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OLD WORDS, NEW TERMS
Semantic Broadening and Narrowing in the Vocabulary of the Circular Economy

Abstract Although the 'Circular Economy' has been widely discussed in the media for years, general dictionaries still do not provide the relevant definitions and/or collocations. We show by examining dictionary definitions that many salient words used in this field have undergone varying degrees of semantic broadening in the general language. Current terminological needs often dictate more precise meanings than those used in the general language, in essence leading to semantic narrowing. We discuss these two seemingly opposing forces in relation to a small set of words from the 'Circular Economy' and show how this sort of semantic development is easily accounted for within the Communicative Theory of Terminology.

Keywords Circular Economy; Communicative Theory of Terminology; sense broadening; sense narrowing of terms

1. Introduction

Working towards a sustainable environment is a topic of considerable public interest and as a result, economists, environmental scientists, policy makers and the public at large increasingly refer to the concept of 'Circular Economy'. As is the case with several sub-fields within a social science, the terminology employed when speaking about this topic is primarily taken from words that already occur in the general lexicon. This type of situation often poses a challenge for defining the terms used in the field, because the expressions being used already exist and often show a significant degree of polysemy and variation in use and meaning.

In this paper, we discuss the development of several salient expressions associated with the terminology of the 'Circular Economy' in English and Spanish. The paper is structured as follows. We first briefly set forth the theory of terminology we adopt, the Communicative Theory of Terminology (Cabré, 1999; Cabré, 2023). We then discuss the definition of 'Circular Economy' and identify a small number of expressions commonly found in texts on this topic which will be the object of analysis. The fact that several of the lexical items studied have long been in use in general, non-specialized domains has historically led to a significant degree of polysemy, while the recent terminological use of the same expressions leads to semantic narrowing. We also discuss the inclusion and representation of these expressions in current dictionaries of reference of English and Spanish, and conclude by commenting on the terminological needs for this growing field of interest.

2. Communicative Theory of Terminology

The Communicative Theory of Terminology (Cabré, 1999; Cabré, 2023) is an integral approach to terminology that brings together cognitive, social and linguistic factors. Importantly, terminological units are lexical items or lexicalized units, the specialized domain character of which is activated in certain communicative contexts. Terminological units are typically nouns; nevertheless, terminological units may also belong to other lexical categories, such as verbs and adjectives. In the Communicative Theory of Terminology terminological units are linguistic units and as such may display variation in form, meaning and function, and as such the vocabularies of specialized domains display synonymy and polysemy. We believe that this theory is particularly well-suited to analysing terms from specialized domains in which the vocabulary has been taken from existing expressions, as lexical items that have been long been in have often undergone varying degrees of semantic change.

A consequence of Cabré's linguistic-based approach to terminology is that lexicographic representation in general language dictionaries is not fundamentally different from terminographic representation in special subject domain terminologies because there is no clear-cut structural division between the general lexicon and terms; rather, the difference between lexicographic representation and terminographic representation is one of the thematic constraints on terminographic products. Terminological units, then, may be seen as senses of lexical units that are activated in a context of specialized communication (whether that be between experts or between experts and laymen). In Cabré's theory, diachronic studies, specifically those on lexical change in special subject domains, are of interest (Lorente Casafont, 2024, pp. 278–279).

It is important to bear in mind that a traditional terminological definition formulated within the General Theory of Terminology (Wüster, 1968) typically applies to nouns in the natural sciences and in technological fields and assumes that concepts are easily delimited. Wüster and his school of thought believe that concepts can be univocally defined in individual specialized subject domains, which often results in several homonymous terms belonging to different, well-defined subject domains. The Communicative Theory of Terminology differs from the General Theory of Terminology in many aspects that are discussed at length in Cabré (1999), Cabré (2003) and elsewhere (see, for example, Faber and L'Homme, 2022) and as such we will not engage in a comparison here, but rather affirm that we have chosen to consider the vocabulary of the 'Circular Economy' through the lens of the Communicative Theory. Given the Communicative Theory's linguistic foundations, a look at the semantic history and use of the main words associated with this topic, as well as their morphological structure, should provide insight into the nature of common words that take on lexicalized, terminological status in certain contexts.

