

Disentangling the Polysemous Character of *Sustainability* in English Specialised Discourse

A CADS Approach

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Abstract

Sustainability is a pervasive yet conceptually unstable keyword in contemporary discourse. While often described as a ‘boundary term’ capable of aggregating heterogeneous epistemic communities around a shared commitment, it also functions as a floating signifier whose meaning shifts across domains and communicative contexts. Despite its widespread association with climate change discourse, since the late Twentieth century, *sustainability* has often been used without clarification, leading to ambiguity and facilitating semantic dilution and greenwashing.

Integrating the theoretical tenets of critical discourse analysis with the methodological techniques of corpus linguistics, this study presents a corpus-based investigation of the noun *sustainability* and the adjective *sustainable* in four specialised English corpora available on Sketch Engine, focusing on collocational and co-occurrence patterns. The four corpora represent environmental discourse (EcoLexicon English Corpus and Environment Corpus), scientific/social science communication (Elsevier Open Access CC-BY Corpus), and economic/institutional language (United Nations Parallel Corpus).

The results reveal both convergence and divergence in usage across domains. Economic and environmental sustainability show strong, recurrent semantic connections, whereas instances of general, domain-neutral sustainability remain vague and poorly specified. Notably, such uses do not clearly distinguish between weak and strong sustainability, nor do they consistently foreground a specific sustainability pillar. This indeterminacy highlights *sustainability* as a case of complex lexeme, whose meanings emerge dynamically through ‘figure and ground’ mechanisms within discourse.

The idea of infinite or unlimited growth, which proves so attractive to economists, financiers and experts in technology, is based on the lie that there is an infinite supply of the earth's goods, and this leads to the planet being squeezed dry at every limit.

(Pope Francis)

1. Introduction

Every historical period has its own *zeitgeist* words and concepts, that is, those terms reflecting the dominant beliefs, attitudes, and moods of an era, from technological shifts to social movements, essentially acting as cultural touchstones or trending concepts that epitomise a time. As a result of societal transformations spurred by knowledge, activism, global phenomena like climate change, and a rising collective awareness of environmental responsibility, social equity, and the need for systemic change, *sustainability* and *sustainable development* feature prominently in the *zeitgeist* of the early 21st century.

Today, we drive *sustainable* cars and choose food produced from *sustainable* agriculture at the grocery store, and when planning a week off, we may opt for a *sustainable* holiday to improve our *sustainable* lifestyle. Sustainability permeates every aspect of society. It is ubiquitous in the discourse of political leaders and economists, in advertising, and on the labels of everyday consumer products (Smith 2025; Bausch, Schröder and Tauber 2024; Machin and Liu 2024; Parguel, Bénéit-Moreau and Russell 2015). Borrowing from Gieryn's (1999; 1983)¹ concept of 'boundary work,' sustainability in its contemporary usage can be characterised as a boundary term² set to bridge gaps among heterogeneous epistemic communities around a shared commitment to environmental, social and political-economic concerns (Godemann and Michelsen 2011; Scoones 2007).

In its broadest sense, sustainability refers to the ability to maintain or sustain a process continuously over time. It is based on the key ideas of a) using resources at a rate at which they can be replenished, b) avoiding irreversible damage to natural, social, or economic systems, and c) focusing on the long-run perspective and not just on short-term goals or gains (Mollenkamp 2025).

Sustainability, which can guide decisions at the global, national, organisational and individual levels, is usually broken down into three pillars, namely economic, environmental and social, and is grounded on the belief that without drastic changes to the way the planet is run, irreversible consequences will follow for both the ecosystem and humanity (Mollenkamp 2025). A related concept is that of 'sustainable development,' and the terms are often used interchangeably. UNESCO, however, specifies that while sustainability is to be conceived as a long-term goal, sustainable development refers to the many processes and pathways to achieve

¹ Gieryn's original definition of 'boundary work' was that of "an ideological style found in scientists' attempts to create a public image for science by contrasting it favourably to non-scientific intellectual or technical activities" (Gieryn 1983, 781) and was designed to discriminate science from other kinds of intellectual activities. Later, the concept has been reframed in interdisciplinary terms as "the constructive effort to support communication and coordination across the fences that separate communities" (Keularz 2009, 266).

² Star and Griesemer (1989) and Star (2010) speak about boundary objects to refer to the same entities (see also Keularz 2009).

it, as exemplified by the Agenda 2030's 17 Sustainable Development Goals (United Nations 2025).

Although it is broadly associated with long-term ecological and social viability, in recent years the term has been widely discussed across a range of policy circles and has received a number of context- and culture-specific definitions (Redclift 2005). Specifically, in corporate discourse, *sustainability* is associated with efficiency, green growth, ESG,³ and long-term profitability. In contrast, in environmental movement discourse, it is related to ecological limits, degrowth, and biodiversity protection. In governmental or institutional discourse, the focus is primarily on the policy balance among the economy, society, and the environment. Finally, in development discourse, it refers to improving poverty reduction, growth and overall resilience. These are but a few possible definitions that testify to an unstable, continually negotiated meaning.

Kosatica and Smith (2025, 1) argue that the proliferation of “so many iterations and meanings of ‘sustainability’ underscores the urgency of developing healthy, environmental, social and economic systems – and just how important it is to investigate what is meant by this highly dynamic word critically.”

However, the flexibility of sustainability as a concept and lexeme, whose widely acknowledged meaning was popularised by the 1987 Brundtland Report (WCED 1987), and the subsequent proliferations of definitions, including the misappropriation of the term by some influential sectors of society, progressively led to a Babel of senses hinting at divergent and at times conflicting agendas.

A common understanding of key terms is paramount in any scientific discussion, especially when the debate is cross-cultural and interdisciplinary (Bausch, Schröder and Tauber 2024). On the one hand, the pervasive use of *sustainability* makes it difficult, let alone impossible, to pinpoint its exact meaning when applied to such wide-ranging areas, leading scholars to note its semantic dilution or even its meaninglessness (Owen 2011, 246). On the other hand, its polysemy enables widespread adoption, while obscuring analytical precision, as actors invoke the term to legitimise practices ranging from transformative systemic change to minimal compliance, or to rebrand unsustainable practices or products in a more environmentally friendly guise (Smith 2025; Parguel, Benoît-Moreau and Russell 2015).

Nowadays, *sustainability* can mean many different things to different constituencies, although it is purportedly supposed to unite them under a shared commitment (Palmer, Cooper and van der Vorst 1997). The emergence of such numerous, and at times conflicting, meanings

³ ESG is an acronym standing for Environmental (E), Social (S), and Governance (G) and defines corporate sustainability standards (United Nations Global Compact 2004).

