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Changing the World with Words? Euphemisms in Climate Change Issues

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Abstract: Words matter when talking about climate change. They influence thinking and ultimately behaviors. We contend that certain kinds of words frequently used in climate change communication, namely euphemisms, can undermine the objectives of raising climate change awareness and changing behaviors to reduce emissions. We characterize euphemisms related to climate change issues and show how they are often manipulated to serve vested interests opposing climate change action. In particular, we highlight euphemistic names of astroturfing organizations that aim to persuade consumers or citizens. We conclude by suggesting some practical ways to prevent or avoid detrimental consequences associated with euphemisms and draw several policy implications.

Key-words: climate change; climate policy; euphemisms; hypocrisy; words.

1. Introduction

Words can seem unimportant when compared with the urgency and magnitude of climate change. Yet, recent research emphasizes that even subtle words changes can significantly influence opinion and behavior, well beyond what is usually assumed (Drews and Antal, 2016; Clot et al., 2017; Farrow et al., 2018; Schuldt et al., 2011; Shi et al., 2020), which is well understood by politicians and journalists. In 2017, *The Guardian* revealed that staff at the US Department of Agriculture were instructed to blacklist terms such as “climate change”, “climate change adaption”, “reduce greenhouse gases” and “sequester carbon”. They were instructed to use “weather extremes”, “resilience to weather extremes”, “build soil organic matter, increase nutrient use efficiency” and “build soil organic matter” (Milman, 2017). In 2019, the same journal –one of the world’s most read newspaper websites – announced

several word changes (Table 1) in favor of terms that they considered to more accurately describe the “environmental crises” (Zeldin-O’Neill, 2019). The *Guardian* justified these changes by “the urgency of climate crisis” requiring “robust new language to describe it” (Chadwick, 2019).

Table 1. Word changes *The Guardian* recommended to its journalists and editors (Source: Zeldin-O’Neill, 2019)

Previous expressions	Recommended expressions
“Climate change”	“Climate emergency”, “climate crisis”
“Climate sceptic”	“Climate science denier”, “climate denier”
“Global warming”	“Global heating”
“Carbon emissions”, “carbon dioxide emissions”	“Greenhouse gas emissions”
“Biodiversity”	“Wildlife”
“Fish stocks”	“Fish populations”

Words are not neutral (Drews and Antal, 2016; Clot et al., 2017), and the effect of different labels (such as climate change versus climate crisis) is complicated. Their impact depends on factors such as the gender, worldview and the individual’s values (Hung & Bayrak, 2020). To increase policy effectiveness, beyond the objective policy content, we posit word choices in climate policy and communication should be carefully considered to elicit the desired behavioral changes. Indeed, words constitute an often-neglected lever that can be mobilized to undermine or reinforce policy on a number of levels such as numbing or awakening people, weakening, or reinforcing policy support, or delaying, or driving change. After examining their considerable potential to support emissions reduction, we focus on euphemisms – words or phrases used to avoid another word or phrase that may be unpleasant or give offence¹ – that are pervasive in climate change communication.

¹ The Greek etymological origin of the word ‘euphemism’ means “speaking well of something”. The motivation behind “speaking well’ may be manifold.

2. Why words matter when communicating on climate change?

Language and thought are intertwined. Subtle variations in wording can cause significantly affect judgment, memory and even behavior (Clot et al., 2017; Farrow et al., 2018; Hauser & Schwarz, 2016). Policy words are not judged only on their objective meaning or content as predicted by rational models. Words also trigger automatic processes (such as heuristics and biases) that can make policies more or less effective. For instance, recent studies show that Covid-19 related policies may have been far more effective in achieving their desired outcomes by simply changing some of the words used (Ajzenman et al., 2020; Padan, 2020; Miller, 2020). According to Padan (2020), the term “crisis” did not encourage the adoption of preventive measures while the term “emergency” did.