3. The 'Circular Economy'

3.1 Origin, Definitions, and Inclusion in Dictionaries

What is a 'Circular Economy', other than an economy that is in some way opposed to a 'Linear Economy'? Murray et al. (2017, p. 371) state that it is an economy that has "no net effect on the environment; rather it restores any damage done in resource acquisition, while ensuring little waste is generated throughout the production process and in the life history of the product." They also state that the origin of the term is debatable, although they place it at an undetermined moment in the 1960s.

The definition given by Murray et al. is not exactly the same as that given by the European Parliament (2016), which states "Circular economy: an economic model based *inter alia* on sharing, leasing, reuse, repair, refurbishment and recycling, in an (almost) closed loop, which aims to retain the highest utility and value of products, components and materials at all times." We note that the European Parliament's definition makes no mention of restoring damage to the environment; rather, it concentrates on making optimal use of products (which are shared, leased, reused, repaired, refurbished and recycled).

Neither of these definitions is particularly good by lexicographic standards. In Murray et al.'s definition, "no net effect on the environment" is equated with generating "little waste", but those two concepts are not equivalent because, presumably, any amount of waste generated has some effect on the environment. The European Parliament's definition is not much better, as it introduces a hedge ("(almost) closed") and states that the 'Circular Economy' is an economic model based on six different types of actions applied to products and on some other, unidentified actions as well (the reference to "*inter alia*"). Although neither of these works is a dictionary and thus definitions do not have to meet the same standards as those written by lexicographers, they nevertheless introduce elements of ambiguity that could have been avoided, particularly since several of the concepts mentioned are increasingly the object of binding legislation in the European Union (e.g., the right to repair directive adopted by the European Parliament in April 2024, legislation on waste management, legislation on plastic recycling, to name only three (European Parliament, 2024)). In fact, it is precisely because issues associated with the 'Circular Economy' are becoming law in an international context that they demand clear, unambiguous and perhaps standardized definitions.

Several—but not all—major dictionaries of English include 'Circular Economy' (not necessarily capitalized) as a headword. The *Oxford English Dictionary* currently defines 'circular economy' as follows:

> An economic system in which the journey of a product, material, etc., leads back in some way to where it began; (now *esp.*) a system or process which seeks to minimize or remediate harm to the environment by recycling, reusing, or regenerating products or materials, as a means of reducing waste and more sustainably or efficiently continuing production.[1]

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[1] This definition was first published in the OED in 2021.

The first recorded use of this expression dates back to 1932. A Google search for 'circular economy' yields a simpler definition from Oxford Dictionaries: "an economic system based on the reuse and regeneration of materials or products, especially as a means of continuing production in a sustainable or environmentally friendly way." 'Circular economy' is defined in the *Collins English Dictionary* ("an economic system based on using renewable resources, eliminating waste, and reusing and recycling material goods"), but is not listed as a lexicalized phrase by *Merriam-Webster Online* in either the *Unabridged Dictionary* or the *Collegiate Dictionary*, nor is it included in either the *American Heritage Dictionary of the English Language* or in *Cambridge English Dictionary Online* (at the date of writing, June 2024). This absence may be due to the fact that the phrase was simply not frequent enough to warrant dictionary inclusion when the dictionary in question was being prepared, or to the fact the lexicalized phrases—as opposed to individual words—are poorly represented in general language dictionaries. In this respect, its absence from the *Cambridge English Dictionary Online* is perhaps surprising because this online resource provides extensive lists of related words and phrases, and includes a vocabulary cloud titled "Environmental issues" containing phrases such as *carbon tax* and *eco-footprint,* both of which are clearly more recent in creation than 'circular economy' (the *Oxford English Dictionary* dates *carbon tax* to 1979 and *eco-footprint* to 2002).