(Salas-Zapata and Ortiz-Muñoz 2018; Johnston, et al. 2007) is undoubtedly connected to discourse hegemony, power authority and the intention of different actors to play a role in climate change and energy transition discourse. The modern discourse on sustainability does not problematise the usefulness of the concept, which is assumed to be generally accepted. By contrast, it is the subject's positionality that determines what is perceived as sustainable or unsustainable (Yamada, et al. 2022; Randle, et al. 2016). Such a situation and the great deal of greenwashing that often takes place under the sustainability banner (Machin and Liu 2024; Mapes and Ross 2022) limit the credibility of a fundamental concept, challenging its applicability and the significance of associated achievements, and hindering the progress in environmental and social development that it was supposed to underpin. While the meaning of *sustainable development* and *sustainability* are often left unspecified and taken for granted even in specialised discourse, clarifying the sense in which these terms are used and establishing for whom something is supposed to be sustainable is not of secondary importance, especially when faced with pressing global issues such as climate change and global warming, which require alignment with supranational policies.

Language is at once the core medium for the social construction of reality through the spread and reproduction of mental models, and a pivotal means in the art of persuasion and the legitimisation of specific viewpoints and agendas (Van Dijk 2006; 1997). Linguistic representation may have crucial repercussions on our moral worldview and what we consider morally right or wrong (Stibbe 2021; Lakoff 2014). In this respect, dominant cultural narratives, often promoted by influential stakeholders or societal structures, can define what sustainability means, what actions are considered valid, and even what problems are deemed most important. This can lead to situations where deeply ingrained cultural assumptions hinder genuine, transformative change.

This contribution integrates qualitative and quantitative research perspectives, combining the tenets of critical discourse analysis (CDA) with corpus linguistics to investigate the meanings of the noun *sustainability* and the adjective *sustainable* in domain-specific English. It argues that combining detailed text and corpus analysis (Baker, et al. 2008; Baker 2006) with a thorough examination of collocations and co-occurrence patterns may provide valid instruments for disentangling the complexities of lexemes. Specifically, starting from the isolation of their defining features, the behaviour of the two lexemes is analysed in a set of specialised corpora available on the corpus manager and text analysis software Sketch Engine (Kilgarriff, et al. 2004). The corpora cover the main areas of relevance of the two terms in current discourse, namely the environmental (EcoLexicon English Corpus and Environment Corpus), the scientific (Elsevier OA CC-BY Corpus), and the sociopolitical (United Nations Parallel Corpus).

The paper is organised as follows: Section 2 provides a brief historical overview of the evolution of the term *sustainability*, highlighting the most recent developments. Section 3 introduces the theoretical background of this research, while Section 4 describes the data and details the methodology adopted. Section 5 constitutes the core of the study and presents and discusses the quantitative and qualitative findings. Conclusions follow in Section 6.

2. *Sustainability*: A story of multiple definitions

Etymologically, *sustainability* derives from Latin *sustīnēo, es, tīnūi, tentum, ēre*, which combines *sub* (up from below) with *tenēre* (to hold) and means “to uphold, bear up, keep up, support, sustain” (Castiglioni and Mariotti 2007; Lewis and Short 1879).

In French, German, and Dutch, the corresponding lexemes had been stably in use for centuries, as reported by Du Pisani (2006). Conversely, according to the Oxford English Dictionary (OED), the first attestation of *sustainability* in English was in 1835 as “the capacity to be upheld, or defended as valid and true,” imported from French *soutenir*, in a sense referring to arguments (OED). Significantly, this normative aspect of validity and righteousness is a core feature that will persist across successive senses. Subsequently, in the 1950s, the time aspect also emerged as one that could be preserved to a certain extent in the sense “the quality of being sustainable at a certain rate or level,” while the environmental understanding of the term is reported from the 1980s (OED).

What is more, the overall estimated frequency of *sustainability* since its first attestation, as recorded in Google Books Ngrams, a dataset based on the Google Books corpus of several million books printed in English between 1500 and 2010, shows a steady increase, rising from 0.0001 in 1830 to 6.5 (per million words) in 2010, thus testifying to a growing salience.

The foundational ideas of sustainability, however, are very ancient and can be traced back at least to 450 BC, when anxieties about deforestation began to spread over the cutting of the cedars of Lebanon in Ancient Greece (Grove 1995, 6). Concerns about various forms of environmental degradation resulting from human activities can be found in the writings of Plato in the 5th century BC and of Pliny the Elder in the 1st century AD (Du Pisani 2006). Furthermore, in Medieval times, those ideas appear in the writings of Francis of Assisi, and later in the geometrically surveyed forests of the Enlightenment, in an epoch when people wanted to get ‘back to nature’ and when a connection between economy and ecology was rediscovered (Grober 2012).⁴

Hans Carl von Carlowitz’s forestry treatise *Sylvicultura Oeconomica* (Silviculture and

⁴ A comprehensive historical survey of the development of sustainability as a concept falls beyond the scope of this study. However, for more details, see Grove (1995), Grober (2012) and Caradonna (2014).

Economics), published in 1732, is argued to contain, *in nuce*, the modern concept of sustainability. In it, von Carlowitz, a forestry expert, coined the expression *nachhaltige Nutzung* (sustainable use) of forest resources (Kosatica and Smith 2025), maintaining that as much wood should be cut as could be regrown.

In the late 20th century, the term broadened to encompass the preservation of environmental resources, as noted in Ernst Basler's 1972 work. However, the turning point for the emergence of the different shades of the term that are crucial nowadays was the UN Commission on Environment and Development's landmark report *Our Common Future*, generally referred to as the Brundtland Report, which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987, 43).

This definition is widely credited with popularising the view of sustainability as a holistic approach encompassing the environmental, economic and social dimensions, highlighting the interconnectedness of these aspects as crucial to achieving lasting prosperity, and spreading the concept of sustainable development into international policy discourse.

One conceptualisation was introduced in this respect, that of the three pillars, i.e. environmental, economic and social, which has gained widespread traction to the point of becoming commonplace (Purvis, Mao and Robinson 2019). This model, also known as the Triple Bottom Line (Elkington 1998), is typically depicted as three intersecting circles, with overall sustainability in the middle (Figure 1a). In it, sustainability is viewed as balancing trade-offs among seemingly equally desirable goals within these three categorisations. Environmental sustainability refers to preserving natural resources without foregoing economic and social progress, ensuring that human activity stays within ecological limits. Its key ideas are the conservation of biodiversity and ecosystems, responsible use of natural resources, waste management, pollution control, and climate change mitigation. Economic sustainability entails balancing economic growth and profit generation with the long-term impact on the environment and people. It involves supporting economic systems that promote prosperity without undermining social or environmental systems. Finally, social sustainability concerns human well-being, equity, and social justice and is conceived as improving the quality of life for all communities, ensuring that development (including healthcare, education, housing, and human rights) benefits everyone fairly.

