



UvA-DARE (Digital Academic Repository)

The Role of Neologisms in the Climate Change Debate: Can New Words Help to Speed Up Social Change?

Zella, G.; Bolderdijk, J.W.; Caselli, Tommaso; Peels-Matthey, Saskia

DOI

[10.1002/wcc.70004](https://doi.org/10.1002/wcc.70004)

Publication date

2025

Document Version

Final published version

Published in

Wiley Interdisciplinary Reviews. Climate Change

License

CC BY

[Link to publication](#)

Citation for published version (APA):

Zella, G., Bolderdijk, J. W., Caselli, T., & Peels-Matthey, S. (2025). The Role of Neologisms in the Climate Change Debate: Can New Words Help to Speed Up Social Change? *Wiley Interdisciplinary Reviews. Climate Change*, 16(2), Article e70004. <https://doi.org/10.1002/wcc.70004>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, P.O. Box 19185, 1000 GD Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)


FOCUS ARTICLE OPEN ACCESS

The Role of Neologisms in the Climate Change Debate: Can New Words Help to Speed Up Social Change?

Greta Zella¹ | Jan Willem Bolderdijk² | Tommaso Caselli¹ | Saskia Peels-Matthey¹

¹University of Groningen, Groningen, The Netherlands | ²University of Amsterdam, Amsterdam, The Netherlands

Correspondence: Greta Zella (g.zella@rug.nl)

Received: 22 February 2024 | **Revised:** 15 January 2025 | **Accepted:** 15 February 2025

Domain Editor: Irene Lorenzoni | **Editor-in-Chief:** Daniel Friess

Funding: This study was partly funded by the University of Groningen. This research was partly funded by Anchoring Innovation. Anchoring Innovation is the Gravitation Grant research agenda of the Dutch National Research School in Classical Studies, OIKOS. It is financially supported by the Dutch ministry of Education, Culture, and Science (NWO project number 024.003.012). For more information about the research program and its results, see the website www.anchoringinnovation.nl. This article was written as part of a research project carried out in the context of a Dutch research grant (NWO-016.Veni.185.103, title: Polytheism as language. A linguistic approach to divine plurality in the religious experience of Greek worshippers).

Keywords: climate change | climate mitigation | neologisms | social tipping points

ABSTRACT

New expressions—or neologisms—continue to emerge in the discourse around climate issues (e.g., “flight shame”). Does the emergence of neologisms merely reflect shifts in sustainable attitudes, or can new expressions also speed up/frustrate social change? Building on literature grounded in linguistics and environmental psychology, we conclude that neologisms may have an important, yet underrated and not sufficiently investigated potential to influence the speed of social change. In this Focus Article, we first discuss the way in which neologisms facilitate the conceptualization of new ideas and thus increase awareness. We do this by linking contributions from the literature in cognitive linguistics on the creation and retrieval of concepts in the mind with work from environmental psychology on the adoption of sustainable behaviors. Then we employ cognitive and ecolinguistic frameworks to describe how new expressions support the introduction of different points of view for the interpretation of climate-related issues. In other words, by bridging different disciplines, we explain how neologisms can facilitate or frustrate the onset of social tipping points. We illustrate these possible effects of neologisms with eight climate-relevant examples (flight shame, greenwashing, light-bulb minute, carbon footprint, carbon indulgence, global warming, climate crisis, climate change) coined or widely adopted in the English language between the 1970s and 2018. Insights from these examples can help activists, policymakers, and citizens to coin neologisms that contribute to climate change mitigation efforts from a communicative perspective.

1 | Introduction

Adopting more sustainable lifestyles is crucial to mitigating climate change (Wiedmann et al. 2020), but this process entails structural changes in society that are difficult to implement on a large scale. Human interventions can enable favorable conditions to facilitate social change. This can contribute to accelerating the diffusion of innovations by reaching critical thresholds

(also called tipping points), which then prompt a chain process leading to new, often irreversible, long-term changes (Farmer et al. 2019; Otto et al. 2020).

Tipping points occur with both natural and social phenomena (David Tàbara et al. 2018; Lenton et al. 2022; Otto et al. 2020). On the social front, reaching tipping points implies reversing a social trend or changing the status quo. For instance, shifting

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025 The Author(s). *WIREs Climate Change* published by Wiley Periodicals LLC.

the perception that people have of the use of fossil fuels from appropriate to inappropriate plays a crucial role in the process of decarbonization (Otto et al. 2020). The spread of sustainable innovations and behaviors is then reflected in the emergence of a new vocabulary, suited to addressing the subject (Nerlich and Koteyko 2009). But are new expressions just a reflection of change, or can they also support it?

Combining insights from the cognitive linguistics, ecolinguistics, and psychological literature, we conclude that new expressions—neologisms—may not only be a consequence of social change; they might also influence it (Stibbe 2020). Thus, by coining specific neologisms, activists, policymakers, and lobbyists can support social change (or frustrate and delay it). Below, we outline how they do this.