Similarly, climate policy objectives can be better achieved by carefully selecting words that are more likely to achieve desired outcomes. The words chosen to describe a phenomenon are highly influential. For instance, Woods et al. (2012) illustrated how unsympathetic religious metaphors used in 122 U.K. newspaper articles were used to misrepresent and denigrate scientific consensus about climate change (Woods et al., 2012). Atanasova & Koteyko (2017) showed how the *Guardian Online* and *Mail Online* used the “war” metaphor to communicate the urgency of action to address climate change. Flusberg et al. (2017) investigated how skeptical attitudes toward climate change can be modified using metaphors. They found that the war metaphor is more effective than a “race” frame: it conveys a feeling of urgency and pushes participants to express a greater willingness to increase conservation behaviors. Rather than basing word choice only on scientific and legal grounds, policymakers should inform their policy framing and formulation with well-crafted studies and experiments at an early stage to understand how various formulations of a similar policy will affect thinking and behaviors of citizens and other targets. In tough budgetary times, words can offer a potentially less costly lever likely to provoke first-order consequences.

In the following sections, we examine a particular type of words and expressions that have become pervasive in climate change discussions, namely euphemisms. Although euphemisms can be beneficial or detrimental to climate-related changes, we focus on the most pervasive ones used by corporate and political actors to deflate climate change action. Euphemisms are also used to preserve the recipient sensibilities such as with those of eco-anxious individuals, i.e., individuals anxious about climate emergency or who have persistent worries about environmental issues (Whitcomb, 2021). However, this motivation is less frequent in the cases of corporate or political messages about climate change. Indeed, the previously mentioned uses correspond more to a characterization of euphemisms as “the language of evasion, hypocrisy, prudery, and deceit” (Holder, 2008, p. vii).

3. Euphemisms in the context of climate change

Three characteristics are fundamental to delineate euphemisms. First, euphemisms are based on *word substitution*. The substitution replaces one (or several) plain term(s) that are considered as undesirable with other terms that are judged more appropriate (Casas Gómez, 2009). This substitution often leads to euphemistic expressions that are often longer than their plain counterpart. For example, acid rain is referred to as “atmospheric deposition of anthropogenically derived substances”. Word substitution typically mobilizes two kinds of framing effects: (i) the equivalency effect, where using different, but logically equivalent, expressions cause individuals to alter their preferences, and (ii) the emphasis effect where a subset of considerations is emphasized to push individuals to focus on some aspects of a situation, relegating other considerations to the background (Druckman, 2001; Farrow et al., 2021). We argue that most euphemisms used in climate change issues can be analyzed as examples of the emphasis framing effect used to push people to prioritize a certain set of meanings. For example, “fossil fuels” have been rebranded in a press release of the US

Department of Energy as “molecules of US freedom” (Ellsmor, 2019). One approach to measuring the effect of such euphemisms could be asking study participants to express (and compare) their immediate thoughts, attitudes and behavioral intentions (e.g., willingness to act) when faced with plain terms and corresponding euphemisms (see, for example, Farrow et al., 2021).

Kreps and Monin (2011) argued that individuals have idealized cognitive templates. When a real-world situation matches these moral templates, individuals are alerted that they should use a moral or ethical frame to respond to the situation. This matching can be (dis)activated by subtle changes in framing. For instance, a plainer term may trigger moralization (e.g., smoggy areas) while a euphemistic alternative (e.g., ozone non-attainment area) may completely focus the attention to other considerations. Euphemisms are frequently used to prevent a match with an available moral template and facilitate moral disengagement (Bandura, 1999; Tenbrunsel and Messick, 2004).

