people default to the ‘*pictures in their heads*’; (5) when communication is effective, people can see an issue from a different perspective (Frameworks Institute, 2005, p.4). In relation to sustainability policies, these understandings need to remind us about the role communication (and the language that shape it) has in the outcome of their implementation and how, consciously or unconsciously, the implementation interventions involves the coherence of values stated and reflected (Guttman, 2000).

An easy to grasp article written by P. Gallagher on 23rd of June, 2019, on the page of UN System Staff College (UNSSC) declares ‘*war on words selling sustainability short*’ (Gallagher, 2019, para.8). He makes the point on how it should be easy to push sustainability forward in a world struggling with poverty, crisis and climate change. Instead, he comes to realize that is rather hard as we ‘*sell*’ sustainability as an abstraction, hard to believe, telling an unconvincing and poorly credible story. The article mentions how climate change is made a villain, how the Nobel-prize winning economist J.E. Stiglitz stated that ‘*climate change is our third world war*’. Even with the best of intentions, the words we use to express our perceptions of the world can trigger stories and metaphors that hijack and reverse our initial intent. Gallagher mentions the arguments of cognitive scientist and linguist, George Lakoff, who speaks of central metaphors existing in our lives, significantly affecting our thoughts and behaviors toward what we perceive as reality (Lakoff & Johnson, 1980). The *military metaphor* suggested by the trigger word ‘*war*’ will always evoke violence, conflict, destruction and chaos, setting feelings of fear and inhibiting the initial intended focus on sustainability, which requires peaceful cooperation, nurture and order. Another common metaphor mentioned in the article is that of *climate*

change and quotes novelist Margaret Atwood whom clarifies that “*Is not climate change. It’s everything change*” (Gallagher, 2019, para.5), meaning the term got us thinking that change comes only from the outside, from the capricious and unpredictable climate, and we must resist its change, we must stay the same i.e. unchanged, keep things as they are, business-as-usual.

Lakoff (2004) insisted over the years on bringing our attention to the almost imperceptible shift of the term ‘*global warming*’ (much used in the beginning of sustainability-related discourses) to the term ‘*climate change*’. He sheds light on how this happened through the American communications consultant, Frank Luntz, who convinced conservatives to stop using ‘*global warming*’ as it sounded scary and alarmist suggesting human agency. Luntz recommended switching to ‘*climate change*’, as ‘*climate*’ sounds nice (i.e. palm trees), while ‘*change*’ is something that just happens, with no human agency. This aspect is of particular importance as “*the key variable which separates the older, positivistic/technicist approaches from newer critical/postmodern ones is agency, that is, the role(s) of individuals and collectivities in the processes of language use, attitudes and ultimately policies*” (Rincento, 2006, p.34). It was also Luntz who suggested using words like ‘*healthy*’, ‘*clean*’, ‘*safe*’, ‘*clear*’ even when talking about coal, oil or pollution (i.e. ‘*clean coal*’), a communication strategy known as Orwellian language which means the opposite of what it says in order to be appealing for both potential sympathizers/non-sympathizers.

In similar course of thoughts, an article written by A. Hoffman in 29th of October 2018, on the page of ERB Institute dedicated to sustainability in partnership with University of Michigan, talks about terms we have embraced from the sustainability discourses, but which do not say much or trigger a negative perception towards something intended to stimulate proactive behavior. Hoffman mentions entrepreneur and author Douglas Gayeton who talks about a climate fatigue due to terms like ‘*carbon debt*’ which people did not understand the first time, nor did the 20th time they heard it. This has determined Gayeton to start *The Lexicon of Sustainability* project in order to provide access to plain language in matters of sustainable food and agriculture. Hoffman further refers in the article to terms like ‘*reduce, reuse, recycle*’, ‘*low footprint*’, ‘*zero footprint*’, ‘*zero waste*’, ‘*going green*’, ‘*eco-friendly*’. Besides the sustainability-birthed terms like ‘*footprint*’, ‘*green*’ or ‘*eco-friendly*’ that can easily pass as un-relatable abstractions, words such as ‘*zero*’, ‘*low*’ or prefix ‘*re-*’ can trigger an unconscious negative perception based on the stories of progress, prosperity and growth we live by.