This framework has been criticised for lacking theoretical grounding, oversimplifying a complex trade-off, and treating each aspect separately and as equally salient (Rupprecht, et al. 2020). A challenging aspect is understanding how the three dimensions interact with and depend on one another at local, regional, and global scales. Furthermore, a crucial question is whether economic development should be allowed to substitute for environmental integrity, and

if so, to what extent (Wu 2013). Two different approaches have been introduced to answer these questions: weak and strong sustainability. Weak sustainability considers the economic system as a closed, isolated system that can grow indefinitely, views natural resources as superabundant or substitutable with other forms of capital and supports maximising monetary compensation for environmental degradation. What is essential for future generations is that the sum of natural and human-made capital must not decline over time if we are to have sustainable development. Such a position leads to maximising monetary compensation for environmental degradation. In addition, from a weak sustainability perspective, technological progress is assumed to continually generate technical solutions to environmental problems (Pelenc, Ballet and Dedeurwaerdere 2015) (Figure 1b). By contrast, proponents of strong sustainability postulate that natural capital is not merely a stock of resources to be exploited, and is qualitatively very different from manufactured capital, since its consumption is usually irreversible. Natural capital is seen as vital for the welfare and well-being of future generations. Therefore, if we want to have sustainable development, neither natural nor human-made capital must decline over time. Moreover, a careful balance between economic growth and the preservation of natural resources is considered paramount (Figure 1c).⁵

Hence, there are some crucial differences between the two views. The first difference has to do with substitutability, i.e. “weak sustainability assumes that manmade and natural capital are basically substitutes,” while “strong sustainability assumes that manmade and natural capital are basically complementary” (Daly 1995, 49). Moreover, the second difference concerns environmental ethics. Specifically, in weak sustainability, nature has instrumental value and is valuable only insofar as it provides benefits to humans.

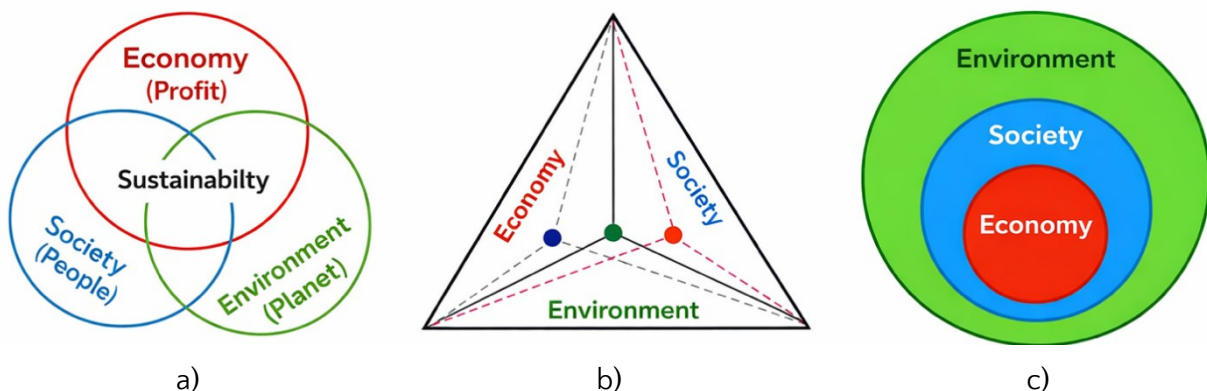


Fig.1: Different representations of sustainability: a. Triple Bottom Line, b. Weak Sustainability, and c. Strong Sustainability, adapted from Wu (2013)

⁵ Multiple intermediate positions exist between the ‘hardcore’ weak and strong sustainability views. For more details, see Pelenc, Ballet and Dedeurwaerdere (2015).

These different views of sustainability have fundamental repercussions, especially when we consider business stakeholders and the specific message they want to convey. It is these specific differences that will be investigated in our corpus-based study.

The polysemous character of *sustainability* emerged relatively recently (Gries 2019; Croft and Cruse 2004) as the term specialised across different fields. Thus, unlike proper polysemy, it rather revolves around mechanisms of figure and ground (Talmy 2000) or perspectivisation (Fillmore 1977), whereby one specific dimension or pillar is given greater prominence than the others, while all three remain presupposed as meaningful elements in the background. Moreover, the evolution of the recent meanings of *sustainability* is consistent with Croft's (2000) evolutionary theory of language change, which posits language change as a two-step process involving a) innovation, that is, the functional production of variation *via* altered replication and b) the propagation of a specific variant *via* selection. Propagation, in Croft's (2000) framework, is a social process related to the social structure of speech communities and to the speakers' desire to identify with a particular speech community. Propagation of a variant, in this respect, begins when new forms are re-analysed as having a social value. This is consistent with the development of specific views of sustainability across fields that, to some extent, are involved in tackling the climate crisis. What is peculiar, however, is that these new meanings did not develop from one that emerged from the *parole* (Saussure 1916) as autonomous grassroots innovations by speakers later accepted within the speech community. Conversely, they were introduced from 'above' in a report produced by a restricted group of individuals with a given scientific and power authority (Verschuere 1985).

Nowadays, *sustainability* is differently characterised across scholars and disciplines. Its features fit with Pollitt and Hupe's (2011) definition of "magic concept". Magic concepts are key terms pervasive among academics and practitioners, which "are very broad, normatively charged, lay claim to universal or near application, [...] and do not easily admit opposites" (Pollitt and Hupe 2011, 643). They are typically characterised by the following features:

- *Broadness*: they cover a huge domain, have multiple and often conflicting definitions, and a large scope;
- *Normative Attractiveness*: they have an overwhelmingly positive connotation;
- *Implication of Consensus*: they overcome earlier policy conflicts;
- *Global Marketability*: they are fashionable and feature prominently in official policy documents, reform project titles, and new units in both governmental and university departments.

Sustainability indeed displays these features: it has a core definition, but also many more specific ancillary senses, sometimes at odds with one another; it has a positive connotation; and it is not easy to oppose it without delegitimising a century of climate and weather science. Moreover, it carries an implication of consensus, as “by placing itself in opposition to environmental, societal and economic collapse, and by never fully defining itself, it does not leave room for opposition” (Tøllefsen 2021, 49) and is fashionable.

At the same time, while operating as a broadly shared normative ideal – such as in the notion of ‘sustainable development’ – that temporarily unifies heterogeneous and potentially conflicting demands without resolving their underlying tensions (Laclau 2005), *sustainability* has been viewed as a floating signifier, namely a signifier that “means different things to different people, fluctuating between different forms of articulation in different projects” (Laclau 2005, 133), where none of these meanings fully dominates. Its meaning is continuously contested and renegotiated across environmental, economic, and political discourses, and its effectiveness lies precisely in this dual character.

3. Theoretical background

This study synergically integrates theories from Critical Discourse Analysis (CDA), an interdisciplinary research framework to the study of language that examines how discourse both reflects and shapes power relations and ideological processes in society (Wodak and Meyer 2009; Wodak 2007; Van Dijk 2001; Fairclough 1995), with corpus linguistics techniques, defined very generally as the quantitative study of language based on the use of large language corpora and computational tools (McEnery and Hardie 2012).

CDA, which combines multiple heterogeneous approaches, is committed to analysing how language reflects, reinforces, and challenges hidden power structures, inequality, dominance, and ideology in society, revealing how social realities are built and maintained through discourse. It looks beyond literal meaning to uncover power embedded in vocabulary, grammar, text structure, and even non-verbal cues. It sees language as a social practice that can both legitimise and resist social hierarchies (Fairclough 1995) and focuses on “opaque as well as transparent structural relationships of dominance, discrimination, power and control, as they are manifested in language” (Wodak 2007, 209). Thus, CDA typically entails a qualitative study of discourse through a close, detailed examination of a small number of texts.