In a well-cited paper, Lakoff (2010) emphasized that framing is both powerful and pervasive – all thought and communication involves framing. He defined environmental frames as “the (typically unconscious) conceptual structures that people have in their brain circuitry to understand environmental issues” (p. 74). While recognizing that words themselves are not frames, he emphasized that words can be selected to activate desired frames. Lakoff suggests that in environmental realm, interest groups that have understood the power of frames for a long time have applied consistent effort to build frames that can be easily activated through the use and repetition of key words and phrases. Frequent repetition of pre-existing dominant environmental frames by the media serve to reinforce their effectiveness. Lakoff (2010) argued “What is needed is a constant effort to build up the background frames needed to understand the crisis, while building up neural circuitry to inhibit the wrong frames.” (p. 74). We contend that words used to communicate messages

about climate change often activate pre-existing frames that will not serve the pursued goals nor contribute to building new and adequate frames. The issue is complex, and we note that some authors (e.g., Matthes, 2009) criticize the misuse of framing theory while others in the context of environmental issues (e.g., Ytterstad, 2015) propose to abandon an overreliance on framing and advocate that “global warming is an ethical challenge which communication scholars can best help solve with a combination of natural realism and political advocacy.” (p. 1).

Second, euphemisms frequently reduce the emotional content by creating distance and serve to *soften* what is conveyed by the plain terms (Casas Gómez, 2009). Euphemisms are a linguistic manipulation to make some communication about difficult topics (more) socially acceptable or to reframe some issues. While this sometimes comes at the expense of clarity, reframing can also support development of understanding, a positive attitude, better ability to recall the concept and reduced anxiety related to sought-after behavioral change. Substituting the more dramatic phrase “global warming” to “climate change” is an example (Lineman et al., 2015).

Third, euphemisms are frequently used in a *social interaction* where two or more parties communicate. Frequently used in self-interest, they can also be other-oriented, such as when they are employed to preserve the sensibilities of eco-anxious individuals (Whitcomb, 2021). Euphemisms can also be used for self-deception. For instance, an individual can engage in unethical behaviors and preserve a positive self-image by relabeling his/her behaviors in sugar-coated terms that create emotional distance (Bandura, 1999; Tenbrunsel & Messick, 2004). For example, “routine exceedances” refer to an industrial plant’s regular violation of clean air or water standards (Beans, 2014).

Euphemisms are also distinguished on a variety of dimensions such as valence (positive versus negative), areas of application, degree of consciousness, geographical,

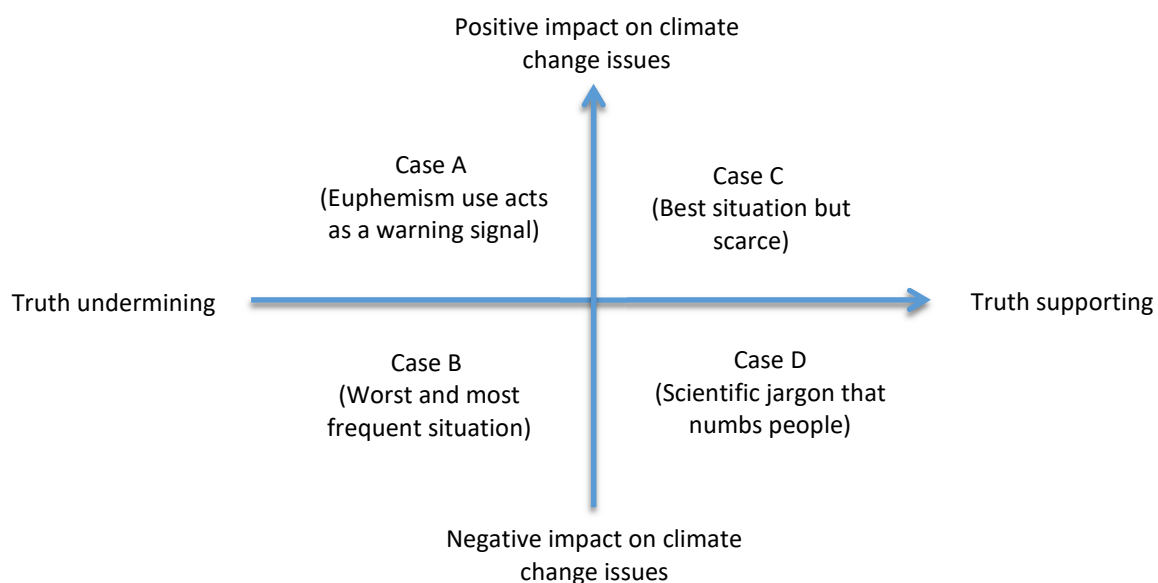
cultural, and historical contexts (Burrige, 2012). A repeatedly used euphemism often loses its euphemistic power. The euphemism can become tainted over time, leading to a euphemistic treadmill where a new euphemism replaces the tainted one and so forth (Burrige, 2012). Several euphemisms have been devised intentionally and consciously by climate change denial promoters to reduce the emotional appeal and deflate the concerns related to climate change issues. In the same vein, euphemisms can reduce (or even counteract) the impact of fear-based campaigns (Tannenbaum et al., 2015), to raise climate change awareness and actions. Moreover, the true intent of the euphemism user can remain hidden. Following the classification of euphemism functions by Burrige (2012), we apply them to climate change issues using real-world examples (Table 2).