According to Stibbe (2015), a story can be defined as a mental model within the mind of an individual and stories-we-live-by are stories or cognitive structures that influence how a large number of people think, talk and act. The *prosperity story* (which promotes worship of material acquisition and monetary wealth), the *progress story* (which promotes industrialization and technological development), or the *growth story* (which promotes economic growth and competition) are stories that have created in our minds a certain kind of aversion towards the meaning of words such as “*zero*” or ‘*low*’ or those carrying the prefix ‘*re-*’ (which sends backwards, to re-use instead of innovating). These stories have set a structure of perception in our mind by which the direction forward or up is always good, backwards or down is always bad, with certain elements mapped onto what is forward (technological innovation/ industrialization) and what is backwards (natural way, ancient or indigenous practices) (Stibbe, 2015). For the growth story, Halliday (2001) adds words like ‘*many is better than few*’, ‘*high is better than low*’, ‘*more is better than less*’, ‘*big is better than small*’, ‘*grow is better than shrink*’ or ‘*up is better than down*’ (Halliday, 2001, p.192).

Language links the natural with our mental reality, two realities that influence our lives affecting our collective perceptions about certain fundamental matters that in turn affect our wellbeing (Bastradas-Boada, 2003). Language depends significantly on education, economy, legislation, culture and policies at local and global level, while reality depends on our beliefs of what language says it is or it is not. If the language we use is lacking an ecological perception and understanding, the reality of the problem can be primary mental (Massip-Bonet & Bastardas-Boada, 2013). Larson (2011) talks about a socio-ecological sustainability framework needed to be integrated in the analysis of language use, while questioning if the metaphors we have chosen to adhere to will help us on the path of sustainability or lead us farther astray from it. As per Brundtland Report’s definition of SD, sustainability-related issues are primary ones concerning the fairness of intergenerational rights, or more plainly, the integrity and propagation of life, rather than those of technology and economy, regardless how important these may be (Orr, 2006).

5. Language, Cognition and Sustainability Policies

In diving deep into the psychology of language, Ludden (2016) talks about how seeing the world in a certain way—based exclusively on what we see or only through the lens of reason, through senses, through bodily sensations—got us taking consciousness for granted, believing that we are experiencing the reality as it is, when we are rather experiencing a virtual reality constructed inside our heads. This, he argues, has caught us in a perception of the world as a passive process, our brain as passive receiver of information, our perceptions being something our brain expects to encounter. This has led to what Lakoff (2004) names as the negation of facts or of different views or possibilities of reality if they contradict a persons’ worldview or popular view.

All this new learning about how language is wired in us and how it wires our realities is pushing strongly to link language to responsibility. These two concepts are firmly put together by renowned linguist Noam Chomsky (1979) who departing from his idea of generative grammar (one which generates behaviorist assumptions) unveils the need to understand and have responsibility over what we generate with our accustomed ways of using language. For example, attention was directed in 2016 on the Trump administration whom decided a policy for building a wall at the border of USA with Mexico. Although attention was directed to the imagery of the actual built and material construction, what has put that idea into action is the belief in separation from other, the belief in borders, the belief in security, etc. The wall is more widely experienced mentally, than actually. The wall becomes only a symbol for what prevails as belief, the belief being the one that dominates and holds something in place. The word ‘*wall*’ invokes thoughts of limitation or protection. If cognitive understanding is lacking, it gets easy to be unconscious of the connection between how one chooses the meaning it resonates with (i.e. limitation or protection) and how based on that decides for what it stands. Likewise, it can be unconscious how the choice made ‘*for*’ or ‘*against*’ the wall is primarily one that responds to what one believes and, secondarily to how that choice may affect others. Speculating where responsibility lies in this case, it is tempting to point towards the Trump administration, but what gives legitimate power to any action is the belief that puts it into place, and the dimension of belief ultimately is an individual choice, therefore an individual responsibility.

Ludden (2015) uses the *Cornsweet illusion* as a good example for attitudes of dismissing facts and how our perceptions are rather about what our brain expects it to be, than how it truly is. The challenge is to become conscious of how the brain and the mind work in order to further take responsibility on this knowledge and how we express it through language.

