

## **Applied semantics and climate communication**

### Author

Bromhead, Helen, Goddard, Cliff

### Published

2023

### Journal Title

Australian Review of Applied Linguistics

### Version

Version of Record (VoR)

### DOI

[10.1075/aral.22028.bro](https://doi.org/10.1075/aral.22028.bro)

### Rights statement

© 2023 John Benjamins Publishing Company Available under the CC BY-NC 4.0 license.

### Downloaded from

<http://hdl.handle.net/10072/425095>

### Griffith Research Online

<https://research-repository.griffith.edu.au>

# Applied semantics and climate communication

Helen Bromhead and Cliff Goddard  
Griffith University

This paper explores ways in which applied semantics (coming out of Natural Semantic Metalanguage approach) can inform effective communicative strategies for action on climate change. After framing discussion, it presents three case studies, which are intentionally disparate in nature: contrastive semantics of the expressions ‘climate crisis’, ‘climate emergency’, and ‘climate catastrophe’; a semantically-enhanced examination of how public inquiries into extreme weather events help shape climate discourse in Australia; the semantics of ‘the economy’ in everyday English and the implications for climate change discourse. We argue that climate action communication is clearer, more resonant, and more effective when it uses or builds on ordinary words and local meanings.

**Keywords:** applied semantics, climate communication, Natural Semantic Metalanguage (NSM), climate change semantics, accessible communication

*Most studies of climate change discourse have been descriptive, but one possible aim of future research should be how (climate) communication can develop communicative strategies which help to convey the urgency of the issue and to enhance and promote action.* (Penz, 2018, p. 289)

## 1. Introduction

This paper explores some ways in which applied semantics can inform effective communicative strategies for action on climate change, with particular reference to research in the Natural Semantic Metalanguage (NSM) approach (Goddard, 2021a; Goddard & Wierzbicka, 2014). By applied semantics we mean, in general, any application of the findings of semantic research to pursuits outside linguistics; for example, in language teaching and intercultural education (Bullock, 2014; Goddard, 2021b; Fernández & Goddard, 2019; Peeters, 2017, 2021; Sadow, 2021a,

2021b) or to assist with more accessible public messaging in disaster communication, health, and other fields (Bromhead, 2021a; Diget, 2021; Diget & Goddard, 2022; Goddard, 2021c; Wierzbicka, 2018a). In the present paper, we focus on ways in which NSM findings and techniques can be used, in Penz's (2018) words, to "develop communicative strategies which help to convey the urgency of the [climate change] issue and to enhance and promote action" (p. 289).

Within linguistics, various forms of discourse analysis, such as Critical Discourse Analysis (Fairclough, 1995), Ecolinguistics (Fløttum, 2017; Penz, 2022), and Appraisal (Martin & White, 2005) have made important contributions to understanding persuasive political discourse. What can NSM semantic analysis add to the contribution from linguistics to what many believe to be the most consequential global discourse of our times? The NSM approach is unique among contemporary approaches to meaning and meaning-making in using simple, cross-translatable words of ordinary language as its mode of representation (see Section 2). For applied purposes, a key point is that this reliance on ordinary everyday words makes NSM findings easily adaptable to uses with the non-linguists, including professionals in government agencies and NGOs, as well as the general public.

To illustrate how NSM findings can be relevant to improving communicative strategies for climate change action, we here present three studies. By design, they are disparate in nature: (i) a lexical case study into the changing vocabulary of climate change (*climate crisis*, *climate emergency*, *climate catastrophe*), (ii) a semantically-enhanced examination of how 'public inquiries' into extreme weather events help shape climate change discourse in Australia, and (iii) a look into everyday understandings of *the economy* and the implications for climate communication. Some of the basic research has been previously published, but what is new here is the attempt to move from basic (academic) research to application. This involves presenting the findings in ways that are more accessible to non-specialists; for example, in a simplified, abbreviated, or approximate fashion.