Discourse structures, in CDA and, in particular, in Van Dijk’s (2024; 2001) framework, are the organised linguistic and semantic patterns through which social knowledge, ideologies, and power relations are expressed, processed, and reproduced. These structures operate at multiple levels and interact with social cognition (shared mental models, attitudes, and ideologies).

Another crucial concept, in this respect, introduced within the cognitive linguistics paradigm, is that of frame. Frames are mental structures that provide a lens through which we interpret information, understand situations, and guide our actions, simplifying reality to make it manageable and actionable. They act as cognitive shortcuts through which we interpret reality and are activated by the recurrent use of specific words and expressions, defining what we see as a problem, what is at stake, and what solutions are possible, influencing our interpretation of reality (Stibbe 2021; Lakoff 2014).

Corpus Linguistics, as a long-established computer-assisted method for identifying linguistic patterns in large-scale corpora (Egbert, Biber and Gray 2022; McEnery and Hardie 2012), when linked to CDA, may facilitate and integrate the qualitative study of language and discourse. This combination is usually referred to as corpus-assisted discourse studies (henceforth CADS), and its aim is the uncovering, in the discourse type under investigation, of what we might call “non-obvious meaning, that is, meaning which might not be readily available to naked-eye perusal” (Partington 2008, 191). Research integrating the usage of corpus techniques with discourse analytical methodologies from different perspectives is now well established in the literature as an effective means of unravelling the complexities of discourse structures and power relations (Baker and McEnery 2015; Partington, Duguid and Taylor 2013; Baker, et al. 2008; Baker 2006; Partington 2004, among others).

This approach entails not only a cross-feeding of quantitative and qualitative analytical perspectives but also an interrelated set of analytical processes, procedures, and techniques. On the one hand, corpus analysis comes in to solve the problem of the limited number of texts analysed in CDA, and of the representativity of discourse patterns, since, as Stubbs argues, “repeated patterns show that evaluative meanings are not merely personal and idiosyncratic, but widely shared in a discourse community. A word, phrase or construction may trigger a cultural stereotype” (Stubbs 2001, 215).

On the other hand, qualitative CDA methods can provide a better understanding of how patterns identified through quantitative measures are used in context or reveal patterns that quantitative analysis did not identify. For example, in the analysis of collocations, namely the “frequent co-occurrence of two lexical items in the language” (Greenbaum 1974, 82), automatic detection softwares are currently unable to discriminate between literal and figurative uses of a given term, or to account for the different frames a lexeme may evoke. We contend, in this respect, that the analysis of collocations and co-occurrence patterns of *sustainability* and *sustainable* in the specialised corpora selected may provide helpful insights for discriminating among different definitions of *sustainability*.

4. Data presentation and methodological outline

To investigate the meanings of sustainability and sustainable in discourse-specific English and shed light on the specific senses of the terms emerging in context, four specialised English-language corpora were selected for analysis. A detailed examination of co-occurring patterns and lexemes aims to shed light on whether any of the three pillars of sustainability outlined in Section 2 prevail in the emerging senses.

The corpora available on the corpus manager and text analysis tool Sketch Engine (Kilgariff, et al. 2004) are the following:

- The EcoLexicon English Corpus (EEC), a text corpus of contemporary environmental texts prepared by the LexiCon Research Group at the University of Granada for the development of a terminological knowledge base on the environment. It consists of 28,616,037 tokens.
- The Environment Corpus, a domain-specific corpus of English texts related to environmental science, collected from the Internet by SpiderLing in 2011. It consists of 70,559,441 tokens.
- The Elsevier OA CC-BY Corpus (henceforth Elsevier Corpus), an English corpus consisting of 40,000 scientific open access research papers published by Elsevier journals, which are a representative sample from across scientific disciplines. It contains articles published between 2014 and 2020 in scientific, technical, and medical research fields. It consists of 232,511,611 tokens.
- The United Nations Parallel Corpus (UNPC) – English, an English corpus from the multilingual collection of 6 sentence-aligned parallel corpora created from official records and other parliamentary documents of the United Nations between 1990 and 2014. It consists of 798,630,043 tokens.

The selected corpora are designed to cover the main dimensions or pillars that shape the variety of contemporary definitions of *sustainability*, namely the environmental, economic/institutional, and social aspects. However, the distinction cannot necessarily be clear-cut.

Admittedly, the selection of corpora presents some limitations. First of all, although all the corpora feature contemporary texts, the data for each were not collected over the same period. Secondly, none of the corpora available on Sketch Engine provides data exclusively related to the economic domain or the social aspects. In this respect, the UNPC corpus was chosen primarily to represent the economic/institutional domain. However, given the broad scope of United Nations policy debates, it is also expected to include instances in which social

sustainability is presupposed. By contrast, the Elsevier Corpus is expected to represent the social aspect.

At the same time, it is necessary to point out that two corpora were selected to represent the environmental aspect, rather than one, to balance, as far as possible, their sizes with the others.

Table 1 below provides details on the size and overall reference domain(s) of the selected corpora.

Corpus	No. of Tokens	Reference Domain(s)
EcoLexicon English Corpus (EEC)	28,616,037	Environment
Environment Corpus	70,559,441	Environment
Elsevier Corpus	232,511,611	Social
United Nations Parallel Corpus (UNPC) – English	798,630,043	Economic/ Institutional – Social

Tab. 1: Size and typology of the corpora analysed

Operatively speaking, the study integrates qualitative and quantitative methodologies in an ‘eclectic’ approach (Baker 2006, 16) which combines the tools and techniques of corpus linguistics with the theoretical and analytical framework of critical discourse studies.

The methodology can be outlined in the following stages:

1. Data examination and description. The selected corpora were queried through the Sketch Engine interface, examining word sketches of the lexemes *sustainability* and *sustainable* to reveal the most statistically frequent collocations and the most relevant discourse patterns. A collocation refers to the statistically significant co-occurrence of lexical items within a defined textual span in a corpus, reflecting patterned language use rather than intuitive judgments alone (Hoey 1991; Sinclair 1991). The principle of collocation is based on the idea that many of the patterns we use to encode meanings occur with remarkable frequency, as speakers draw upon a relatively limited repertoire of conventionalised “ways of saying” (Sinclair 1991, 108). Furthermore, it revolves around the idea that “many, if not most, meanings require the presence of more than one word for their normal realisation, and patterns of co-selection among words, which are much stronger than any description has yet allowed for, have a direct connection with meaning” (Sinclair 1998, 4).
2. Interpretation. The patterns outlined were interpreted using concordance and microtext analyses within the CDA framework, based on a random sample of the data for each corpus.
3. Explanation of the findings. The patterns outlined were explained in light of the available linguistic context.

5. *Sustainability* and *Sustainable* in specialised corpora: analysis

From a statistical point of view, before focusing on each lexeme in a dedicated subsection, it is worth examining the number of occurrences of the two key lexemes in the selected corpora, as reported in Table 2.