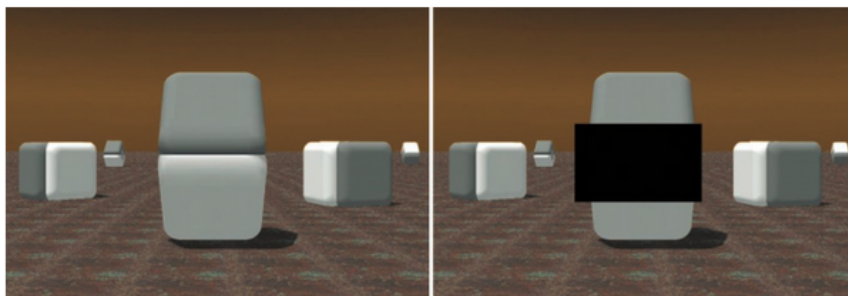


Figure 1. The Cornsweet illusion.

(Description: Put the finger on the picture on the right, on the line where the two central tiles meet. Now that you know the two tiles are the same color, you would expect the apparent difference would disappear when you removed your finger. But your brain goes back to its original interpretation. Why? For all your life, your brain has been dealing with patterns of lighting and shading. If both tiles appear to be the same color, then the top tile must be darker, because it’s in the light. Likewise, the bottom one must actually be lighter, since it’s in the shade. This is how your brain reasons. That is, your brain shows you what it thinks the colors should be, not what your eyes say they are (Ludden, 2015, para.5–6)

Source: Lupyan, G. & Clark, A. *Words and the World: Predictive Coding and the Language-Perception-Cognition Interface*. *Current Directions in Psychological Science*, 24, 2015, 29–284.

There is an expansion of recent literature informing that language is far more than a tool for communication: through language we categorize, distinguish and create the universe (Lefkoe, 2009). We do not see the external world as it is, but as we believe it is, regardless that many aspects of the physical reality exist independent of our belief upon it. As Nobel Prize awarded physicist Werner Heisenberg noted “*what we are observing is not nature itself, but nature exposed to our method of questioning [...] in the language that we possess*” (Heisenberg, 1958, p.78). If our discursive practices employ a view on nature as an environment to be fixed by technological innovation and scientific inquiry only, according to our beliefs (which may or may not be coherent with the reality of nature), then this uni-directional way may further lead to disconnections and anthropogenic tragedies. As Heisenberg concludes, “*the dangers threatening modern science cannot be averted by more experimenting, for our complicated experiments have no longer anything to do with nature in her own right, but with nature charged and transformed by our own cognitive activity*” (Heisenberg in Heller, 1952, p. 26).

Monbiot (2017) exemplifies how crucial language is in how we perceive the natural world and calls for better ways of describing nature, referring to terms widely found in sustainability policy discourses. For instance, he names life-alienating terms used in describing nature, which influence how we relate to the essence of what supports all life: “*sites of special scientific interest*” for land; “*no-take zones*” or “*reference areas*” for seas; “*nature reserve*” for natural areas abundant of life and elements (hinting to a perception of something being disposable, to be replaced); or its longer version “*protected area of importance for flora, fauna, or features of geological or other special interest*” (hinting to a perception of something of interest according to resource/use potential); “*resources*” for plants, people or elements, “*stocks*” for animals, “*ecosystem services*” for the gifts nature offers to sustain life (hinting to their role to serve us). Monbiot sees the term “*natural capital*” as the worst framing of all, which reflects the failure of ecologists and policymakers to listen to cognitive linguists and social psychologists. The term is informing us that nature is subordinated to human economy, which loses its value when it cannot be measured by money. The author is urging on finding terms that speak of love for/and being part of nature, terms to convey life’s wonders.

6. Framing Sustainability with Rational Policy Models: Incompatible?

Framing in policy research is seen as seeking to understand “*the forces that shape human behavior in the policy process*” and frames are providing “*the cognitive means of making sense of the social world, but discordance among them forms the basis of policy contestation*” (Koon, Hawkings & Mayhew, 2016, p. 1). In policy analysis, framing or frame analysis has a steady record in policy research and studies.