The paper proceeds as follows. Section 2 provides background on NSM theory and methodology. Section 3 is about the changing lexicon of climate change. Section 4 examines the role of public inquiries in climate discourse. Section 5 is about everyday understandings of 'the economy' and how these figure in climate change discourse. Section 6 contains concluding remarks. The study is particularly informed by the national conversations in one majority Anglophone country, Australia, although much of the discussion is relevant to other English-speaking countries and to international environmental discourse in English generally.

## 2. Background on NSM theory and methodology

Our platform for unpacking word meanings and for modelling discourse themes is the Natural Semantic Metalanguage approach (henceforth, NSM approach). The NSM approach is a way of capturing meanings and expressing ideas using simple ordinary words, rather than the complex terms and technical notations favored by other linguistic theories and methods of discourse analysis. The approach has been developed over more than 30 years. It is a well-established method with dozens of books and many hundreds of peer-reviewed journal articles and chapters behind it (e.g., Goddard, 2018, 2021a; Goddard & Wierzbicka, 2014; Levisen & Waters, 2017; Wierzbicka, 1996; Wong, 2014; Ye, 2017). A large searchable bibliography is available at [nsm-approach.net](http://nsm-approach.net).

The explanatory language of the NSM approach is ultimately based on a set of very simple words called semantic primes. Examples include: 'I', 'you' and 'people'; 'do' and 'happen'; 'good' and 'bad'; 'want', 'think', 'know' and 'say'. Research indicates that semantic primes have equivalents in all or most languages. Certain other basic meanings, such as 'water', 'fire', 'air', 'the earth', 'eat', 'buy', and 'money', are also used, so that the basic explanatory language consists of several hundred words overall.<sup>1</sup> In academic research, this language (or metalanguage) is chiefly used for three purposes: semantic explications, cultural and pedagogical scripts, and explanatory texts.

Semantic explications, often termed simply 'explications', are paraphrases of word meanings. To some extent they can be compared with dictionary definitions, but with the important difference that the defining vocabulary is very tightly controlled. In this way one can avoid getting caught up in definitional circles. It also becomes possible to achieve greater detail than ordinary dictionaries, partly because there is no pressure to keep the paraphrase brief, as in a conventional dictionary. Explications often take 6–10 lines of simple text. Of course, because they are phrased in simple words and grammar, explications look and feel very different to conventional definitions. Writing semantic explications is usually quite time-consuming, even for trained NSM experts. Care is needed to separate the meaning of a given word from what is 'read in' from the surrounding words

---

1. Non-prime meanings that function as building blocks in the composition of other lexical meanings are termed 'semantic molecules'. Primes and molecules, along with other widely known or necessary domain-specific words, are increasingly used in the applied arena under the broad rubric of a 'minimal languages approach' or under other more specific brandings, such as Minimal English, Minimal Medical English, Standard Translatable English, and Clear, Explicit Translatable Language (CETL); see Goddard (2021b) and chapters therein.

and extralinguistic contexts. Often it is necessary to distinguish several distinct but interrelated meanings for a word, each requiring a distinct explication.

The term ‘scripts’ is used for a diverse range of texts formulated in the NSM metalanguage for purposes other than semantic explications. They include ‘cultural scripts’ intended to capture widespread norms, assumptions, and beliefs (Goddard & Wierzbicka, 2004; Wierzbicka, 2002), and pedagogical scripts and ‘compositions’ for teaching purposes (Peeters, 2021; Sadow, 2021a, 2021b). Recently, script-like texts have been used to capture discourse themes, for example, Bromhead (2021b) and Hein (2020), or cognitive models and processes, for example, Forbes (2020) and Diget and Goddard (2022). Explanatory texts are written to express an idea or set of ideas, as clearly as possible. For example, Wierzbicka’s (2018b) ‘Charter of Global Ethic’ gives 25 short texts, which are intended to state in simple language a set of ethical norms that Wierzbicka argues are widely shared by religious authorities and humanist thinkers alike.