Neologisms answer a need in a community of speakers (Bauer 2000), representing a doorway to how people conceptualize society and the world. For example, until recently, flying was associated with a high social status, but nowadays flying frequently is also perceived as immoral, because of the relatively large environmental impact of airplanes (Gössling et al. 2020). The expression “flight shame” comes from the Swedish “flygskam”; it emerged in 2017 and was later made popular by activist Greta Thunberg in 2019 in the context of the movement “Fridays for future” (Becken et al. 2020; Chiambaretto et al. 2021). This neologism refers to the feeling of shame that some people may experience when they fly, indicating a societal change.

Therefore, the emergence of new expressions can be seen as a thermometer of social change. However, in Germany, the social norms regarding flying actually changed in the months following the diffusion of the debate on “flight shame” in Northern Europe (Gössling et al. 2020). Hence, the emergence of the “flight shame” movement may also have been a catalyst for further social change. But was it solely the debate around the environmental impact of flying that caused the change, or has the invention of a dedicated expression—a neologism—contributed as well? Would using another expression instead of “flight shame” have had the same impact?

In this contribution, we provide a better understanding of the effects that neologisms have on the way speakers categorize information and understand the reality around them, bridging the gap across multiple linguistic frameworks. Based on this analysis, we conclude that neologisms help support both favorable and skeptical perspectives on climate mitigation efforts. We selected eight expressions that are good candidates to illustrate the characteristics of neologisms highlighted in our discussion or that have been the subject of studies whose results are in line with our theoretical frameworks.¹ Our aim is to provide interesting case studies that bring together insights from relevant disciplines, summarized in Table 1.

2 | Why Having a Dedicated Expression Matters: To Name Something Is to Become Aware

In general, conventions (e.g., eating turkey at Thanksgiving) are institutionalized practices and behaviors that people follow to meet social expectations and avoid social sanctions (Hawkins

TABLE 1 | Disciplines in which our contribution is grounded.

Ecolinguistics	Cognitive linguistics	Environmental psychology
Ecolinguistics is a subfield of linguistics which emerged in the 1990s. It revealed the impact that language has on the way humans perceive their ecosystem and how they interact with it. This branch of linguistics was created with the intent of detecting the predominant narratives used to address environmental topics—also called stories—and uncover their influence on people's relationship with their ecosystem, while creating new, peaceful stories to replace disruptive ones (Stibbe 2020).	Cognitive linguistics originated in the 1970s and lies at the crossroads of linguistics and cognitive sciences. It provides an individualistic perspective on how the world is understood through language. This field of study analyses the relationship between language and cognition and is thus helpful to understand the way in which climate change-related concepts are structured in the mind with respect to one another (Lakoff 2010; Lakoff and Johnson 1980).	Environmental psychology studies both how humans are affected by their environment and how humans affect their environment. Over the past decades, this field has studied barriers that prevent people from protecting the environment and interventions that promote pro-environmental actions (Bouman and Steg 2022; Gifford 2014).

et al. 2019). Once established, social conventions tend to stick: it is socially safer to conform to the current convention. However, many current social conventions (e.g., flying by plane to cover short distances) are not sustainable and can be questioned by increasing awareness about their unsustainability (Judge et al. 2024; Otto et al. 2020). How could neologisms help in this process?

2.1 | Hypostatization

Neologisms represent a tool to categorize new experiences (Fillmore 2006). The use of a name, or a label, to refer to an abstract phenomenon or event makes the latter easier to grasp, bringing together all the features that constitute it and facilitating the creation of a new concept. This cognitive process is called hypostatization (Schmid 2008). Neologisms make it easier for language users to conceptualize a phenomenon (i.e., create a concept in the mind that corresponds to the new label) and thus discuss it, to realize that it is common and known by other members of the community, hence increasing awareness. Hypostatization does not imply that speakers did not know or could not recognize the phenomenon before learning the expression that refers to it, but rather that they did not have readily available, clearly defined mental representations for it (Schmid 2008).

In the climate change debate, hypostatization has significant potential. It validates, corroborates, and strengthens the impression that a phenomenon exists and deserves a term in our vocabulary and a concept in our mental interpretation of reality. In other words, neologisms could help make explicit the connections between different sets of ideas, which were previously more difficult to pinpoint. This has important implications for aspects regarding climate mitigation efforts. For example, since people tend to think that others care less about the environment than they do (Bouman and Steg 2022), they are tempted to disregard sustainable alternatives because they think that their own efforts will be useless. Hearing a neologism will help people realize what others also experience, for example, “flight shame.” Creating conversations using neologisms is crucial for people since neologisms help them realize that the impression that others do not care is incorrect and that other people may want to switch to more sustainable lifestyles but do not know how (Hoffmann et al. 2024). The contrast, or dissonance, between enjoying a desirable activity—flying—and the awareness of it contributing to carbon emissions leads to the experience of a complicated feeling (Becken et al. 2020), which is simplified in the expression “flight shame.” Because of hypostatization, neologisms can thus increase awareness of a shared concern by giving a name to climate change-related emotions.