The idea of framing—backed by what cognitive science has taught us so far about language—is challenging the concept of rational choice theory or rational agent theory (Homans, 1961) according to which people will always strive to make the most rational choice possible from a cost-benefit point of view, following self-interest. As Lakoff (2014) exemplifies, if someone wants to built a hotel, but the watershed needs a deviation, a cost-benefit analysis is done: → in economics the cost means lack of profit → thus not constructing a hotel is a lack of profit, as the lack of profit turns out to be a cost as opposed to a benefit → measuring a cost and benefit requires a starting point and an ending point which must be measurable → but natures does not start or end → in order to do the measurement in that calculation, nature will always loose. With regards to sustainability, this can mean that cost will likely dethrone the care for sustainable living. This rational and cost-benefit view is a framework much pervasive in mainstream policy teaching and represents the basis for understanding and modeling current social and economic behaviors. Embracing this theory is based on a wider acceptance of the idea that we are rational beings, above the instinctive and mechanistic (i.e. nature and animal life), ideas coming from the theory of reason from the half of XVII century ignited by Descartes.

As Lakoff details (2014), this reliance on reason comes from two habits: policy makers (and most of us) did not study cognitive science, psychology or linguistics to understand how people think and thus rely on what was taught: that thought is conscious, that mind is reason and logic and these attributes characterize human beings (makes us more than a mere animal who do not have reason and do not think, more than animals seen like machines). Since then, we actually learned that thought is

98% unconscious, decisions being made unconsciously usually about half of a second and up to seven seconds before you know you made them (Lakoff in Franks & Turner, 2013). Not only that, but thought is also disembodied, it is something hanging above your head (Lakoff & Johnson, 1999), abstract like in a cartoon. Why? Lakoff (2014) further makes it clear how Descartes' *'reason'* had to be disembodied because, if it were physical, it would be subject to laws of nature and physics and that would mean that one would not have absolute free will. But cognitive science teaches us that thought is physical as it happens within our neural circuitry, it is subject to laws of nature and we do not have absolute free will, as we can only understand what our brains allow us to understand (Lakoff, 2014). Descartes promoted the idea that thought is logical as he was a mathematician and believed thought was like deduction in geometry—logic and linear.

These ideas were important for the XVII and XVIII centuries because that brought to consciousness the idea that people no longer needed others to reason for them (emperors, monarchs, clerics and other highly-concentrated forms of power who based their rule on superstition and lack of knowledge). Thus, people started to reason for themselves, bringing forth the Enlightenment era based on reason and science over faith and superstition. It was immensely important for that period, but not as much for our present. In our time we discover that our brain is not logic or linear, it uses frames, metaphors, narratives and all sorts of other structures that go beyond logic and are highly linked to our emotions (Lakoff, 2004). Regardless, our brain uses language not just to name things in the world, but to make sense of it, define it, categorize it, fix it to personal perceptions and experiences, to express one's frame of mind or who one is or not, what one likes or does not (Lakoff, 1987).

These are the basic things about thought and language that are not common language, but many professionals in rising unregulated business areas such as marketing or social networks technologies know and apply it. As Pressman and Wildavsky (1973, in van Hulst and Yanow, 2016) noticed, policy makers have a tendency of applying a technical rationality in creating problem-solving programs which itself is seen as a fail in approach since popular policy problems framed such as *'war on poverty'*, *'war on drugs'* or *'war on terror'* have turned out hard to win and far more complex than rational approach can grasp.

Getting back on the rational actor model, Lakoff (2014) makes an important stance on how treating subjects such as sustainability from this perspective, is a dangerous framing. It teaches to deal with policy matters in a disconnected manner. In doing policy implementation or evaluation, it usually obliges to dismiss timeframes and evaluate a project only for the time set for its target period or particular program duration (no time before the starting time matters, the past does not count and after the time you evaluate it, the future does not matter). This is procedural work in policy and it hinders sustainability's holistic and *'future horizons'* premises. Thus, Lakoff (2014) urges to ditch the attachment of linear thinking, embrace systematic causation thought to do better than mere sustainability and give back to the Earth more than we take, not just sustain. All these ideas are detailed by Lakoff at the *Economics for Sustainability Conference* (2014, Fort Mason, San Francisco) worth seeing for integrating the wider framework of sustainability thought.