Dictionaries of Spanish similarly show uneven inclusion of the expression '*economía circular'*. The *Diccionario de la lengua española* by the Spanish Royal Academy in its most recent electronic edition[2] does not include the phrase. The online commercial lexicographic resource *Diccionarios.com*, however, does include the phrase under the headword '*economía'*, and its definition is similar to that given by Oxford Dictionaries, although it also specifically contrasts the concept of 'Circular Economy' with that of 'Linear Economy':

> *Modelo económico que persigue producir bienes de modo sostenible, potenciando la reutilización y el reciclado de los productos más allá de su vida útil: en contraste con la economía lineal, basada en la lógica de usar y tirar, la economía circular busca dar siempre una nueva vida a los productos.[3]*

3.2 Vocabulary of the 'Circular Economy'

To determine a small set of lexical expressions frequently used in conjunction with the 'Circular Economy' that could be analysed within the scope of this paper, three documents of reference were consulted: The European Parliament's 2016 briefing on the 'Circular Economy' in English; the European Commission's 2020 "Circular Economy Action Plan for a Cleaner and More Competitive Europe," in both English and Spanish; and, the "Circular Economy Glossary" published online by the Ellen Macarthur Foundation in both English and Spanish. The following expressions were chosen, as they were all found in all three sources, as well as being prominent in the definitions discussed in the previous section:

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[2] We are referring to the seventh online update of the 23rd edition.

[3] Our English translation of the original Spanish: 'An economic model that aims to produce goods in a sustainable fashion, emphasizing the reuse and recycling of products beyond their useful life: in contrast to the linear economy, which is based on the idea of use and disposal, the circular economy always aims to give products a new use.'

Table 1: Words chosen for study

English	Spanish
c*ircular* [adjective], *circularity*	*circular* [adjective], *circularidad*
sustainable, especially *sustainable development*	*sostenible*, especially *desarrollo sostenible*
sustainability	*sostenibilidad*
recycle	*reciclar*
reuse [verb]	*reutilizar*
waste [noun]	*residuo/desperdicio/desecho*

A cursory examination of these words yields that most are polysemous in general discourse and most are morphological derivatives, and our own knowledge of the history of lexis in English and Spanish indicates that many of these words have been in use in a variety of contexts for generations, if not hundreds of years. We now turn to these characteristics in more detail.

3.2.1 Polysemy, Semantic Development, and Morphological Structure of the English Set of Expressions

The English words under study have all been in use for generations, and in some cases, for centuries. The following table provides an overview of the degree of polysemy recorded in two contemporary dictionaries of reference (one originally published in the United States, the other originally published in Britain), along with the date of first use as reported by *Merriam-Webster.com Dictionary*:

Table 2: Overview, English expressions[4]

	Number of senses, Merriam-Webster	Date of first known use, Merriam-Webster	Number of senses, Collins English Dictionary
circular	6	15th century	5
circularity	none; run-on entry	not indicated	none; run-on entry
sustainable	2	1924	3
sustainability	none; run-on entry	1924	2
reuse	1	1843	1
recycle	8	1925	4
waste	4	13th century	10

We note that the differences in the number of senses recorded reflects each dictionary's criteria for determining senses and sub-senses, and a fewer number of senses does not necessarily mean that the dictionary´s coverage of meaning is lacking. The fact that all but one of the expressions is polysemous is interesting and reflects the progressive semantic broadening that these expressions have experienced over time.

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[4] The number of senses refers to the major, numbered sense distinctions under the headword and does not include the number of sub-senses.

The original meaning of adjective *circular* clearly refers to round shape and is still frequently used with that sense according to Sketch Engine, but notably the third most frequent noun it modifies in the English Web 2021 corpus is *economy*.[5] The verb *reuse* has only one sense in both dictionaries, but this is somewhat misleading because the verb on which it is based, *use*, has several current senses in both dictionaries (8 in *Merriam-Webster.com Dictionary* and 6 in the *Collins English Dictionary*).