2.2 | Communicative Efficiency

There is a second way in which neologisms can facilitate social change. New expressions also represent a step toward efficient language use: according to the principle of linguistic economy and the principle of least effort (Martinet 1955; Zhurkenovich et al. 2021; Zipf 1949), humans are prone to get the most out of the least amount of labor. In the case of communication,

efficiency is maximized by reducing the number of words that the speaker has to think of, utter, or write. Native English speakers shorten words both phonologically, that is, in the sounds they have to make, and graphically, that is, in how much they need to write, by means of abbreviations and ellipses (Kreidler 1979). For example, “carbon” was originally part of an expression of its own, that is, “carbon dioxide,” which is not frequently used in the public discourse on sustainability anymore. In fact, the word “carbon” has become so productive in the coinage of compounds (e.g., carbon footprint, carbon tax) that it is recognizable on its own in context, thus allowing “dioxide” to be dropped and increasing linguistic efficiency.

Furthermore, the term “carbon” is an example of the metonymic use of words. Metonymy is a figure of speech that allows the use of a word or expression to refer to something else closely related to it. The term “carbon emissions” today refers to emissions of all types of greenhouse gases (e.g., methane), including but not limited to carbon dioxide. In our example, one type of greenhouse gas, namely carbon (dioxide), is used to refer to all greenhouse gases. Therefore, metonymies abide by the principle of economy: they have the advantage of allowing a single word or label to be used to refer to multiple concepts, thereby often facilitating communicative efficiency.

While many neologisms in the field of environmental sustainability are indeed constituted by abbreviations or ellipses, we can consider all neologisms as an intrinsic application of the principle of economy. As we have already mentioned, neologisms are the result of “naming” new things. They therefore allow the use of a single expression to refer to a phenomenon rather than long descriptions (even if composed of more than one word, e.g., “flight shame”), thereby making it easier for people to talk about and correct social misconceptions—an important hurdle toward climate action (Bouman and Steg 2022). For example, expressing unease over flying frequently because of its environmental impact with the expression “flight shame” is a case of communicative efficiency.

2.3 | Anchoring

According to cognitive linguistics, neologisms can foster comprehension and awareness by linking new or unknown concepts to already familiar ones or providing sufficient context for their interpretation (Elzen et al. 2012; Sluiter 2017). For example, the neologism “light-bulb minute” was coined and used as a label in the context of a consumer psychology experiment to efficiently communicate the quantity of carbon emissions of food in terms of the energy consumed by a light bulb in a minute, positively affecting the choices of consumers (Camilleri et al. 2019). Giving a familiar name to often new and/or abstract phenomena, events, and processes (e.g., energy consumption) allows speakers to include them in their categorization of the world, making them understandable, known, and accepted (Sluiter 2021).

This process of creating new names and concepts based on a connection with already existing ones consists of “anchoring” something new and difficult to understand to something else already well known (Sluiter 2021). Another example is the expression “greenwashing,” coined in the 1980s by environmentalist Jay

Westerveld to designate a strategy that hotels had conceived: asking guests to re-use their towels to save water, when in reality their goal was to save money (de Freitas Netto et al. 2020). The word derives from the verb “to whitewash,” which originally referred to applying white paint to a building to cover stains (Williams 2024). “Whitewashing” figuratively means to hide errors and faults by means of misleading or wrongful information (Kalkan 2008). In “greenwashing,” white is replaced by green, the color used to refer to anything “related to the environment.” The verb “to wash” instead implies that something dirty, or metaphorically immoral—the hypocritical practices of companies—must be cleaned, that is, made moral (Lakoff and Johnson 1980). The convention of employing ecological arguments to hide or cover up the true business practices of a company is being unmasked using a neologism. In this way, a practice that might have been difficult to conceptualize takes on its own status, creating a link with other concepts that were likely disconnected before a name was given. Could this method of forging new names while also creating links among different concepts have implications for speeding up social change?

Since classical antiquity, pioneers have introduced their inventions into society by linking them to familiar objects or phenomena, to facilitate their acceptance and turn them into successful innovations (Sluiter 2021). This is often necessary because, based on the “common is moral” heuristic (Lindström et al. 2018), people perceive new or unfamiliar objects and phenomena negatively, or even as immoral. One way to achieve such links between the “known” and the “new” with language is to employ (conceptual) metaphors. In literature, metaphors are rhetorical figures that compare two elements belonging to different domains, by means of shared attributes (e.g., saying that “Alex is a lion” equates the two by attributing a prototypical characteristic of the lion, i.e., its strength, to Alex). Metaphors, however, are also conceptual tools that can build a bridge between two different concepts (Lakoff and Johnson 1980); they describe an entity, action, or situation in terms of another (Stibbe 2020). An example is the sentence “*Trump will run for president*”. Here, the ambition of achieving a political aim is compared with physically attaining a place; a goal is understood in terms of reaching a destination. Similarly, at the core of greenwashing, we find the comparison between the physical action of

covering a building to hide its original appearance and resorting to lies to disguise an inconvenient truth.