Corpus	<i>Sustainability</i> No. of Occurrences	<i>Sustainable</i> No. of Occurrences
Environment Corpus	18,661	48,615
EcoLexicon	993	2358
Elsevier Corpus	11,763	15,339
UNPC	36,446	321,440

Tab. 2: Number of occurrences of *sustainability* and *sustainable* in the selected corpora

What clearly emerges from these data is that both lexemes exhibit a high number of occurrences relative to the size of the corpora. Moreover, discussion around sustainability appears salient not only in strictly environmental or climate-related corpora but also across all sectors at stake. At the same time, however, the occurrences of the adjective *sustainable* significantly exceed those of *sustainability* in all four corpora examined, testifying (perhaps) to a higher level of perceived clarity of the term due to the possibility of employing it in more ‘concrete’ domains. *Sustainable* can, in fact, be found in adjective-noun combinations with a range of more concrete nouns, such as *tourism*, *agriculture*, *yield*, *forestry*, *use*, *technology*, and *transition*, among others (as will be examined in 5.2), which may shed light on the meaning nuances of the sustainability concept. The following two subsections report and discuss the data on the most frequent collocates for each term considered and present the most relevant co-occurrence patterns.

5.1 *Sustainability* in specialised corpora

Our analysis begins by examining the most relevant co-occurring patterns of *sustainability* across the four selected corpora, assuming that, given the term’s high level of underspecification and polyfunctionality, co-occurring terms may provide helpful insights into its interpretation. Specifically, as we are analysing the behaviour of a noun, it is worth considering specific syntactic constructions, namely verbs in transitive constructions where the term features as the direct object, pre-modifiers, that is, elements placed before the head noun other than determiners, notably in this case adjectives or nouns (Biber, et al. 1999; Quirk, et al. 1995), and nouns modified by *sustainability*.

Table 3 reports the most frequent verbs in transitive verb + *sustainability* syntactic patterns.

Environment Corpus	EcoLexicon	Elsevier Corpus	UNPC
Verb+ <i>sustainability</i>	Verb+ <i>sustainability</i>	Verb+ <i>sustainability</i>	Verb+ <i>sustainability</i>

<i>ensure</i>	276	<i>assess</i>	22	<i>improve</i>	204	<i>ensure</i>	3,883
<i>improve</i>	204	<i>ensure</i>	19	<i>ensure</i>	147	<i>achieve</i>	555
<i>promote</i>	171	<i>achieve</i>	12	<i>assess</i>	119	<i>promote</i>	495
<i>achieve</i>	161	<i>improve</i>	11	<i>achieve</i>	87	<i>enhance</i>	446
<i>reduce</i>	89	<i>promote</i>	7	<i>increase</i>	80	<i>maintain</i>	247
<i>increase</i>	83	<i>advance</i>	6	<i>evaluate</i>	77	<i>guarantee</i>	185
<i>enhance</i>	49	<i>threaten</i>	6	<i>promote</i>	69	<i>threaten</i>	175
<i>incorporate</i>	45	<i>regard</i>	5	<i>enhance</i>	56	<i>integrate</i>	168
<i>embrace</i>	42	<i>meet</i>	4	<i>affect</i>	37	<i>increase</i>	167

Tab 3: Most frequent verbs in verb+*sustainability* constructions across corpora

All the featured verbs, ranging from *ensure*, to *improve*, *enhance*, *advance* and *guarantee*, among others, display the prominence of sustainability as a societal driver and an ideal outcome which cannot be taken for granted, and for which society as a whole must work together, be the featured sense related to the economic, the social, or the environmental aspect, as testified by excerpts (1) and (2) (Stibbe 2021).

- (1) New Zealand considers that it is imperative that the two further sessions of the Conference, which are scheduled for 1994, result in the adoption of strengthened measures to regulate high-seas fishing activities, thereby ensuring the sustainability of resources that are becoming increasingly scarce. (UNPC)
- (2) Natural ecosystems are theoretically self-sustaining, but increasing human interference is threatening their sustainability in many parts of the world, and various methods of ecosystem management have been introduced in an attempt to preserve and protect characteristic natural ecosystems. (EcoLexicon)

The 10 most frequent pre-modifiers with *sustainability* in the four corpora examined are reported in Table 4. Across the selected corpora, with figures consistent with their respective size, *environmental* emerges as the most frequent pre-modifier, followed by *long-term* in three corpora, except in UNPC, where the second most recurrent pre-modifier is *debt*. These data indicate that the environment is generally perceived as the most salient sustainability dimension among those at play. At the same time, there is a widespread emphasis on the temporal aspect across corpora.

Environment Corpus		EcoLexicon		Elsevier Corpus		UNPC	
Pre-mod+ <i>sustainability</i>		Pre-mod+ <i>sustainability</i>		Pre-mod+ <i>sustainability</i>		Pre-mod+ <i>sustainability</i>	
<i>environmental</i>	935	<i>environmental</i>	45	<i>environmental</i>	630	<i>environmental</i>	4,836
<i>long-term</i>	215	<i>long-term</i>	13	<i>long-term</i>	206	<i>debt</i>	2,762
<i>ecological</i>	162	<i>weak</i>	12	<i>social</i>	193	<i>long-term</i>	2,232
<i>economic</i>	113	<i>ecological</i>	8	<i>economic</i>	114	<i>financial</i>	770
<i>global</i>	112	<i>strong</i>	8	<i>financial</i>	85	<i>economic</i>	285

<i>social</i>	79	<i>financial</i>	7	<i>global</i>	66	<i>global</i>	281
<i>corporate</i>	68	<i>corporate</i>	6	<i>corporate</i>	65	<i>social</i>	264
<i>urban</i>	63	<i>future</i>	5	<i>ecological</i>	59	<i>fiscal</i>	181
<i>seafood</i>	43	<i>overall</i>	4	<i>urban</i>	57	<i>ecological</i>	123
<i>community</i>	42	<i>agricultural</i>	4	<i>water</i>	56	<i>future</i>	95

Tab 4: Most frequent pre-modifiers of *sustainability* across corpora

Detailed examination of a random sample of the data across all the corpora highlights that even in corpora from different operative fields, discussion about the environment, and specifically the phrase ‘environmental sustainability,’ is often complemented by other keywords that may clarify its meaning nuances, such as *greenhouse emission* in (3) from the UNPC, and *climate change* and *green* in (4) from the Environment Corpus. *Green*, however, as a lexeme, may be associated with the same ambiguity and misleading appeal that sustainability is usually accused of, and assessing the trustworthiness of those who employ it solely on the basis of verbal or written claims is not always easy (Parguel, B  noit-Moreau and Russell 2015; Baum 2012).

At the same time, multiple factors broadly connected to the so-called three pillars of sustainability (Purvis, Mao and Robinson 2019) can be detected in the same sentence, as in (5), which displays that sustainability is typically viewed as a broad-ranging issue encompassing multiple interrelated aspects.