The oldest English word in this group has undergone semantic broadening over time. The original sense of *waste* is that of 'barren land', although today it is more frequently associated with the sense of 'unwanted by-product of a manufacturing process, chemical laboratory or nuclear reactor'.[6] According to Sketch Engine's Word Sketch feature, the five most frequent modifiers of *waste* are *hazardous*, *radioactive*, *toxic*, *solid* and *plastic*, all of which fall under this latter sense and clearly point to the idea of having a harmful effect on the environment.

All of the words with the exception of *waste* are morphologically derived, and the prefix and suffixes present in these words are frequent and still productive in English. The influence of morphological structure on dictionary representation is a complex issue (DeCesaris, 2020–2021) that we will not delve into here, but it is important to note that derived words often display fewer senses than their base forms. This can be observed in the definitions given in *Merriam-Webster.com Dictionary* for *sustain* and *sustainable*, as the transitive verb *sustain* has 8 senses, most of which are not applicable to the use of the adjective *sustainable* nor to its derived noun, *sustainability*.

Table 3: Definitions of *sustain* and *sustainable*, Merriam-Webster.com Dictionary

	sustain	*sustainable*
Sense		
1	to give support or relief to	capable of being sustained

2	to supply with sustenance **: NOURISH**	**a:** of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged
		   sustainable techniques
		   sustainable agriculture
		
		b: of or relating to a lifestyle involving the use of sustainable methods
		   sustainable society

3	**KEEP UP, PROLONG**	
4	to support the weight of **: PROP** *also* **:** to carry or withstand (a weight or pressure)	
5	**:** to buoy up *sustained* by hope	

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[5] The most frequent noun modified by *circular* is *motion*, followed by *saw*, *economy*, and *orbit*.

[6] Definitions have been adapted from *Merriam-Webster.com Dictionary*.

6	**a:** to bear up under **b: SUFFER**, **UNDERGO** *sustained* heavy losses	
7	**a:** to support as true, legal, or just **b:** to allow or admit as valid the court *sustained* the motion	
8	to support by adequate proof**: CONFIRM** testimony that *sustains* our contention	

It is not uncommon in dictionaries of English for morphologically derived words to remain undefined if the dictionary in question defines both the base word and the pertinent affix as a headword (which is the case for *circularity* and *sustainability* in *Merriam-Webster.com Dictionary*; *-ity* is defined as a noun suffix meaning "quality, state, degree").

Examination of usage data confirms that *sustain* occurs in a wide variety of contexts, whereas *sustainable* currently refers to economics. The data from Sketch Engine (English Web 2021 corpus) shown in Table 4 for the use of *sustain* as opposed to the use of *sustainable* reveal that what is *sustained* in English is quite varied, ranging from *injuries*, *damage*, *wounds*, and *loss* to *growth* and *momentum*. We note that what is *sustained* may have either positive semantic prosody (*growth*, *momentum*) or negative semantic prosody (*injuries*, *damage*, *wounds*, *loss*), and the direct object of the active verb can be either (cf. *sustain damage* vs. *sustain momentum*), although the pattern [**noun** *sustained*] with the postposed participle strongly associates with negative prosody. In contrast, *sustainable* is mainly used to modify *development*, *future*, *goal*, *agriculture*, and *growth*, all of which are part of the 'Circular Economy'.