7. Key contemplative aspects and observations (instead of conclusions)

The language used in communicating sustainability shapes our perceptions upon it, our interactions with the natural and social surroundings, our ability to link root causes with integrative and creative solutions. As such, inconsistencies in implementing sustainability policies are seen as a matter of cognitive ability coded by language and invites research to look for potential language use that infers values and beliefs incompatible with sustainability. Thus, language is approached as a vehicle of values and beliefs and this paper aims to sketch potential unsustainable layers of cognition found in policy discourse that inhibit a full embrace of sustainable life.

Language merits an operational framework in sustainability research and this calls for a better understanding of language used in framing sustainability and an enhanced awareness of these in practice. The abundance of digital information is firstly available in textual forms offering access to a different kind of data, words—the starting point of most human activities in relation.

It gets tempting or rather responsible to question ourselves and our policies from this perspective: how does language affect our interrelation with nature, our time-perception-driven actions, our understanding

of sustainability concepts, our approach for the future, our place in it? Addressing such questions has a great potential to get us a closer and more conscious look at perceptive conditionings that keep repeating in our social constructs, maintaining an incoherent development of ourselves as species and their effects on everything we interact with.

The paper calls for an exploration and expansion of sustainability terminologies that engage both the head and the heart, as scientific language and domain-specific language seem to divide these worlds, failing to develop mindfulness and empathy, much needed for this collaborative and collective global effort.

This view brings much value to the fundamental need to question taken for granted concepts, to encourage reflective view over foundations of both conscious and unconscious beliefs and perceptions guiding our policies, the language used to convey them, the vision, the questions and the answers we might have gotten used to or which may have gotten us stuck in a passive approach of procedures and highly regulated responses.

References:

1. United Nations World Commission on Environment and Development (WCED) (1987) *Our Common Future*; Oxford University Press: New York, NY, USA.
2. Genç, R. (2017) *The Importance of Communication in Sustainability and Sustainable Strategies*. Procedia Manufacturing, Volume 8, pp.511-516, <https://doi.org/10.1016/j.promfg.2017.02.065>
3. United Nations Framework Convention on Climate Change (UNFCCC) (1997) *The Kyoto Protocol*, online at <https://unfccc.int/resource/docs/convkp/kpeng.pdf>, accessed 12 Jan 2021.
4. United Nations Framework Convention on Climate Change (UNFCCC) (2015) *The Paris Agreement*, online at https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english.pdf accessed 12 Jan 2021.
5. Howes, M.; Wortley, L.; Potts, R.; Dedekorkut-Howes, A.; Serrao-Neumann, S.; Davidson, J.; Smith, T. and Nunn, P. (2017), *Environmental Sustainability: A Case of Policy Implementation Failure?*, Sustainability, 9, 165, <https://doi.org/10.3390/su9020165>
6. Keiner, M. (2006) *The Future of Sustainability*. Springer Netherlands. <https://doi.org/10.1007/1-4020-4908-0>
7. The United Nations Conference on Environment and Development (UNCED) (1993) *Report of the Earth Summit*, Rio de Janeiro, Brazil, 3-14 June, 1992, online at https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CO_NF.151_26_Vol.I_Declaration.pdf, accessed 12 Jan 2021.
8. Elkington, J.; Trisoglio, A. (1996) *Developing Realistic scenarios for the environment: Lessons from Brent Spar*, Long Range Planning 29(6). [https://doi.org/10.1016/S0024-6301\(97\)82814-2](https://doi.org/10.1016/S0024-6301(97)82814-2)
9. Meadows, D.H.; Meadows, D.L.; Randers, J and Behrens III, W.W. (1972) *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*, New York: Universe Books
10. United Nations (UN) (1973) Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, United Nations Press: New York, NY, USA.
11. United Nations (UN) (2002) Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August-4 September 2002, United Nations Press: New York, NY, USA.
12. United Nations General Assembly. (2015). *Transforming our world: The 2030 agenda for sustainable development*. New York, NY: United Nations. Retrieved from <https://undocs.org/A/RES/70/1>, accessed 12 Jan 2021.
13. EC – European Commission (2001) A sustainable Europe for a better World: a European Union strategy for sustainable development (Commission's proposal to the Gothenburg European Council), COM (2001) 264 final, Brussels, 15 May 2001, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52001DC0264&from=EN>, accessed 12 Jan 2021.
14. World Trade Organization (WTO) (1994) *Marrakesh Agreement Establishing the World Trade Organization*, online at https://www.wto.org/english/docs_e/legal_e/04-wto_e.htm, accessed 12 Jan 2021.
15. Guerra, J. and Schmidt, L. (2016) Macking Wishful Thinking Reality – From SDGs to COP21, Ambiente & Sociedade, São Paulo v. XIX, n. 4 n pp. 197-214, <http://dx.doi.org/10.1590/1809-4422ASOCEX0003V1942016>
16. Atkinson, R. (2000) *Narratives of P: The Construction of Urban probl. & Urban P in the Official Discourse of British Government 1968-1998*, Critical soc. P, 20(2), 211-232
17. Elkington, J. (1994) *Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development*, California Management Review 36, no. 2 (1994): 90–100
18. Hove, H. (2004) *Critiquing Sustainable Development: A Meaningful Way of Mediating the Development Impasse?*, Canadian Undergraduate Journal of Development Studies, Vol. 1, No. 1, pp.48–53.
19. Karoly, K. (2011) *Rise and Fall of the Concept Sustainability*, Journal of Environmental Sustainability: Vol. 1:Iss 1, Article 1, available at <https://scholarworks.rit.edu/jes/vol1/iss1/1/>, accessed 12 Jan 2021.
20. Smythe, S. (2014) *Communities are where it all happens': Tracing discourses of sustainability in the destatisation of adult literacy education in sustainability in the destatisation of adult literacy education in*