On the other hand, anchoring and neologisms can also be employed with the aim of preserving the status quo and protecting vested interests (Penz and Fill 2022). An example is the expression “carbon footprint,” popularized in the 2000s (Durojaye et al. 2020), that can describe the amount of carbon emissions generated by an individual or practice. The oil company BP has applied the concept of “carbon footprint” to the individual, making responsibility a personal matter: It is not companies that are accountable for the environmental impact of their products; on the contrary, consumers are responsible for what they choose to buy (Chater and Loewenstein 2023). The notion of “carbon” can be perceived as somewhat abstract and intangible, but the expression “carbon footprint” exploits the attributes of a footprint, that is, a visible trace, to anchor the idea in the embodied experience of the physical marks that individuals leave as they walk (Figure 1).

The common attributes between source and target concepts are what allow the creation of a link between the two. Many other metaphorical representations of concepts regarding climate change have received wide attention in the cognitive linguistics and ecolinguistics literature: the term “climate crisis” is, for instance, often described as a vehicle, destination, war, threat, or wrestler (Adam and Wahyuni 2020; Stibbe 2020). Even the concept of “tipping point” is used to describe climate change in a metaphorical way, as a point of no return (van der Hel et al. 2018). The strategy of anchoring allows listeners to conceptually process new notions by connecting them to known ones and creating narratives around them, which drive public opinion in one direction or another (Stibbe 2020).

3 | Which Word? Different Words Lead to Different Interpretations

We have seen that using a unique expression to identify phenomena supports the creation of a clear and complete representation

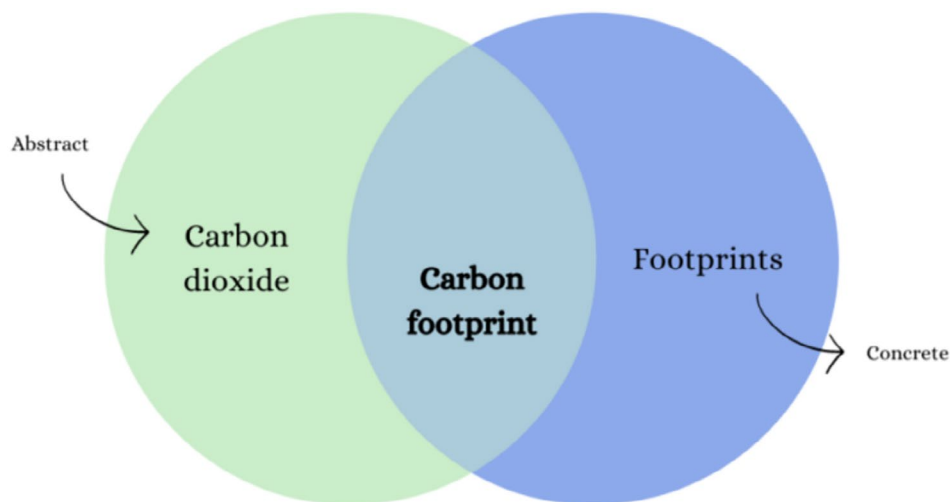


FIGURE 1 | Metaphors build a bridge between abstract and concrete concepts, making the former perceived as more tangible and familiar. Graphic created using Canva’s Free content. Credits: Canva Creative Studio and @Tenate Arte by Tania Licea via [Canva.com](https://www.canva.com).

of them in the mind. Associating such mental representations with others already established and known is a common practice to facilitate the understanding and acceptance of innovations that might otherwise be difficult to grasp in the first place. This helps create more conversations, which in turn facilitates sharing ideas and thus adopting each other's points of view. But is one name as good as another? Or does the choice of a name subtly impact the interpretation of the phenomenon itself?

3.1 | Linguistic Features

In Section 2, we discussed how neologisms increase communicative efficiency by reducing the number of words needed to express a concept. Not all neologisms, though, have the same potential of being coined, becoming successful, or favoring the creation of concepts in the mind. For example, “transparent” neologisms make communication more effective because their meaning is easily decodable, starting from the meanings of the simple words that constitute them (e.g., “flight shame”), requiring no strong effort for comprehension. These are favored by speakers and are more likely to increase efficiency (Kjellmer 2000; Schmid 2008). On the other hand, “opaque” compounds are more easily recognized as new because their meaning is more difficult to process and requires more cognitive effort, at least when they are encountered for the first time (e.g., “greenwashing”)² (Schmid 2008). Moreover, nouns that identify concepts as concrete, tangible, or visible objects (e.g., “footprint”) are preferred because they confer favorable features for hypostatization, such as clear boundaries (Schmid 2008).

3.2 | Framing

Previous work has demonstrated how different expressions used to refer to the same phenomenon can influence the perception of the phenomenon itself (Fillmore 2006; Lakoff and Johnson 1980; Stibbe 2020). Indeed, once conceptualized, neologisms do not exist in isolation in our mind; they are interrelated in a network of concepts, or cognitive frames, that is, situations schematically represented through their prototypical elements. For instance, the concepts of “seller,” “buyer,” “money,” “goods” are all interrelated in the frame of a “commercial event” (Fillmore 2006). When new terms are encountered, new concepts are created for them in the mind, and they are embedded in a frame that helps make sense of them (Lakoff 2010). Concepts like “company,” “hide,” and “consumers” are all part of the “greenwashing strategy” frame. Building frames can be a method to offer varied interpretations of a phenomenon.³ In this way, which name is chosen plays a fundamental role in communicating information to the public since comprehension and interpretation largely depend on the words, and thus the frame that is activated (Fillmore 2006). Therefore, frames can prove crucial to steering interpretations and changing conversations.