Table 2. Types of euphemisms, their functions and examples (source: Burrige, 2012)

Euphemism type	Function	Example
Protective	To shield and avoid offense	Offset vs. tax, especially for people who consider taxation as theft by the state
Underhand	To mystify and misrepresent	Build soil organic matter, increase nutrient use efficiency vs. reduce greenhouse gases Nuisance flooding vs. sea-level rise Soil enhancer vs. manure
Uplifting	To talk up and inflate	Chief officer climate change Nature-based solutions
Provocative	To reveal and inspire	Increased density vs. overpopulation
Cohesive	To act as an in-group trademark	“Clean coal” or “ethical oil” among promoters of fossil fuels
Ludic	To have fun and entertain	“A \$100,000 fine was not a fine but (...) a "donation" to the region's air quality”

Going further, we introduce a two-dimensional framework: (i) whether the euphemism reinforces the truth or available evidence or undermines the truth or available evidence and (ii) the likely effects of the euphemisms on climate change (positive versus negative).

Figure 1: Characterizing climate change euphemisms in a 2-dimensional space



We are especially interested in the use of euphemisms that directly or indirectly reduce the likelihood or the magnitude of engaging in climate actions. Detrimental euphemisms in corporate and political communication about climate change may serve several goals: diminishing the perceived danger of situations, increasing the perceived moral permissibility of an action, and reducing public accountability for unethical behaviors (Gladney & Rittenburg, 2005; Rittenburg et al., 2016).² An interesting feature of well-crafted euphemisms is their ability to avoid lies and contradictory statements when addressing various stakeholders (La Cour & Kromann, 2011; Walker et al., 2021). Nevertheless, the short-term benefits generated by euphemisms can be counterbalanced by long-term detrimental consequences such as loss of trust and image degradation.

² Determining the intents of a specific euphemism's user is challenging but beyond the scope of our contribution. It can be difficult to determine when an individual is making a deliberate attempt to disguise or misrepresent something, and when s/he just has a genuine difference of view about the best policy option to follow.

4. Words that work: The euphemistic names of astroturfing organizations

Astroturfing organizations can be described as fake grassroots movements. Astroturfing designates “a deceptive communication strategy initiated by a political actor and manufacturing public support to influence public policies” (Lits, 2021, p. 229). Environmental issues, including climate change, are often targeted by astroturfers (McNutt & Boland, 2007; Hobbs et al., 2020; Lits, 2020). For instance, the coal industry developed astroturf campaigns in the United States to defend their interests: among 72 interest groups identified as active on the shale gas debate, 12 groups were astroturfers (Lits, 2020).