- sustainability in the destatisation of adult literacy education in sustainability in the destatisation of adult literacy education in British Columbia, Canada British Columbia, Canada British Columbia, Canada, Encyclopedia, XVIII (40), pp.14-33, <https://doi.org/10.6092/issn.1825-8670/4659>
21. Parker, J. (2014) *Critiquing Sustainability, Changing Philosophy*, in Routledge Studies in Sustainability, Routledge: London, UK.
 22. Stibbe, A. *Ecolinguistics. Language, Ecology and the Stories We Live By*. Routledge: London, UK.
 23. Karoly, K. (2011) Rise and Fall of the Concept Sustainability. Journal of Environmental Sustainability: Vol. 1:Iss 1, Article 1, available at <http://scholarworks.rit.edu/jes/voll/iss1/1> accessed 12 Jan 2021.
 24. Fritsch, von B.; Schmidheiny, S. and Seifritz, W. (1994) *Towards an Ecologically Sustainable Growth Society*, in Physical Foundations, Economic Transitions, and Political Constraints. Softcover, Springer: Berlin, DE.
 25. Espinosa, A and Walker, J. (2011) *A Complexity Approach to Sustainability - Theory and Application*, In Series on Complexity Science 2011, Computer Science, Engineering, <https://doi.org/10.1142/p699>
 26. Wells, P.E. (2013) *Business Models for Sustainability*, Edward Elgar, Cheltenham.
 27. Lakoff, G. (2014) How Systemic Causation Affects Sustainability, presentation at The Economics of Sustainability Conference, October 6-9, 2014 Fort Mason, San Francisco, CA.
 28. Carson, M.; Burns, T.R. and Calvo, D. (2009) *Paradigms In Public Policy: Theory And Practice Of Paradigm Shifts In The EU*, Peter Lang Publishers: Berlin/Frankfurt/Oxford/New York.
 29. Lovelock, J. (2000) *Gaia: A New Look at Life on Earth*, Oxford: Oxford University Press.
 30. Harding, S. 2010. Gaia theory and deep ecology, in M. van Eyk McCain (ed.) GreenSpirit. London: John Hunt, pp. 36–49.
 31. Wuppertal Institute for Climate, Environment and Energy (2015) Capacity Building for a transformational use of climate finance, Wuppertal Institute for Climate, Environment and Energy GmbH: Berlin, DE, online at https://www.wupperinst.org/uploads/tx_wupperinst/Governance_Action.pdf, accessed 12 Jan 2021.
 32. Gibbons, L. V., Cloutier, S. A., Coseo, P. J., & Barakat, A. (2018). Regenerative development as an integrative paradigm and methodology for landscape sustainability. Sustainability, 10, 1910, <https://doi.org/10.3390/su10061910>
 33. Stichweh, R. (2011) *Systems Theory (International Encyclopedia of Political Science)*, published in Bertrand Badie et al. (eds.), International Encyclopedia of Political Science, Sage: New York 2011, Vol. 8, pp. 2579-2582.
 34. Luhmann, N. (2013) *Introduction to Systems Theory*, Cambridge and Maiden: Polity Press.
 35. Estrada, E. (2011) *The Structure of Complex Networks : Theory and Applications*, Oxford University Press: Oxford, UK.