As mentioned, in this paper we make use of the NSM approach but not always following the usual NSM conventions. We deliberately use simplified, abbreviated, or approximate texts in an effort to make them more accessible or more pertinent to non-specialist users.

One point of clarification is in order. We are interested in words, meanings, and ideas as they circulate in the public sphere (Habermas, 1962/1991), which we may define loosely, but sufficiently for present purposes, as the imagined discursive space in which people exchange ideas and information, and form opinions. Although we adduce many real-world examples of language in use, the basic research underlying the present study (e.g., Bromhead, 2021b; Goddard & Sadow, 2021) is better described as transtextual and corpus-assisted, rather than as corpus-based. While we employ corpus-analytical methods at times, we also draw on texts and commentaries from public policy, journalism studies, political science, and environmental communication (cf. Bromhead, 2022, pp. 3–4 on humanistic, multi-methods approaches to the study of meaning and discourse).<sup>2</sup>

---

2. This paper presents eight applied semantic texts. Texts [A]–[C] on ‘emergency’, ‘crisis’, and ‘catastrophe’ were devised specifically for this study. Texts [D] and [E] on ‘public inquiries’ draw on work from Bromhead (2021b). Texts [F] and [G] on ‘the economy-1’ and ‘the economy-2’ are based on work in Goddard and Sadow (2021). Text [H] on ‘a low carbon economy’ was devised specifically for this study.

### 3. *Climate emergency, climate crisis, climate catastrophe*: The semantics of ‘mobilizing expressions’

The current decade represents a critical window in which the world must act to both mitigate climate change<sup>3</sup> and adapt to living with its consequences. The name given to the problem continues to be a site targeted for motivating change. Lexicographers, discourse analysts, and media scholars, such as Oxford Languages (2019), Ions and Wild (2021), Penz (2018), and Feldman and Hart (2021), have been tracking changing trends in climate change nomenclature. One prominent journalistic intervention came in 2019 when *The Guardian* newspaper updated its style guide to specify that in its pages the expression *climate change* should be replaced by *climate crisis* or *climate emergency* (Carrington, 2019), in the wake of calls by Swedish climate activist Greta Thunberg (2019).<sup>4</sup> To date, however, little systematic meaning analysis has been undertaken, which may shed light on the different affordances of various expressions. In this section, we treat three ‘climate’ compounds – *climate emergency*, *climate crisis*, and *climate catastrophe* – which may all be considered ‘mobilizing expressions’.<sup>5</sup>

2019 was the peak year for the expression *climate emergency* (Ions & Wild, 2021).<sup>6</sup> Around the world, many national, provincial, and municipal governments declared a ‘climate emergency’. In September that year the use of ‘climate emergency’ was 100 times greater than at the beginning of the year, and it was named or nominated ‘word of the year’ by a number of dictionaries (Oxford Languages, 2019). Examples (1)–(3), taken from Australian media, illustrate its use in government declarations and by activists and sceptics alike:

---

3. The expression ‘climate change’ itself deserves careful semantic analysis using NSM methods, yet such a project would require a separate study of its own. Some relevant ideas are touched on in Section 4 in connection with explanatory text [H] for ‘low carbon economy’. Beyond that, we would only note two points here: first, there is an extensive meta-discourse about the history, politics, and usage of the term ‘climate change’ and related expressions such as ‘global warming’ and ‘the greenhouse effect’ (e.g., Penz, 2018); second, almost certainly the term ‘climate change’ does not wholly incorporate the traditional/older meaning of the word ‘climate’, as in expressions like *a subtropical climate*, but rather shares certain meaning components with it.

4. Thunberg urged people to stop saying ‘climate change’ and ‘call it what it is’ with a list of alternatives including ‘climate emergency’, ‘climate crisis’, and ‘ecological emergency’.