Astroturfing organizations typically use euphemistic names that disguise their real identities and/or agenda that might otherwise be considered harsh or unpleasant. Their names frequently convey a sense of in-group membership (by including words such as citizens, consumers) and trustworthiness (e.g., clean, sound) using well-selected euphemisms (Lits, 2020). For instance, several fossil-fuel industry front groups sponsor organizations with misleading euphemistic names such as “*National Wetlands Coalition*”, “*Global Climate Coalition*”, “*Greening Earth Society*”, “*Washington Consumers for Sound Fuel Policy*” or “*American Coalition for Clean Coal Energy*”. First impressions matter and these organizations seem explicitly dedicated to promoting environmental and climate change issues. They frequently target legitimate nonprofit and grassroots organizations with whom they can be confused. These euphemistic names conceal the true sponsors’ interests and affect public opinion in directions that do not align with climate science (Pfau et al., 2007).

Naming astroturfing organizations is a strategic choice. Organization names can be one of the first and simplest steps to persuade a targeted audience. For example, the *Responsible Energy Citizen Coalition* launched a campaign in 2012 to influence two European Parliament reports regarding shale gas exploration (Lits, 2021). This organization described itself as “an association of natural persons, representatives of self-governments and

local authorities as well as social organizations” and was financially supported by three corporations with a significant interest in commercially developing shale gas (Lits, 2021). According to the Elaboration-Likelihood Model of persuasion, there are central (effortful information processing) and peripheral (use of heuristics) routes of persuasion (Petty & Cacioppo, 1986). The model suggests the persuasive power of a message can be reinforced by exploiting heuristics about the qualities attributed to the messenger. The more similar the messenger is to the target audience (in-group effect) or the more trustworthy the messenger is considered to be, the more likely the message delivered will be accepted without critically evaluating its content (Bolsen et al., 2019; Brewer & Ley, 2013).

The companies funding astroturfing organizations can embrace double standards. They may describe themselves as environmental stewards, while still supporting well-named astroturfing organizations working behind the scenes to promote climate disinformation or at least views that better align with their agenda (Heald, 2017). If the funding relationships are disclosed, these businesses can both displace responsibility and demonstrate plausible deniability. Moreover, using experimental data, Cho et al. (2011) demonstrated that astroturfing organizations can remain persuasive even when their funding sources are disclosed. In short, euphemistic names exploit an immediate perceived emotional proximity to sway people’s opinions or emotions to a particular side, frequently to deny or lessen climate change.³ In the case of the shale gas industry, astroturfing organizations use words such as “economy”, “creating jobs” and “growth” to describe the benefits of this industry (Lits, 2020).

³ Astroturfing organizations are also successful at climate information because they have resources (e.g., money, power, competences) to design and manage influencing campaigns.

5. Policy implications and conclusion

Words are powerful instruments that influence thinking and behaviors related to climate change. They can numb people, lead them to be passive or can encourage them to take responsibility and appropriate actions. They offer a nudge that can generate first-order effect that will help or harm the pursued goals. Our analysis suggests several implications.

First, researchers who want to influence policy need to give more attention to research communication, including developing skills required to effectively use social media such as tweets. Research communication could become a required or highly recommended course in a policy related degree. Climate scientists are typically not cognition or communication specialists and they often use, either purposefully or subconsciously, a model of human behaviour based on deliberate and unemotional reasoning where facts and scientific evidence are the most important elements of their argumentation (Lakoff, 2010).

Second, although politicians and top bureaucrats are obviously aware of word power, we invite policymakers to take *greater* account of the power of words and recognize it as a central part of the policy cycle, especially in the climate change domain. For instance, many basic text books about the policy cycle omit the crucial step of developing a communication strategy. These decision makers should understand that their messages are received in a context where some groups have already built strong frames, well aligned with their interests. We observe that, policy makers do not play a one-shot game where a single well-worded message will by itself result in desired changes. They are engaged in a long term construction of frames to counter or replace preexisting ones, where carefully selected words constitute elements that can activate the adequate frames.