 36. Mark Newman, *Networks: An Introduction*, Oxford University Press: Oxford, UK.
 37. Massip-Bonet, À. & Bastardas-Boada, A. (2013) *Complexity Perspectives on Language, Communication & Society*, Springer-Verlag Berlin Heidelberg, <https://doi.org/10.1007/978-3-642-32817-6>
 38. Raglan, G.B. and Schulkin, J. (2014) *Decision Making, Mindfulness, and Mood: How Mindfulness Techniques Can Reduce the Impact of Biases and Heuristics through Improved Decision Making and Positive Affect*, Journal of Depression and Anxiety, 4(1), <https://doi.org/10.4172/2167-1044.1000168>
 39. Keralaia, N. and Reb, J. (2015) *Improving Decision Making Through Mindfulness, Mindfulness in organizations: Foundations, research, and applications*. 163-189. Research Collection Lee Kong Chian School Of Business, online at https://ink.library.smu.edu.sg/lkcsb_research/4809, accessed 12 Jan 2021.
 40. Thiermann, U.B., Sheate, W.R. (2020) The Way Forward in Mindfulness and Sustainability: a Critical Review and Research Agenda. *J Cogn Enhanc*, <https://doi.org/10.1007/s41465-020-00180-6>
 41. Barbaro N., & Pickett S. M. (2016). *Mindfully green: Examining the effect of connectedness to nature on the relationship between mindfulness and engagement in pro-environmental behavior. Personality and Individual Differences*, 93, 137–142, <https://doi.org/10.1016/j.paid.2015.05.026>
 42. Favre, M., Wittwer, A.; Heinemann, H.R.; Youkalov, V.I. and Sornette, D. (2016) *Quantum decision theory in simple risky choices*, Physics and Society, PLoS ONE 2016 11(12), <https://doi.org/10.1371/journal.pone.0168045>
 43. Dyck, B. and Greidanus, N.S. (2016) *Quantum Sustainable Organizing Theory: A Study of Organization Theory as if Matter Mattered*, Journal of Management Inquiry, 26(1), <https://doi.org/10.1177/1056492616656407>
 44. Kitzbichler MG, Smith ML, Christensen SR, Bullmore E (2009) *Broadband Criticality of Human Brain Network Synchronization*. PLoS Comput Biol 5(3): e1000314. <https://doi.org/10.1371/journal.pcbi.1000314>
 45. Lakoff, G. (2004) *Don't think of an Elephant. Know Your Values and Framing the Debate*, Chelsea Green Publishing: Vermont, USA.
 46. Bourdieu, Pierre (1991) *Language and Symbolic Power*, (John B. Thompson, ed.; transl. by Gino Raymond and Matthew Adamson) Cambridge: Polity Press, 37-42.
 47. McNall, S.G. & Basile, G. (2013). *How to Create a New Narrative for Sustainability That Will Work: And Why It Matters*. Sustainability Journal of Record. December 2013 6 (6):297-301, <https://doi.org/10.1089/sus.2013.9835>
 48. University of Glasgow (2020) Arts Lab, Discourses of Sustainability, online at <https://www.gla.ac.uk/researchinstitutes/artslab/labsandthemes/collegewidethemes/discoursesofsustainability>, accessed 12 Jan 2021.
 49. Hajer, M. (1995) *The politics of Environmental Discourse: Ecological Modernization and the Policy Process*, Oxford University Press: Oxford, UK.