5. We take the ‘climate’ contribution to these compounds to be, very roughly, the semantic content of the expression *climate change* (see Note 3). The same applies to other compounds used in the main text of this article such as *climate action* and *climate discourse*.

6. 2019 was also a peak year for *climate crisis*. In 2020 and 2021, COVID-19 may have meant that climate-related issues were less discussed than they were in 2019.

- (1) Noosa in south-east Queensland is the latest coastal shire to declare a '*climate emergency*'.
- (2) 'We are in a *climate emergency* and you have failed to act,' one protester said.
- (3) ... this *climate emergency* BS. I sit and watch news bulletins and read all about the puerile antics of the ratbag brigade.

Observers have noted that the use of *climate emergency* is significant because it brings what is most closely associated with the sphere of health and medicine into a new realm (Oxford Languages, 2019). After words from the health domain, the majority of the most frequent modifiers that occur with *emergency* from the English Web, 2015 (enTenTen15) corpus concern military and political conflict, and extreme weather events. See selected examples in (4). As shown in (5), many collocations with *emergency* as a noun modifier come from health and medical contexts, though it is also found in contexts such as aviation (*emergency landing*). Further examples from the Australian context are given in (6).

- (4) medical emergency, obstetric emergency, humanitarian emergency, national emergency, drought emergency, snow emergency
- (5) emergency department, emergency physician, emergency services, emergency personnel
- (6) a. If your call is an *emergency*, please hang up and dial 000.  
b. ABC Emergency: Up to date information about bushfires, storms, flooding and other *emergencies* from around Australia...  
c. Premier Daniel Andrews has declared *a state of emergency* (...) to stem the spread of coronavirus.

What do all these uses in context have in common? The key ingredient of an *emergency* is that it concerns something very bad happening in a place, which requires someone there to take immediate action. It is also an exceptional act: an 'emergency landing' of an aeroplane could take place in a river, which would not be the normal course of affairs; 'emergency approval' of a vaccine differs from the usual approval processes. If someone does not act, it is understood that the outcome will be extremely bad for people in this place. The meaning of 'emergency' can be partially paraphrased in simpler words as follows:<sup>7</sup>

---

7. The explication is partial because top-level components framing the explication as an abstract noun are omitted. They are not necessary for the present purpose (Goddard & Wierzbicka, 2014: Chapter 9 Levisen & Waters, 2017).

**[A] A partial semantic explication of *emergency***

something very bad is happening to people in this place  
 because of this, someone there has to do something now  
 they have to do something not like at other times  
 they have to do it very quickly  
 if they don't do this, something very, very bad will happen to people in this place  
 it will be very bad for people in this place

The declaration of 'climate emergency' by many governments could be considered a win for climate activists, yet this success could then provoke the reaction of 'now what?'. The expression conveys the implication that with swift and extraordinary action, one can avert a very bad situation. Implicitly then, it would appear that an 'emergency' comes with an expiry date, but at the same time it is obvious that the necessary action on climate change has not yet come to pass.

This leads to the thought that the discursive affordances of 'emergency' may not be as great as its main competitor *climate crisis*, to which we now turn. How does a *climate crisis* differ from a *climate emergency*? Examples of *crisis* follow:

- (7) a. economic crisis, financial crisis, political crisis, constitutional crisis, energy crisis
- b. midlife crisis, identity crisis
- c. crisis of capitalism; crisis of confidence, crisis of faith
- (8) a. The bushfire *crisis* deepened over the weekend, with firies [firefighters] now battling major blazes in every mainland state.
- b. The Prime Minister's also in town ... to discuss the *crisis* engulfing the dairy industry.
- c. ... the worst *crisis* since World War Two.