An example of framing is the neologism “carbon indulgence,” which made its first appearance in the early 2000s (Nerlich and Koteyko 2009). It has the purpose of making “carbon offset,” that is, actions that aim at counteracting carbon emissions (e.g., planting trees), perceived as immoral by presenting it as related to the practice of indulgences. In the Middle Ages, sinners, that

is, Catholics who committed violations of moral norms, used to ask for forgiveness by paying a sum of money to the Church, rather than repenting and refraining from perpetrating their sins.⁴ The same frame is evoked with “carbon indulgence”: Just as the sinner would pay a sum in exchange for forgiveness, so those who feel guilty about their environmental impact are willing to pay money to silence their conscience and continue to engage in environmentally harmful activities.⁵

We can employ a very well-known metaphor in linguistics to clarify how this works. Words are like boxes that contain ideas, while communication consists of two interlocutors sending boxes to each other (Lakoff and Johnson 1980). One of the keys to open the box, that is, decode the meaning of a word or an expression and understand the message, is to possess preliminary knowledge about the cognitive frames in which a word belongs. Words or expressions that roughly designate the same phenomenon (e.g., climate change and global warming) may be used as near-synonyms, but if they belong to different cognitive frames, they activate and evoke different connotations, that is, emotions, points of view, and feelings conveyed by the sole use of a word in context (Basile et al. 2022). To recognize the different associations activated by different words means acknowledging that they provide a different point of view of the same phenomenon.

We noted earlier with anchoring mechanisms that frames and language can be created and instrumentalized for different purposes: They can pave the way for social change, but they can also be used to fuel skepticism and consolidate existing practices and their underlying mindsets (Meadows 2015). For example, the expression “carbon footprint” that we analyzed in Section 2.3 is part of a frame used to reinforce the existing belief that consumers are responsible for their own environmental impact and implicitly assume that businesses do not need to change (Chater and Loewenstein 2023).

Twenty years ago, Lakoff was already arguing that even though “climate crisis,” “global warming,” and “climate change” are commonly used as near-synonyms, they convey three different perspectives of the consequences of increasing levels of carbon dioxide in the atmosphere, triggering different responses in the readers (Lakoff 2010). The term “global warming” is used in some contexts to deny the existence of climate change or to downplay the problematic aspects, by reasoning that in some parts of the world, temperatures are even colder than average or by arguing that a higher temperature is nice. The term has been shown to be employed five times more often by climate change deniers than by climate change believers (Effrosynidis et al. 2022).

In fact, the frame in which “global warming” is embedded evokes positive associations: a very complex problem is simplified by highlighting one aspect, temperature, and erasing other relevant factors or agents. On the other hand, even “climate change” erases the urgency of the problem, presenting the phenomenon as a physiological transformation of the planet, like many already observed in its history and out of humanity's control (Lakoff 2010). Through this erasure/salience (Stibbe 2020) mechanism, it is possible to frame phenomena in a way that hides critical details for their comprehensive interpretation and encourages the acceptance of false explanations. Thus, it is

clear that not only is giving the phenomenon a *name* essential in itself, but the *choice* of that name also plays a role in the perception of the phenomenon, which can differ according to the cultural and political background of the recipient of the message (Schuldt et al. 2011; Soutter and Möttus 2020; Whitmarsh 2009).

Describing climate change as a “supply chain challenge” frames the issue from an economical perspective, assuming that businessmen should take the lead in finding a solution (Stibbe 2020). This framing presents natural systems as business, favoring the perception of natural resources as products and putting a price on them. Another example is framing climate change as “climate destruction,” which implies the participation of an agent, namely the destroyer, in the event (Drury et al. 2022).

It is, however, worth noting that it takes years and even decades to build convincing and strong frames (Lakoff 2010). Even then, already existing underlying mindsets may still stay in place, since mindsets are the hardest to change (Meadows 2015). Therefore, the effect of neologisms might not be immediately perceived, but they constitute the planting seed that, if properly constructed, can become the foundation of a new frame. When the latter finally becomes established in the mind of speakers, the use of the neologism on its own can activate the entire frame (Lakoff 2010). Moreover, just like any other tool, frames, metaphors, neologisms, and language more generally must be used with caution, paying maximum attention to the way and purpose of their use.

Carefully constructing a message by choosing the vocabulary based on the target audience is a practice that companies, policymakers, and activists should adopt to ensure the intended interpretation of the message. People are mostly affected by well-built, emotional communication rather than just by facts. Providing people only with factual information may prevent their full comprehension of and/or full engagement with environmental issues (Lakoff 2010; Stibbe 2020). On the other hand, citizens and consumers should know how linguistic and cognitive mechanisms can be leveraged (e.g., frames and hypostatization) to recognize them and avoid being misled.