Table 4: Comparison of Word Sketch data for *sustain* and *sustainable*

Objects of *sustain*	Nouns modified by *sustainable*
injury injuries sustained	**development** sustainable development
damage sustained damage	**future** a sustainable future
wound wounds sustained	**goal** sustainable development goals
loss losses sustained	**agriculture** sustainable agriculture
growth sustain growth	**growth** sustainable growth
momentum sustain the momentum	**practice** sustainable practices
fracture sustained a fracture	**management** sustainable management
concussion sustained a concussion	**livelihood** sustainable livelihoods

3.2.2 Polysemy, Semantic Development, and Morphological Structure of the Spanish Set of Expressions

The Spanish words under consideration all have Latin roots, and all but *residuo* are morphologically derived.[7] The degree of polysemy represented in dictionaries is somewhat less than that observed in English, as shown in Table 5.[8]

Table 5: Overview, Spanish expressions

	Number of senses, *Diccionario de la lengua española, Real Academia Española*	Number of senses, *Diccionarios.com*	Comparison with number of English senses, *M-W.com / Collins*
circular	4	4	6 / 5
circularidad	1	0	0 / 0
sostenible	2	2	2 / 3
sostenibilidad	1	1	0 /2
reciclar	4	3	8 / 4
reutilizar	1	1	1 / 1
residuo	4	3	
desperdicio	2	2	
desecho	5	3	

We note that the derived words *circularidad*, *sostenibilidad*, and *reutilizar* are defined in the dictionaries with a clear cross-reference to their base words, which is common practice in Spanish dictionaries (Spanish dictionaries do not have a strong tradition of run-on entries, unlike English dictionaries, and they often require the user to refer to definitions under another headword). The verbs with the prefix *re-* are relatively new additions to the Academy dictionary (*reciclar*, in 1984; *reutilizar*, in 2014).

Interestingly, texts on the 'Circular Economy' in Spanish use three equivalents for the word *waste* in English: *desecho*, *desperdicio*, and *residuo*. All three have been in use in Spanish for hundreds of years, having been recorded in the earliest dictionaries of the language. The current definitions of these words do not clearly distinguish among the three; for example, the Academy dictionary gives *residuo* as the third sense of *desecho*, and states that both *residuo* and *desperdicio* are synonyms of *desecho*.

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[7] The word *residuo* was borrowed from the Latin into Spanish in the 15th century and cannot be considered a morphologically derived word in a synchronic analysis of Spanish.

[8] No comparison is shown for *residuo/desperdicio/desecho* because all correspond to *waste*.

Table 6: Definitions, *Diccionario de la lengua española*, 23rd edition[9]

desecho	desperdicio	residuo
1. m. Aquello que queda después de haber escogido lo mejor y más útil de algo. SIN.: restos, sobras, residuo, piltrafas.	1. m. Derroche de la hacienda o de otra cosa. SIN.: despilfarro, derroche, dilapidación. ANT.: aprovechamiento	1. m. Parte o porción que queda de un todo. SIN.: resto, sobrante, excedente, remanente, saldo, resta, rezado, pucho resquicio.
2. m. Cosa que, por usada o por cualquier otra razón, no sirve a la persona para quien se hizo.	2. m. Residuo de lo que no se puede o no es fácil aprovechar o se deja de utilizar por descuido. SIN.: restos, broza, desecho, residuo, despojos. ANT.: aprovechamiento	2. m. Aquello que resulta de la descomposición o destrucción de algo.
3. m. Residuo, basura. SIN.: basura, desperdicio, escoria, residuo, bazofia, broza, piltrafas.		3. m. Material que queda como inservible después de haber realizado un trabajo u operación. U. m. en pl. SIN.: restos, sobras, despojos, desecho, desperdicio, basura, escombro, morralla, escurriduras.
4. m. Desprecio, vilipendio.		4. m. Mat. Resto de la sustracción y de la división. SIN.: resto, diferencia, resta, restante.
5. m. Lo más vil y despreciable.		