Third, our recommendation should not be confused with a one-size-fits-all approach where an ideal word or expression is identified once and for all and applied indiscriminately. We suggest tailoring and testing frames with target audiences (see e.g., Hung and Bayrak,

2020). Vocabulary is already used in various circles to influence and even manipulate and not necessarily with the best intentions (Cho et al., 2011). Rather than allowing scientific, legal, or linguistic considerations to determine word choice, we suggest considering the psychological and behavioral reactions of policy audiences, notably the frequently overlooked automatic part (System 1). Words are selected for their objective content but also for their potential to activate unconscious automatic processes and emotions in people. This analysis can lead to tradeoffs between words that were not originally considered, e.g., by sacrificing scientific precision to make the policy more effective (Reddy, 2020) or making subtle variations to address audiences characteristics.

Another implication is to consider the ‘supply’ and ‘demand’ sides of euphemisms use. The use of misleading euphemisms could be reduced by emphasizing the risks involved to the user such as potential legal actions, trust loss, and long-term negative consequences. Another option is to help people spot euphemism use and increase their awareness of the influence of these euphemisms on thinking and behaviors. Sophisticated methods are currently emerging to detect euphemisms, especially in online communication (Zhu et al., 2021). Developing media and environmental literacy notably in online environments, reinforcing skepticism defenses, critical thinking skills and appropriate online behaviors can prevent or reduce passive or automatic reactions to euphemism exposure and may contribute to proactive behaviors. Developing media and environmental literacy in school curricula can enhance understanding of environmental issues and prepare individuals to participate in environmental decision-making processes and reduce the likelihood that they will become victims of astroturfing attempts. Equipping people with ways to quickly detect whether a message comes from a dubious source (e.g., used frames, lack of corroborating sources, personal attacks rather than content-related arguments) could make them less prone to be influenced by misleading euphemisms, although recent evidence is not so encouraging (Cho et al., 2011).

For instance, when a seemingly reputable organization uses euphemistic arguments, it makes sense to develop in the audience the desire to take a deeper look at its funding, governance arrangements and representatives to detect potential connections with sponsors that the organization may prefer to remain hidden. It is also important to acknowledge that people with strong political views of their own can make anti-climate change euphemisms seem more effective than they really are because they already hold those beliefs and avoid dissonance. It may also be useful to trace the trajectories of specific euphemisms, from their emergence to their growth and diffusion, including their lifecycle and disappearance given the well-known euphemism treadmill.

References

- Ajzenman, N., Cavalcanti, T., Da Mata, D. 2020. More than words: Leaders' speech and risky behavior during a pandemic. *SSRN Electronic Journal*.
<https://doi.org/10.2139/ssrn.3582908>
- Atanasova, D., Koteyko, N. 2017. Metaphors in Guardian Online and Mail Online opinion-page content on climate change: War, religion, and politics. *Environmental Communication*, 11(4), 452-469.
- Bandura, A. 1999. Moral disengagement in the perpetration of inhumanities. In Brewer, M. B., Miller, A.G., Kenny, D.A., Norem, J.K. (Eds.). *Perspectives on Evil and Violence. A Special Issue of Personality and Social Psychology Review*. Psychology Press.
- Beans, L. 2014. Eco euphemisms that confuse our understanding of environmental destruction. *EcoWatch*, March 29. <https://www.ecowatch.com/eco-euphemisms-that-confuse-our-understanding-of-environmental-destruc-1881880863.html>
- Bolsen, T., Palm, R., Kingsland, J.T. 2019. The impact of message source on the effectiveness of communications about climate change. *Science Communication*, 41(4), 464-487.