4 | Conclusions

In this article, we reviewed existing work on the impact that neologisms have on cognition and on the relationship between humans and the environment, concluding that neologisms may play a role in accelerating—or preventing—the achievement of social tipping points. Grounding our discussion in different linguistic frameworks (i.e., hypostatization, frame semantics), we have hypothesized that new expressions can help speed up social change. Newly coined expressions trigger the realization that the designated phenomenon actually exists, fostering the consolidation of the corresponding concept in the mind (Schmid 2008). This contributes to creating awareness about environmental sustainability.

The acceptance of innovations, which may be considered with apprehension or mistrust due to their very newness, can be fostered by underlining what they have in common with established conventions (Sluiter 2021). This can be achieved through

forging metaphorical links, turning inventions into successful innovations. Neologisms support the creation of different perspectives because terms that are considered near-synonyms can give life and be embedded in different, often new cognitive frames, each evoking a different set of connotations (emotions and points of view) (Fillmore 2006). In this way, different expressions can prompt different interpretations of the same phenomenon by hiding or highlighting certain aspects over others or evoking an emotional response, which is usually more effective than pure, logical reasoning (Lakoff 2010).

Based on the cognitive linguistics, ecolinguistics, and environmental psychology literature reviewed in this contribution, we argue that new expressions and concepts can contribute to the achievement of social tipping points. While we conclude that neologisms may be particularly suited to support perceptive shifts, we stress that, much like any tool, words can also be leveraged by vested interests to defend the status quo. Neologisms can be used to resist change, and it is therefore necessary to pay maximum attention to their use from both a speaker's and a recipient's perspective. The best way to do this is to be aware of the mechanisms that we have discussed in this contribution. They can be useful for policymakers, activists, and consumers to tailor their communications to their audience.

Author Contributions

Greta Zella: conceptualization (lead), investigation (equal), methodology (equal), writing – original draft (lead), writing – review and editing (equal). **Jan Willem Bolderdijk:** conceptualization (equal), funding acquisition (lead), investigation (equal), methodology (equal), project administration (lead), resources (equal), supervision (lead), visualization (equal), writing – original draft (supporting), writing – review and editing (lead). **Tommaso Caselli:** conceptualization (equal), investigation (equal), methodology (equal), project administration (lead), resources (equal), supervision (lead), visualization (equal), writing – original draft (supporting), writing – review and editing (equal). **Saskia Peels-Matthey:** conceptualization (equal), funding acquisition (lead), investigation (equal), methodology (equal), project administration (lead), resources (equal), supervision (lead), visualization (equal), writing – original draft (supporting), writing – review and editing (equal).

Acknowledgments

We thank Gerry Wakker for providing helpful comments and suggestions throughout the final steps of the writing process.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Related WIREs Articles

[Theory and language of climate change communication](#)

Endnotes

¹ Although some of the expressions considered here cannot be considered neologisms anymore, we evaluate retrospectively the effect they had when they emerged and became widespread.

- ² However, this does not mean that opaque compounds cannot enter our shared vocabulary as well (Schmid 2008).
- ³ The term “framing” can take different meanings in different disciplines. In this case, we use it to refer to descriptions of societal issues that highlight certain aspects over others and offer a specific interpretation of them (Nelson et al. 1997).
- ⁴ The practice of buying indulgences was already considered immoral at that time, and it was addressed and criticized by, for example, Dante Alighieri and, subsequently, Martin Luther.
- ⁵ Thus, the impression of activists and environmentalists that certain neologisms are unsatisfactory or even counterproductive to the climate mitigation efforts can in turn lead to the creation of more new words, adopting alternative, contrasting frames.