- (3) Environmental sustainability is also becoming an increasingly alarming issue in the region, which is responsible for 34 per cent of global greenhouse gas emissions and is home to 7 of the 15 major global emitters of such emissions. (UNPC)
- (4) The adverse effects of climate change on environmental sustainability and human wellbeing are forcing most countries to move away from the “brown” or traditional economy to the “green” economy – a viable option for sustainable development. (Environment Corpus)
- (5) Timely forest monitoring is a required precondition to the successful implementation of national policies and international agreements toward the ultimate goal of balancing economic development and environmental sustainability. (Elsevier Corpus)

As a pre-modifier, *long-term* is used consistently across all the corpora examined, with durability as a prominent feature. However, not all examples are equally clear about the specific reading of this expression and the kinds of resources it implies. Specifically, while in (6) from the EcoLexicon Corpus, the context provides valuable insights that shed light on its intended meaning, in policy-related discourse of the type featured in (7) from the UNPC, despite the

presence of such indexical words as *measures*, *management* and *conservation*, the meaning of the expression still appears rather vague and underspecified.

- (6) Noxious weeds increase soil erosion and soil sedimentation. Protecting and conserving the surface soil are critical to the long-term sustainability of healthy, functioning ecosystems. Soil provides nutrients and moisture necessary for plant growth. (EcoLexicon)
- (7) We are all aware of the need to establish appropriate measures to secure such conservation and management as a means of promoting the long-term sustainability of the resources. (UNPC)

After the first couple of most frequent co-occurring pre-modifiers, the corpora tend to differentiate themselves in line with their respective fields of specialisation. In this respect, the adjective *financial* appears as a very common pre-modifier in UNPC. In (8), however, the topic at stake is women's economic independence, a key element of social sustainability (see Section 2). At the same time, in (9), the sense of social sustainability is clarified through references to human needs and an inclusive society.

- (8) Local committees managed over 60 per cent of the women's programme centres, as well as all community rehabilitation and youth activity centres, with the Agency providing financial and technical support and actively promoting self-management and financial sustainability. (UNPC)
- (9) In the development of [district name], particular focus will be given to social sustainability with special reference to the development of an inclusive society where basic human needs are fulfilled. (Elsevier)

Adjectives such as *weak* and *strong* occur in numerous attestations as pre-modifiers only in the EcoLexicon (10), where the 'academic' meaning of the two views of sustainability, as discussed in Section 2, is reported (Pelenc, Ballet and Dedeurwaerdere 2015). The absence of these terms in the other corpora may indicate that distinguishing between these two core approaches is crucial in environmental and climate-related circles, as well as in academic circles. By contrast, corporations or policymakers may not necessarily wish to clarify whether they subscribe to a weak or strong sustainability policy as a strategic move to avoid losing widespread consensus,

since, it must not be forgotten, we are dealing with a magic concept (Tøllefsen 2021; Pollitt and Hupe 2011) with a broad-ranging appeal hard to counter.

- (10) The requirements for weak sustainability are met when a tree (natural capital) is cut for the construction of a frame house (human-made capital). However, if the tree is cut and cast aside in a land-clearing project, the requirements for weak sustainability are not met. Strong sustainability requires that depletions of one sort of natural capital be compensated for by increases in the same or similar natural capital. (EcoLexicon)

The three founding pillars of sustainability appear together in many instances of the term, as in (11) and (12), even when other social and economic aspects are not explicitly mentioned as sustainability dimensions (Purvis, Mao and Robinson 2019). This phenomenon, consistently with the broad-ranging scope of the UN sessions and documents, is particularly evident in the UNPC.

- (11) It urges all Governments to adopt and/or strengthen integrated national shelter strategies based on the enabling approach and principles of social, economic and environmental sustainability, and to review them regularly with a view to ensuring the improvement of living conditions, particularly of the rural and urban poor, women and the homeless. (UNPC)
- (12) The programme includes four focus areas aligned with the strategic plan and with the United Nations Development Framework: (a) rule of law and participation; (b) reduction of inequality gaps for cohesion, inclusion and quality of life; (c) environmental sustainability, resilience, and risk management; and (d) sustainable and equitable economic development. (UNPC)

In other corpora as well, sustainability is widely perceived as multifactorial, as shown in excerpt (13), where a commitment to environmental sustainability is coupled with a reference to science and technology.

- (13) Now, however, the greatest technological challenge is to reconcile technology with environmental sustainability consequences. The survival of humankind and of the planet that supports it now requires that the established two-way interaction between science and technology become a three-way relationship, including sustainability through the application of green science and technology. (EcoLexicon)

When the lexeme occurs without pre-modifiers, more senses may appear intertwined, as in (14). Here, the concept of ‘sustainable development’ is defined. However, although environmental concerns are more prominent, other elements seem to be at stake (social, economic, and political). The same pattern emerges in (15), where the economic and social aspects co-occur as crucial elements of sustainability.

(14) The PAC has stated that its environmental policy would adopt a holistic approach, committing itself to the conservation of ecosystems and biotic diversity and accepting the concept of sustainable development, that is, the wise and non-destructive use of resources, with the understanding that a prerequisite for sustainability is that disparities in social, economic and political development be ended. (UNPC)

(15) The efficiency of the utilisation of human resources depends on how the benefits of economic growth are distributed and how that affects human conditions, which are an important determinant of the sustainability of economic development and social progress. (UNPC)

Table 5 outlines the most frequent nouns in *sustainability* + noun patterns across the four corpora. These data show that sustainability is often viewed as an issue, or a challenge, as evidenced by predicative clauses (featuring such nouns as *issue*, *concern*, *challenge* and *goal* as the main predicative expressions), which are not reported here because they are not relevant to all the corpora analysed.

Environment Corpus	EcoLexicon	Elsevier Corpus	UNPC
<i>Sustainability</i> + noun	<i>Sustainability</i> + noun	<i>Sustainability</i> + noun	<i>Sustainability</i> + noun
<i>issue</i> 324	<i>indicators</i> 11	<i>transition</i> 492	<i>framework</i> 328
<i>initiative</i> 242	<i>science</i> 11	<i>assessment</i> 324	<i>analysis</i> 303
<i>program</i> 186	<i>assessment</i> 11	<i>issue</i> 192	<i>issue</i> 294
<i>strategy</i> 172	<i>debate</i> 8	<i>practice</i> 168	<i>criterion</i> 202
<i>goal</i> 155	<i>issue</i> 8	<i>strategy</i> 165	<i>reporting</i> 181
<i>effort</i> 145	<i>criterion</i> 7	<i>criterion</i> 163	<i>indicator</i> 151
<i>report</i> 105	<i>principle</i> 6	<i>challenge</i> 134	<i>assessment</i> 110
<i>standard</i> 104	<i>index</i> 6	<i>goal</i> 122	<i>goal</i> 90
<i>plan</i> 104	<i>guideline</i> 5	<i>indicator</i> 117	<i>report</i> 84
<i>criterion</i> 92	<i>process</i> 5	<i>requirement</i> 105	<i>challenge</i> 75

Tab. 5: Most frequent nouns in *sustainability*+noun patterns across corpora

Among the various nouns, *indicator* is especially relevant for clearly specifying the measures adopted to improve sustainability (16). However, other nominals shed only partial light on the

intended sense of sustainability or clarify whether specific measures or criteria have been employed to determine whether an activity is effectively sustainable.