These three words have been defined in similar terms for hundreds of years. For example, the definition for *desecho* in the 1780 edition of the Academy dictionary reads as follows: "*Sobra, desperdicio de alguna cosa, el residuo que queda despues de haber escogido lo mejor y util de ella.*"[10]

Corpus data do not clarify the issue much, as all three words are commonly used as direct objects of the verbs *expulsar* 'expel', *reutilizar*, *verter* 'dump', and *reciclar*. European Union documents tend to refer to *residuos* in Spanish, but we note that the concept of *residual waste* is usually rendered as *desechos residuales*. Although *desperdicio* is common in texts with reference to food, it is not exclusively used as such: although the most frequent modifier of *desperdicio* is *alimentario* ('food-related'), the second most frequent is *industrializable* ('able to be industrialized').[11] It often implies that the waste was not a necessary outcome of the process involved. We have not been able to discern a clear-cut difference between *desecho* and *residuo,* and frequency data from Sketch Engine similarly show that both are in current use and collocate with the same words (*sólido* 'solid', *tóxico* 'toxic', *peligroso* 'dangerous', *radioactivo* 'radioactive', among others).

[9] Explanation of abbreviations used in the *Diccionario de la lengua española*: *m.* (masculine gender for a noun); *SIN* (synonyms); *ANT* (antonyms); *U. m. en pl.* (mainly used in the plural); *MAT* (mathematics). Senses that are restricted to a specific geographical area and which are so labelled have not been included in this table. The underlining in red is ours.

[10] The 1780 edition was consulted via the *Nuevo Tesoro Lexicográfico de la Lengua Española.* Our English translation of the original Spanish (which was printed without accents): 'Leftover, waste from something, the waste that remains after having chosen the best and most useful parts of it.'

[11] According to Word Sketch, Sketch Engine (Spanish Web Corpus 2018).

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4. Discussion

The lexical items most closely associated with the 'Circular Economy' are all in general use in both English and Spanish in a variety of semantic contexts. The key word *circular* may have its origins in a description of a physical reality, but clearly over time its use has been extended to intangible contexts: shapes, motions, orbits, arguments, and economies can all be *circular*. The fact that we now use the lexicalized phrase 'Circular Economy' with a fixed, terminological-like meaning does not preclude the use of *circular* in other contexts, some of which display differing pragmatic overtones: *circular* is now a positive characteristic of manufacturing processes, but is a negative feature of arguments or reasoning. Similar observations may be made about other lexical items in this field. *Sustain*, and especially its participial form *sustained*, is commonly used in court proceedings in English (see sense 7 in Table 3 above), but *sustainable* increasingly—and almost exclusively—is used to refer to initiatives that do not harm the environment. The meanings of *sustain/sustainable/sustainability*, like those of the Spanish equivalents *sostener/sostenible/sostenibilidad*, have expanded over time, but in the more recent usage in specialized discourse on waste management and environmental policy, the meanings of these words have become narrower. In essence, the use of these words in a terminological context has initiated the reverse of the historical trend of semantic broadening.

The use of old words from the general language in a new specialized field, in which words are used with terminological intent, is nicely accounted for by the Communicative Theory of Terminology. The terminological sense of expressions is triggered by their use in specialized discourse; e.g., in texts on economics, *sustainable* in the expressions *sustainable development* or *sustainable future* makes use of a specific meaning of *sustainable*. The definition of the terminological sense may be phrased following the same style requirements adopted by a specific dictionary project and does not need to be structurally different from the style used for defining other senses. In our view, then, it is not that *circular* in physics, for example, is a different term from *circular* in economics; rather, the word *circular* is polysemous and takes on different nuances of meaning when used in domain-specific discourse. Those nuances are typically represented in dictionaries as separate senses, often with subject labels.

Given the current social interest in the 'Circular Economy', it is somewhat disheartening that several of the dictionaries examined did not afford the expression headword status. We note that the newer sense of *sustainable/ sostenible* is now widely accounted for in general language dictionaries, and we would expect that 'Circular Economy' will soon find its way into more headword lists. A good dictionary definition of 'Circular Economy' would improve on those given in section 3.1 of this paper by eliminating the ambiguity those definitions display; the European Parliament's definition in particular could be improved by specifying what '*inter alia*' refers to, and this may require substantial rewording of the definition.