50. Conrad, J. (2012) *The Discourse on SD: How pol. & Scientific Codes Go along each Other*, Presentation @ Berlin Conference on the Human Dimensions of Global E Change, Berlin 5-6 October 2012, Germany http://www.berlinconference.org/2012/?page_id=1060
51. Genus, A. (2014) Governing Sustainability: A discourse-Institutional Approach. *Sustainability*, 6, 238-305, <https://doi.org/10.3390/su6010283>
52. Koon, A. D. Hawkins, B. & Mayhew, S. H. (2016) *Framing and the Health Policy Process: A Scoping Review*, *Health P & planning*, 31(6), 801–816. <https://doi.org/10.1093/heapol/czv128>
53. Gallagher, P. (2019) *Declaring War on Words that Sell Sustainability Short*, United Nations Syst. Staff College (UNSSC), 23 June 2019, online at <https://unssc.org/news-and-insights/blog/declaring-war-words-sell-sustainability-short/> accessed 12 Jan 2021.
54. Frameworks Institute (2005) *Digesting Public Opinion: A meta-Analysis of Attitudes Toward Food, Health and Farms*,
55. Ricento, Thomas (2006) *An introduction to Language Policy Theory and Method*, Blackwell Publishing: Hoboken, NJ, USA.
56. Guttman, N. (2000), *Public Health Communication Interventions: Values and Ethical Dilemmas*, SAGE Publications, Inc.: Thousand Oaks, CA, USA.
57. Hoffman, A. (2018) *What Does It Really Mean When We Call Something “Sustainable”?*, ERB Institute, 29 October 2018, online at <https://erb.umich.edu/2018/10/29/what-does-it-really-mean-when-we-call-something-sustainable-andy-hoffman-quoted-in-fashion/>, accessed 12 Jan 2021.
58. Halliday, M. 2001. *New Ways Of Meaning: The Challenge To Applied Linguistics*, in A. Fill and P. Mühlhäusler (eds) *The ecolinguistics reader: language, ecology, and environment*. London: Continuum, pp. 175–202.
59. Larson, B. (2011) *Metaphors For Environmental Sustainability: Redefining Our Relationship With Nature*, New Haven, CT: Yale University Press.
60. Orr, W.D. (2006) *Framing Sustainability*, *Conservation Biology* Volume 20, No. 2, 265–268, Society for Conservation Biology, <https://doi.org/10.1111/j.1523-1739.2006.00405.x>
61. Ludden, D. (2016) *The Psychology of Language: An Integrated Approach*, SAGE Publications: Newbury Park, CA, USA.
62. Lupyan, G. & Clark, A. *Words and the World: Predictive Coding and the Language-Perception-Cognition Interface*. *Current Directions in Psychological Science*, 24, 2015, 29–284.
63. Chomsky, N.; Ronat, M. (1979) *Language and Responsibility: Based on Conversations with Mitsou Ronat*; Pantheon Books: New York, NY, USA, 1979.
64. Lefkoe Institute, (2009) *How Our Perceptions Shape Our Reality*, online at <https://www.mortylefkoe.com/our-perceptions-shape-our-reality/>, accessed 12 Jan 2021.
65. Monbiot, G. (2017) *Forget ‘The Environment’: We Need New Words To Convey Life’s Wonders*, *The Guardian*, 9 August 2017, online at <https://www.theguardian.com/commentisfree/2017/aug/09/forget-the-environment-new-words-lifes-wonders-language>, accessed 12 Jan 2021.
66. Heisenberg, W. (1958) *Physics and Philosophy: The Revolution in Modern Science*; Penguin: London, UK, reedited 2000.
67. van Hulst, M. J. & Yanow, D. (2016). *From Policy “Framess” to “Framing”:* *Theorizing a More Dynamic Political Approach*. *American Review of Public Administration*, 46(1), 92-112. <https://doi.org/10.1177/0275074014533142>
68. Lakoff, G and Johnson, M. (1999) *Philosophy In The Flesh: The Embodied Mind And Its Challenge To Western Thought*, Basic Books: NY, USA.
69. Homans, G. (1961) *Social Behaviour: Its Elementary Forms*. London: Routledge and Kegan Paul.
70. Lakoff, G. (1987) *Women, Fire, and Dangerous Things: What Categories Reveal About the Mind*; University of Chicago Press: Chicago, IL, USA