References

- Adam, M., and W. Wahyuni. 2020. “The Image of Climate Crisis in Media: A Conceptual Metaphor Analysis.” *Journal of Language and Literature* 20, no. 1: 10–24. <https://doi.org/10.24071/joll.v20i1.2413>.
- Basile, V., T. Caselli, A. Koufakou, and V. Patti. 2022. “Automatically Computing Connotative Shifts of Lexical Items.” In *Natural Language Processing and Information Systems—27th International Conference on Applications of Natural Language to Information Systems, NLDB 2022, Proceedings (13286)*, edited by P. Rosso, V. Basile, R. Martínez, E. Métais, and F. Meziane, 425–436. Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-08473-7_39.
- Bauer, L. 2000. “System vs. Norm: Coinage and Institutionalization.” In *1. Halbband: Ein internationales Handbuch zur Flexion und Wortbildung*, edited by G. Booij, C. Lehmann, J. Mugdan, W. Kesselheim, and S. Skopeteas, 832–840. De Gruyter Mouton. <https://doi.org/10.1515/978310111286.1.11.832>.
- Becken, S., H. Friedl, B. Stantic, R. M. Connolly, and J. Chen. 2020. “Climate Crisis and Flying: Social Media Analysis Traces the Rise of ‘Flightshame’.” *Journal of Sustainable Tourism* 29, no. 9: 1450–1469. <https://doi.org/10.1080/09669582.2020.1851699>.
- Bouman, T., and L. Steg. 2022. “A Spiral of (In)action: Empowering People to Translate Their Values in Climate Action.” *One Earth* 5, no. 9: 975–978. <https://doi.org/10.1016/j.oneear.2022.08.009>.
- Camilleri, A. R., R. P. Larrick, S. Hossain, and D. Patino-Echeverri. 2019. “Consumers Underestimate the Emissions Associated With Food but Are Aided by Labels.” *Nature Climate Change* 9, no. 1: 53–58. <https://doi.org/10.1038/s41558-018-0354-z>.
- Chater, N., and G. Loewenstein. 2023. “The i-Frame and the s-Frame: How Focusing on Individual-Level Solutions has Led Behavioral Public Policy Astray.” *Behavioral and Brain Sciences* 46: e147. <https://doi.org/10.1017/S0140525X22002023>.
- Chiambaretto, P., E. Mayenc, H. Chappert, J. Engsig, A.-S. Fernandez, and F. Le Roy. 2021. “Where Does Flygskam Come From? The Role of Citizens’ Lack of Knowledge of the Environmental Impact of Air Transport in Explaining the Development of Flight Shame.” *Journal of Air Transport Management* 93: 102049.
- David Tàbara, J., N. Frantzeskaki, K. Hölscher, et al. 2018. “Positive Tipping Points in a Rapidly Warming World.” *Sustainability Governance and Transformation* 2018, no. 31: 120–129. <https://doi.org/10.1016/j.cosust.2018.01.012>.
- de Freitas Netto, S. V., M. F. F. Sobral, A. R. B. Ribeiro, and G. R. D. L. Soares. 2020. “Concepts and Forms of Greenwashing: A Systematic Review.” *Environmental Sciences Europe* 32, no. 1: 19. <https://doi.org/10.1186/s12302-020-0300-3>.
- Drury, M., J. Fuller, and M. Keijzer. 2022. “Biodiversity Communication at the UN Summit 2020: Blending Business and Nature.” *Discourse & Communication* 16, no. 1: 37–57. <https://doi.org/10.1177/17504813211043720>.
- Durojaye, O., T. Laseinde, and I. Oluwafemi. 2020. “A Descriptive Review of Carbon Footprint.” In *Human Systems Engineering and Design II*, edited by T. Ahram, W. Karwowski, S. Pickl, and R. Tair, 960–968. Springer International Publishing.
- Effrosynidis, D., G. Sylaios, and A. Arampatzis. 2022. “Exploring Climate Change on Twitter Using Seven Aspects: Stance, Sentiment, Aggressiveness, Temperature, Gender, Topics, and Disasters.” *PLoS One* 17: e0274213. <https://doi.org/10.1371/journal.pone.0274213>.
- Elzen, B., B. van Mierlo, and C. Leeuwis. 2012. “Anchoring of Innovations: Assessing Dutch Efforts to Harvest Energy From Glasshouses.” *Environmental Innovation and Societal Transitions* 5: 1–18. <https://doi.org/10.1016/j.eist.2012.10.006>.
- Farmer, J. D., C. Hepburn, M. Ives, et al. 2019. “Sensitive Intervention Points in the Post-Carbon Transition.” *Science* 364: 132–134. <https://doi.org/10.1126/science.aaw7287>.
- Fillmore, C. J. 2006. *Cognitive Linguistics: Basic Readings*, edited by D. Geeraerts, 373–400. De Gruyter Mouton. <https://doi.org/10.1515/978310199901.373>.
- Gifford, R. 2014. “Environmental Psychology Matters.” *Annual Review of Psychology* 65, no. 1: 541–579. <https://doi.org/10.1146/annurev-psych-010213-115048>.
- Gössling, S., A. Humpe, and T. Bausch. 2020. “Does ‘Flight Shame’ Affect Social Norms? Changing Perspectives on the Desirability of Air Travel in Germany.” *Journal of Cleaner Production* 266: 122015. <https://doi.org/10.1016/j.jclepro.2020.122015>.
- Hawkins, R. X. D., N. D. Goodman, and R. L. Goldstone. 2019. “The Emergence of Social Norms and Conventions.” *Trends in Cognitive Sciences* 23, no. 2: 158–169. <https://doi.org/10.1016/j.tics.2018.11.003>.
- Hoffmann, T., M. Ye, L. Zino, M. Cao, W. Rauws, and J. W. Bolderdijk. 2024. “Overcoming Inaction: An Agent-Based Modelling Study of Social Interventions That Promote Systematic Pro-Environmental Change.” *Journal of Environmental Psychology* 94: 102221. <https://doi.org/10.1016/j.jenvp.2023.102221>.
- Judge, M., T. Bouman, L. Steg, and J. W. Bolderdijk. 2024. “Accelerating Social Tipping Points in Sustainable Behaviors: Insights From a Dynamic Model of Moralized Social Change.” *One Earth* 7, no. 5: 759–770.
- Kalkan, S. 2008. “Quality of Information Produced by Producers: Greenwashing or Can We Really Trust?” *Consumer Citizenship: Promoting New Responses* 4: 93–106.
- Kjellmer, G. 2000. “Potential Words.” *Word* 51, no. 2: 205–228.
- Kreidler, C. W. 1979. “Creating New Words by Shortening.” *Journal of English Linguistics* 13, no. 1: 24–36.
- Lakoff, G. 2010. “Why It Matters How We Frame the Environment.” *Environmental Communication* 4, no. 1: 70–81. <https://doi.org/10.1080/17524030903529749>.
- Lakoff, G., and M. Johnson. 1980. *Metaphors We Live By*. University of Chicago Press.
- Lenton, T., S. Benson, T. Smith, et al. 2022. “Operationalising Positive Tipping Points Towards Global Sustainability.” *Global Sustainability* 5: 1–32. <https://doi.org/10.1017/sus.2021.30>.
- Lindström, B., S. Jangard, I. Selbing, and A. Olsson. 2018. “The Role of a ‘Common Is Moral’ Heuristic in the Stability and Change of Moral Norms.” *Journal of Experimental Psychology: General* 147, no. 2: 228–242. <https://doi.org/10.1037/xge0000365>.
- Martinet, A. 1955. *Économie des changements phonétiques: Traité de phonologie diachronique*. A. Francke.
- Meadows, D. H. 2015. *Thinking in Systems*. Chelsea Green Publishing.
- Nelson, T. E., Z. M. Oxley, and R. A. Clawson. 1997. “Toward a Psychology of Framing Effects.” *Political Behavior* 19, no. 3: 221–246. <https://doi.org/10.1023/A:1024834831093>.