- (16) Suggested sustainability indicators for the oil industry are: - proportion of gas to OIL held and sold on an 'ENERGY equivalency' basis; - estimated CARBON content of the oil and gas portfolio; - renewables content of the energy portfolio on an energy equivalency basis. (UNPC)
- (17) The authors appeal to common EU sustainability criteria, including solid biomass, to make the consumption of biomass in the electricity and heating/cooling sectors more flexible and efficient. (Elsevier)

Overall, the corpus analysis of the term, together with an examination of its co-text and context of use, reveals that, in the majority of instances, determining the specific reading of the term presupposed, let alone whether the author of the text endorses a weak or a strong sustainability viewpoint, is not always a straightforward task. In most of the instances examined, multiple aspects seem to be at stake, corresponding to the three main pillars of sustainability (Purvis, Mao and Robinson 2019), confirming the polysemous and flexible character of *sustainability* as an encompassing lexeme and concept. In the next section, the behaviour of the adjective *sustainable* is discussed.

5.2 Sustainable in specialised corpora

As reported in Table 1, occurrences of *sustainable* significantly exceed those of *sustainability* in the corpora analysed. Examining the most frequent co-occurring pre-modifiers (Table 6), which in this case are adverbs, instances of *environmentally* are the most numerous across corpora. At the same time, *ecologically* and *socially* feature as the second- and third-most-frequent pre-modifiers. These results, coupled with the high frequency of *economically* across all corpora, further corroborate the analysis of *sustainability* presented in 5.1, in which the environmental aspect emerged as the most salient dimension. At the same time, they attest to the salience of the social and economic dimensions.

Environment Corpus		EcoLexicon		Elsevier Corpus		UNPC	
Pre-mod+sustainable		Pre-mod+sustainable		Pre-mod+sustainable		Pre-mod+sustainable	
<i>environmentally</i>	778	<i>environmentally</i>	29	<i>environmentally</i>	248	<i>environmentally</i>	2,258
<i>ecologically</i>	253	<i>ecologically</i>	14	<i>socially</i>	63	<i>socially</i>	223
<i>truly</i>	252	<i>economically</i>	6	<i>economically</i>	36	<i>ecologically</i>	222
<i>economically</i>	110	<i>truly</i>	4	<i>ecologically</i>	34	<i>truly</i>	197
<i>socially</i>	58	<i>technically</i>	4	<i>financially</i>	31	<i>economically</i>	164

<i>highly</i>	39	/	<i>truly</i>	29	<i>financially</i>	151
<i>genuinely</i>	34	/	<i>fully</i>	13	<i>fiscally</i>	35
<i>fully</i>	33	/	<i>relatively</i>	9	<i>politically</i>	26
<i>financially</i>	28	/	<i>highly</i>	8	<i>genuinely</i>	25
<i>fiscally</i>	12	/	<i>strongly</i>	6	<i>fully</i>	22

Tab. 6: Most frequent pre-modifiers of *sustainable* across corpora

Moreover, the presence of an epistemic stance adverbial (Biber, et al. 1999) like *truly*, among the most frequent co-occurring adverbials is worth mentioning, testifying that mere claims that an object or activity is green or sustainable are not necessarily trustworthy, unless corroborated by specific requirements, as in excerpt (18) (Machin and Liu 2024; Parguel, B  noit-Moreau and Russell 2015; Baum 2012).

- (18) For a corporation to be truly sustainable, management systems and processes must be continually reviewed to ensure their effectiveness. (Environment Corpus)

Examining the most frequent co-occurring pre-modifiers reveals that more apparent meanings emerge as the various adverbials qualify the specific reading of *sustainable* intended, as in (19), (20), and (21). At the same time, in (21), the specific features of *socially sustainable* are further elucidated by the presence of other adjectives, whereas in (19) and (20), the inextricable connection between the economy and the environment is shown in senses that feature multiple elements together.

- (19) Since July 1992, the Department has continued to promote the objectives of environmentally sustainable economic development through a broad range of information activities designed to maintain the momentum and satisfy the heavy demand for information on this issue worldwide. (UNPC)
- (20) The most important question facing political and business leaders today is if the renewable energy technologies and environmentally sustainable agricultural and business practices are largely available, why are we largely failing to adopt the measures needed to head off catastrophe? (Environment Corpus)
- (21) Making manufacturing a central part of the future of work means developing work environments that are technically efficient and socially sustainable: creative, flexible, safe, and welcoming to personal and professional development despite differences in competence, degrees, age, or culture. (Elsevier)

Table 7 presents data on the most frequent nouns modified by *sustainable*. Not surprisingly, given the impact of this phrase across numerous perspectives in contemporary discourse, the collocation ‘sustainable development’ by far exceeds all the others.

Environment Corpus		EcoLexicon		Elsevier Corpus		UNPC	
Sustainable+noun		Sustainable+noun		Sustainable+noun		Sustainable+noun	
<i>development</i>	7,344	<i>development</i>	660	<i>development</i>	1,479	<i>development</i>	16,4521
<i>management</i>	1,499	<i>management</i>	130	<i>goal</i>	782	<i>management</i>	15,878
<i>practice</i>	1,244	<i>use</i>	111	<i>management</i>	657	<i>use</i>	8,424
<i>use</i>	1,181	<i>yield</i>	101	<i>use</i>	455	<i>goal</i>	5,186
<i>future</i>	1,090	<i>agriculture</i>	84	<i>system</i>	394	<i>consumption</i>	4,541
<i>agriculture</i>	811	<i>planning</i>	59	<i>production</i>	320	<i>growth</i>	3,778
<i>community</i>	714	<i>system</i>	49	<i>practice</i>	291	<i>energy</i>	3,507
<i>solution</i>	653	<i>approach</i>	42	<i>intensification</i>	199	<i>strategy</i>	3,159
<i>energy</i>	613	<i>policy</i>	35	<i>solution</i>	199	<i>livelihood</i>	2,895
<i>design</i>	581	<i>production</i>	32	<i>innovation</i>	190	<i>peace</i>	2,776

Tab 7: Most frequent nouns in *sustainable*+ noun constructions across corpora

Based on the available data, it is sometimes possible to determine the specific sense of the phrase ‘sustainable development,’ as in (22).

- (22) Similarly, it has been stated that “sustainable development implies using renewable resources in a manner which does not eliminate, or degrade them, or otherwise diminish their usefulness for future generations.” (Elsevier)

Since many co-occurring nouns refer to more ‘concrete’ situations or activities, such as *agriculture*, *yield*, or *practice*, the initial expectation was that this feature might be crucial for clarifying the intended sense of *sustainable* presented. However, as shown in example (23), this is not always the case. From this example, we only understand that sustainable agriculture combines technology and tradition, but we do not learn how or to what extent. Thus, while also introducing the ambiguous adjective *green*, this example does not actually contribute to clarifying the term’s intended sense.