- Brewer, P.R., Ley, B.L. 2013. Whose science do you believe? Explaining trust in sources of scientific information about the environment. *Science Communication*, 35(1), 115-137.
- Burridge, K. 2012. Euphemism and language change: The sixth and seventh ages. *Lexis*, 7.
- Casas Gómez, M. 2009. Towards a new approach to the linguistic definition of euphemism. *Language Sciences*, 31(6), 725-739.
- Chadwick, P. 2019. The urgency of climate crisis needed robust new language to describe it. *The Guardian*, June 16.
<https://www.theguardian.com/commentisfree/2019/jun/16/urgency-climate-crisis-robust-new-language-guardian-katharine-viner>
- Cho, C.H., Martens, M.L., Kim, H., Rodrigue, M. 2011. Astroturfing global warming: It isn't always greener on the other side of the fence. *Journal of Business Ethics*, 104(4), 571-587.
- Clot, S., Grolleau, G., Méral, P. 2017. Payment vs. compensation for ecosystem services: Do words have a voice in the design of environmental conservation programs? *Ecological Economics*, 135, 299-303.
- Drews, S., Antal, M. 2016. Degrowth: A “missile word” that backfires? *Ecological Economics*, 126, 182-187.
- Druckman, J.N. 2001. The implications of framing effects for citizen competence. *Political Behavior*, 23(3), 225-256.
- Ellsmor, J. 2019. Trump administration rebrands fossil fuels as “molecules of U.S. freedom.” *Forbes*, May 30. <https://www.forbes.com/sites/jamesellsmoor/2019/05/30/trump-administration-rebrands-carbon-dioxide-as-molecules-of-u-s-freedom/?sh=775e2cf13a24>
- Farrow, K., Grolleau, G., Mzoughi, N. 2018. What in the word! The scope for the effect of word choice on economic behavior. *Kyklos*, 71(4), 557-580.

- Farrow, K., Grolleau, G., Mzoughi, N. 2021. 'Let's call a spade a spade, not a gardening tool': How euphemisms shape moral judgement in corporate social responsibility domains. *Journal of Business Research*, 131, 254-267.
- Flusberg, S.J., Matlock, T., Thibodeau, P.H. 2017. Metaphors for the war (or race) against climate change. *Environmental Communication*, 11(6), 769-783.
- Gladney, G.A., Rittenburg, T. 2005. Euphemistic text affects attitudes, behavior. *Newspaper Research Journal*, 26(1), 28-41.
- Kreps, T., Monin, B. 2011. Doing well by doing good? Ambivalent moral framing in organizations. *Research in Organizational Behavior*, 31, 99-123.
- Hauser, D.J., Schwarz, N. 2016. Semantic prosody and judgement. *Journal of Experimental Psychology: General*, 145(7), 882-896.
- Heald, S. 2017. Climate silence, moral disengagement, and self-efficacy: How Albert Bandura's theories inform our climate-change predicament. *Environment: Science and Policy for Sustainable Development*, 59(6), 4-15.
- Hobbs, M., Della Bosca, H., Schlosberg, D., Sun, C. 2020. Turf wars: Using social media network analysis to examine the suspected astroturfing campaign for the Adani Carmichael Coal mine on Twitter. *Journal of Public Affairs*, 20(2).
- Holder, R.W. 2008. *How Not to Say What You Mean: A Dictionary of Euphemisms*. Oxford University Press.
- Hung, L.-S., Bayrak, M.M. 2020. Comparing the effects of climate change labelling on reactions of the Taiwanese public. *Nature Communications*, 11(1), 6052.
- La Cour, A., Kromann, J. 2011. Euphemisms and hypocrisy in corporate philanthropy. *Business Ethics: A European Review*, 20(3), 267-279.
- Lakoff, G. 2010. Why it matters how we frame the environment. *Environmental Communication*, 4(1), 70-81.