- Nerlich, B., and N. Koteyko. 2009. "Compounds, Creativity and Complexity in Climate Change Communication: The Case of 'Carbon Indulgences'." *Global Environmental Change* 19, no. 3: 345–353. <https://doi.org/10.1016/j.gloenvcha.2009.03.001>.
- Otto, I., J. Donges, R. Cremades, et al. 2020. "Social Tipping Dynamics for Stabilizing Earth's Climate by 2050." *Proceedings of the National Academy of Sciences of the United States of America* 117: 201900577. <https://doi.org/10.1073/pnas.1900577117>.
- Penz, H., and A. Fill. 2022. "Ecolinguistics: History, Today, and Tomorrow." *Journal of World Languages* 8, no. 2: 232–253.
- Schmid, H.-J. 2008. "New Words in the Mind: Concept-Formation and Entrenchment of Neologisms." *Anglia – Zeitschrift Für Englische Philologie* 126: 1–36. <https://doi.org/10.1515/angl.2008.002>.
- Schuldt, J. P., S. H. Konrath, and N. Schwarz. 2011. "'Global Warming' or 'Climate Change'?": Whether the Planet Is Warming Depends on Question Wording." *Public Opinion Quarterly* 75, no. 1: 115–124. <https://doi.org/10.1093/poq/nfq073>.
- Sluiter, I. 2017. "Anchoring Innovation: A Classical Research Agenda." *European Review* 25, no. 1: 20–38. <https://doi.org/10.1017/S1062798716000442>.
- Sluiter, I. 2021. "Old Is the New New: The Rhetoric of Anchoring Innovation." In *The Language of Argumentation*, edited by R. Boogaart, H. Jansen, and M. van Leeuwen, 243–260. Springer International Publishing. https://doi.org/10.1007/978-3-030-52907-9_13.
- Soutter, A. R. B., and R. Möttus. 2020. "'Global Warming' Versus 'Climate Change': A Replication on the Association Between Political Self-Identification, Question Wording, and Environmental Beliefs." *Journal of Environmental Psychology* 69: 101413. <https://doi.org/10.1016/j.jenvp.2020.101413>.
- Stibbe, A. 2020. *Ecolinguistics: Language, Ecology and the Stories We Live By*. 2nd ed. Routledge. <https://doi.org/10.4324/9780367855512>.
- van der Hel, S., I. Hellsten, and G. Steen. 2018. "Tipping Points and Climate Change: Metaphor Between Science and the Media." *Environmental Communication* 12, no. 5: 605–620. <https://doi.org/10.1080/17524032.2017.1410198>.
- Whitmarsh, L. 2009. "What's in a Name? Commonalities and Differences in Public Understanding of 'Climate Change' and 'Global Warming'." *Public Understanding of Science* 18, no. 4: 401–420. <https://doi.org/10.1177/0963662506073088>.
- Wiedmann, T., M. Lenzen, L. Keyßer, and J. Steinberger. 2020. "Scientists' Warning on Affluence." *Nature Communications* 11: 3107. <https://doi.org/10.1038/s41467-020-16941-y>.
- Williams, J. 2024. "Greenwashing: Appearance, Illusion and the Future of 'Green' Capitalism." *Geography Compass* 18, no. 1: e12736.
- Zhurkenovich, S. R., Z. A. Kozhamuratkyzy, D. G. Khatipovna, K. B. Tasbulatovna, and V. R. Aisovich. 2021. "The Principles of Economy in Word-Formation in Functional Styles of English." *Arab World English Journal* 12, no. 2: 424–435. <https://doi.org/10.24093/awej/vol12no2.29>.
- Zipf, G. K. 1949. *Human Behavior and the Principle of Least Effort*. Addison-Wesley Press. xi, 573 pp.