- (23) Reinvest in research geared toward leading a global movement in sustainable agriculture, combining technology and tradition to create a new and meaningful Green Revolution. (Environment Corpus)

At the same time, as shown by excerpts (24) and (25), sometimes multiple senses seem to be blended, encompassing features of the environment and the economy in the first place.

- (24) Energy efficiency is a policy priority in Europe, with the goal to secure renewable and sustainable energy supply by reducing greenhouse gas (GHG) emissions, saving costs and encouraging economic competitiveness. (UNPC)
- (25) Sustainable land management is at the foundation of societal goals to produce food, fuel, and fodder in an environmentally sound and supportable manner over the long-term. (Elsevier)

Overall, the expectation that disentangling the meaning of *sustainable* across the various corpora would identify specific nuances and the kind of sustainability approach endorsed by the author of a given message is only partially met. While the presence of co-occurring adverbs such as *environmentally* or *economically* indicates specific aspects considered, multiple dimensions seem to be presupposed in the background and are hinted at by other keywords.

At the same time, while *sustainable* tends to co-occur not only with abstract nominals but also with more concrete ones, such as *yield* or *agriculture*, in the corpora analysed, the references remain rather general and vague, hindering a clear understanding of the approach pursued.

6. Concluding remarks

Based on the data examined, *sustainability* is consistently framed as a pivotal societal driver across corpora, with greater prominence attributed to the environment, generally deemed the root of sustainability. At the same time, our analysis confirms that experts and stakeholders from the most disparate fields tend to recur to the same expressions and collocations – to the point that they may even become trite and sometimes be labelled meaningless by other authors (Owen 2011), when they are fashionable, have a positive aura and the power to mobilise around a purportedly shared commitment (Tøllefsen 2021; Pollitt and Hupe 2011).

Comparing the empirical findings from the analysis of *sustainability* and *sustainable* in four different corpora of specialised discourse conducted in this study, several points emerge. For both terms, instances that seem to favour an environmental orientation are predominant, as evidenced by keywords related to climate or ecology, thereby demonstrating the priority given to the environmental pillar of sustainability (Purvis, Mao and Robinson 2019). However, many attestations in the corpora indicate references to multiple dimensions at the same time, thus testifying to the powerful impact and the apparent difficulty of distancing oneself from the definition of sustainability popularised by the Brundtland report (1987) and of producing more transparent definitions. The Brundtland definition paved the way for the application of the concept across multiple, diverse spheres of interest, where flexible, underdefined senses

subsequently emerged. *Sustainability* combines strong normative appeal with conceptual vagueness and broad applicability. Like other widely mobilised concepts such as *resilience*, *transparency*, or *green growth*, it derives much of its symbolic power from its apparent ability to bridge the gaps among competing objectives, such as economic growth, social equity, and ecological protection, without clearly specifying the trade-offs required to achieve them (Pollitt and Hupe 2011).

This encompassing character and the simultaneous pointing at all the so-called pillars through ‘figure and ground’ dynamics, however, seem to hinder clarity. Disentangling the specific sense of *sustainability* referred to across the various corpora examined or determining whether the texts analysed endorse a weak or strong sustainability perspective proved extremely difficult and often impossible within the scope of a single paper, due to the flexibility with which the term is used. Another reason for this difficulty is that, contrary to initial expectations, the four corpora, selected to broadly cover the various fields of application (and pillars) of sustainability, do not necessarily focus on a single aspect; rather, they tend to be wide in scope. This feature is particularly evident in the case of UNPC, given the broad focus of the UN policies and debates.

What is significant, however, is that precision is enhanced by the presence of specific nominals in *sustainability* + noun constructions. These nominals, such as *indicators*, *criteria*, and *thresholds*, among others, foster an operational definition of the term by explicitly specifying certain parameters. This is also consistent with the idea that many meanings emerge in combination, and that patterns of co-selection affect meaning generation (Sinclair 1998).

The initial research hypothesis in this study was that, especially with the adjective *sustainable*, the disambiguation of the intended meaning might be a more straightforward task, since the lexeme often co-occurs with qualitative adverbials as pre-modifiers, and with nominals that refer to concrete objects or artefacts (cars, houses, yields) or more pragmatic professional activities (agriculture, industry). However, this hypothesis is only partially confirmed. While the expression ‘sustainable development,’ another flexibly applied buzzword, is the most frequent collocation across all the corpora examined, in many occurrences of the adjective with nominals, ecology is combined with general references to business or to inclusiveness in society, thus confirming the rhetorical flexibility of ‘sustainable’ as well.

Therefore, was the empirical analysis combining the tenets of CDA with a corpus-assisted methodology effective in disambiguating and clarifying the senses in which *sustainability* and *sustainable* are employed in the corpora examined? The answer to this question is ‘only partially.’ In most cases, references to the three main pillars of sustainability appear intertwined within the same passage. Even when other indexical keywords co-occur with the terms, the predominant sense cannot always be easily detected. What is more, and perhaps even

more important, especially when we deal with corporate stakeholders, the observed instances do not allow us to determine whether the featured sense presupposes weak or strong sustainability, and thus which specific pillar is prioritised.

The study also displays some limitations. On the one hand, the different size of the corpora hinders further comparisons. Moreover, the Elsevier corpus, selected to cover the social pillar, also encompasses other fields, as does the UNPC. As a consequence, social sustainability, when not combined with the other aspects, appears to be underrepresented in some corpora compared with the other dimensions. Furthermore, upon closer inspection, the academic, formal style of the language encountered in the corpora examined, some of which are admittedly based on academic texts, has a typically abstract, general overtone that does not foster clarity and understanding of the actual senses of the terms at stake.

Finally, a problematic aspect that emerged during the analysis concerns corpus analysis and the size of the linguistic co-text. It was observed that, to enhance clarity and gain further insights into the specific senses of the terms, expanding the size of the linguistic co-text was pivotal, as multiple elements could be discovered only in a broader context, not corresponding to the size of the sentence, but at least of a paragraph. Such a requirement, thus, makes detailed analysis of a large number of texts problematic.

Future analysis may focus on how sustainability is contrastively framed, examining English and Italian, and analysing corporate documents, such as sustainability reports for specific companies in both languages, to pinpoint a more precise field of analysis that may foster clarity of expression.

Overall, it can be argued that the analysis suggests that *sustainability* and *sustainable* can be viewed as examples of complex lexemes, whose meanings, like complex systems, emerge from the interrelation of multiple features according to ‘figure and ground’ dynamics (Talmy 2000), with all of them still presupposed in the background. However, the vagueness, magical flexibility, and all-encompassing character of sustainability risk turning it into an illusion and a potentially useless concept (Owen 2011; Redclift 2005) rather than into a transformative driver. In this way, unless it is anchored in explicit metrics, institutional constraints, and enforceable commitments, sustainability risks depoliticising fundamentally distributive and ethical questions through empty slogans that do not alter core practices.

Bionote

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