- Lineman, M., Do, Y., Kim, J.Y., Joo, G.-J. 2015. Talking about climate change and global warming. *PLOS ONE*, 10(9), e0138996.
- Lits, B. 2020. Detecting astroturf lobbying movements. *Communication and the Public*, 5(3–4), 164-177.
- Lits, B. 2021. Exploring astroturf lobbying in the EU: The case of Responsible Energy Citizen Coalition. *European Policy Analysis*, 7(1), 226-239.
- Matthes, J. 2009. What's in a frame? A content analysis of media framing studies in world's leading communication journals, 1990-2005. *Journalism and Mass Communication Quarterly*, 86(2), 349-367.
- McNutt, J., Boland, K. 2007. Astroturf, technology and the future of community mobilization: Implications for nonprofit theory. *Journal of Sociology and Social Welfare*, 34(3), 165-178.
- Milman, O. 2017. US federal department is censoring use of term 'climate change', emails reveal. *The Guardian*, August 7.
<https://www.theguardian.com/environment/2017/aug/07/usda-climate-change-language-censorship-emails>
- Padan, C. 2020. Coronavirus: On crisis, emergency, and the power of words. *Institute for National Security Studies*, 1353. <https://www.jstor.org/stable/resrep25527>
- Petty, R.E., Cacioppo, J.T. 1986. The elaboration likelihood model of persuasion. In Petty, R. E. Cacioppo, J.T. (Eds.). *Communication and Persuasion*. Springer New York.
- Pfau, M., Haigh, M.M., Sims, J., Wigley, S. 2007. The influence of corporate front-group stealth campaigns. *Communication Research*, 34(1), 73-99.
- Reddy, S.J. 2020. Hypocrisy they name: "Colorado river flow shrinks from climate crisis, risking severe water shortages"—A note. *Journal of Agriculture and Aquaculture*, 2(2), 1-14.

- Rittenburg, T.L., Gladney, G.A., Stephenson, T. 2016. The effects of euphemism usage in business contexts. *Journal of Business Ethics*, 137(2), 315-320.
- Schuldt, J.P., Konrath, S.H., Schwarz, N. 2011. “Global warming” or “climate change”? Whether the planet is warming depends on question wording. *Public Opinion Quarterly*, 75(1), 115-124.
- Shi, W., Fu, H., Wang, P., Chen, C., Xiong, J. 2020. #Climatechange vs. #Globalwarming: Characterizing two competing climate discourses on Twitter with semantic network and temporal analyses. *International Journal of Environmental Research and Public Health*, 17(3), 1062.
- Tannenbaum, M.B., Hepler, J., Zimmerman, R.S., Saul, L., Jacobs, S., Wilson, K., Albarracín, D. 2015. Appealing to fear: A meta-analysis of fear appeal effectiveness and theories. *Psychological Bulletin*, 141(6), 1178-1204.
- Tenbrunsel, A.E., Messick, D.M. 2004. Ethical fading: The role of self-deception in unethical behavior. *Social Justice Research*, 17(2), 223-236.
- Walker, A.C., Turpin, M.H., Meyers, E.A., Stolz, J.A., Fugelsang, J.A., Koehler, D.J. 2021. Controlling the narrative: Euphemistic language affects judgments of actions while avoiding perceptions of dishonesty. *Cognition*, 211, 104633.
- Whitcomb, I. 2021. Therapists are reckoning with eco-anxiety. *Scientific American*, April 19. <https://www.scientificamerican.com/article/therapists-are-reckoning-with-eco-anxiety/>
- Woods, R., Fernández, A., Coen, S. 2012. The use of religious metaphors by UK newspapers to describe and denigrate climate change. *Public Understanding of Science*, 21(3), 323-339.
- Ytterstad, A. 2015. Framing global warming: Is that really the question? A realist, gramscian critique of the framing paradigm in media and communication research. *Environmental Communication*, 9(1), 1-19.

Zeldin-O'Neill, S. 2019. "It's a crisis, not a change": The six Guardian language changes on climate matters. *The Guardian*, October 16.

<https://www.theguardian.com/environment/2019/oct/16/guardian-language-changes-climate-environment>

Zhu, W., Gong, H., Bansal, R., Weinberg, Z., Christin, N., Fanti, G., Bhat, S. 2021. Self-supervised euphemism detection and identification for content moderation. *Proceedings of the 42nd IEEE Symposium on Security and Privacy*. <https://arxiv.org/pdf/2103.16808.pdf>