5. Concluding Remarks

The lexis in the 'Circular Economy' provides for a fascinating case of rapidly developing senses for words that have existed for a long time. We have showcased the tension between general lexicological development and specific terminological needs. The words most associated with this field are polysemous, yet present terminological requirements that select and prioritize specific senses in specialized discourse. The need for improved lexicographic representation of the vocabulary in this field is clear, as governments worldwide increasingly enact legislation on the ´Circular Economy' that is important to us all. If that legislation is to be binding and enforceable by law, the expressions used must be clearly defined.

References

Cabré, M. T. (1999). *La terminología. Representación y comunicación.* Institut Universitari de Lingüística Aplicada.

Cabré, M. T. (2003). Theories of terminology: Their description, prescription and explanation. *Terminology. International Journal of Theoretical and Applied Issues in Specialized Communication*, *9*(2), 163–199. https://doi.org/10.1075/term.9.2.03cab

Cabré, M. T. (2023). *Terminology. Cognition, language and communication.* John Benjamins.

Circular Economy Glossary / Glosario de economía circular. (2021). Ellen Macarthur Foundation. Retrieved February 4, 2024, from https://ellenmacarthurfoundation.org

DeCesaris, J. (2020–2021). Dictionaries and Morphology. In Z. Gavriilidou, L. Mitits, & S. Kiosses (Eds.), *Lexicography for Inclusion: Proceedings of the 19th EURALEX International Congress*, Vol. 2. (pp. 577–584). Democritus University of Thrace.

European Commission. (2020). *A new Circular Economy Action Plan for a cleaner and more competitive Europe / Nuevo Plan de acción para la economía circular por una Europa más limpia y más competitive.* Document 52020DC0098. Retrieved January 22, 2024, from https://eur-lex.europa.eu

European Parliament. (2016). Briefing. Closing the Loop. New Circular Economic Package. Document 5738999. Retrieved January 15, 2024, from https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2016)573899

European Parliament. (2024). Topics. Climate and environment. Circular economy. Retrieved July 25, 2024, from https://www.europarl.europa.eu/topics/en/topic/circular-economy

Faber, P., & L'Homme, M.-C. (2022). *Theoretical Perspectives on Terminology. Explaining terms, concepts and specialized knowledge.* John Benjamins.

Lorente Casafont, M. (2024). La lexicalització dins del canvi terminològic. *Caplletra. Revista Internacional De Filologia, 76,* 277–298. DOI: https://doi.org/10.7203/caplletra.76.28217

Murray, A., Skene, K., & Haynes, K. (2017). The Circular Economy: An Interdisciplinary Exploration of the Concept an Application in a Global Context. *Journal of Business Ethics 140*, 369–380. https://doi.org/10.1007/s10551-015-2693-2

Sketch Engine. Word Sketch [sustain], [sustainable], [waste], [residuo], [desperdicio], [desecho]. Retrieved May 24, 2024, from https://www.sketchengine.eu/guide/word-sketch-collocations-and-word-combinations/

Wüster, E. (1968). *The Machine Tool. An interlingual dictionary of basic concepts.* Technical Press.

Dictionaries:

American Heritage Dictionary of the English Language Online. https://www.ahdictionary.com/

Cambridge English Dictionary Online. https://dictionary.cambridge.org/dictionary/

Collins English Dictionary Online. https://www.collinsdictionary.com/dictionary/english

Diccionario de la lengua española. 23rd edition, 7th online update. Real Academia Española. https://dle.rae.es

Diccionarios.com. https://www.diccionarios.com. [Portal of Larousse Editorial in Spain and compendium of dictionaries edited by Larousse and Vox]

Merriam-Webster.com Dictionary. https://www.merriam-webster.com/dictionary

Nuevo Tesoro Lexicográfico de la Lengua Española. https://apps.rae.es/ntlle/SrvltGUILoginNtlle

Oxford English Dictionary Online. https://www.oed.com

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