Phraseological and collocational differences between *crisis* and *emergency* show that *crisis* tends to occur with verbs showing continuation through time (see English Web, 2015 Sketch Diff *emergency/crisis*). *Crisis* goes more with *unfold*, *deepen*, and *loom*. Its meaning can be partially unpacked as follows:

**[B] A partial semantic explication of *crisis***

something very bad is happening in this place  
 many very bad things are happening to people here for some time because of this  
 because of this, some people have to do many things for some time  
 they have to know what it is good to do  
 because of this, after this, this place will not be like it was before  
 maybe some good things can happen not like before



Like an *emergency*, a *crisis* concerns something very bad happening in a place; however, unlike *emergency*, what is happening is understood to be extended through time. As with *emergency*, action is required; however, this action is not necessarily immediate or exceptional. Rather, one may have time to consider what the best course of action is. Whereas people tend to *respond* to an *emergency*, they lean towards *tackling*, *addressing*, *solving*, or *defusing* a *crisis* (see English Web, 2015 Sketch Diff *emergency/crisis*). These verbs indicate intricate, multi-part actions, which chime with some people doing a number of things over a stretch of time. Though the stakes are high in a *crisis*, when compared with *emergency* the word *crisis* is more future focussed. After people do many things, it is understood that the situation will not be as before. The wording does not rule out the possibility there could be some good consequences as a *crisis* can be *resolved*.

While *emergency* is solely about action, *crisis* has in-built some time and desirability for reflection, which may make it attractive for use in contexts of reconsideration and discussion.<sup>8</sup> These various semantic reasons may all be contributing factors that help explain why *climate crisis* has become more prominent than *climate emergency* (Ions & Wild, 2021).

The third ‘climate compound’ to be considered here, *climate catastrophe*, came to prominence in 2021 when the UN’s Intergovernmental Panel on Climate Change (IPCC) issued a major review. UN Secretary General António Guterres warned of the planet’s severe situation, but said: “if we combine forces now, we can avert climate catastrophe” (UN, 2021).<sup>9</sup>

How can *catastrophe* be distinguished from *emergency* and from *crisis*? Unlike an *emergency*, one can often see a *catastrophe* coming. Corpora show that *catastrophes* can be *impending*, *foreseeable*, *preventable*, and *avoidable*, but *emergency* does not frequently combine with these words (English Web, 2015) (see (9)). Unlike a *crisis*, a *catastrophe* is not as changeable through time. While a *crisis* can frequently *ease*, *grow*, *deepen*, and *worsen*, *catastrophes* tend not to. Further, people can *manage* both *emergencies* and *crises*, and *solve*, *resolve*, or *end* a *crisis*, but people do not tend to do so with *catastrophes*. This tendency is indicative of the more dire nature of *catastrophes*. Many corpus examples with *catastrophe* envis-

---

8. Note that *The Guardian*’s tagline is ‘journalism for climate crisis’, rather than ‘journalism for climate emergency’. And US Special Presidential Envoy for Climate, John Kerry, is reported to have said (19 February 2021): “I really, I think we have to end the word ‘climate change’ and own up to the fact it is the ‘climate crisis’ now”.

9. Interestingly, *climate catastrophe* has been reported to be calqued from German (Dörries, 2014), where *catastrophe* is perhaps closer to ‘disaster’, see the newish English expression ‘climate disaster(s)’.

age a single place-changing event, such as the Chernobyl nuclear accident or Hurricane Katrina in New Orleans (English Web, 2015); see Example (10).

- (9) a. They have the opportunity to set a precedent that will lead the world from impending *catastrophe* towards a new, green global economy.  
 b. Immediate and wide-ranging action is needed to avert the looming *climate catastrophe*.
- (10) After Chernobyl and Fukushima *catastrophes*, more and more countries abandon plans to build new nuclear power plants...

A partial semantic explication of *catastrophe* is given in [C], which captures its magnitude and impact:

[C] **A partial explication of *catastrophe***

something very, very bad happened in this place  
 because of this, many very bad things are happening in this place now  
 it is very, very bad for people  
 because of this, after this, it can't be like it was before  
 people can know that this happened there for a long time after

When a *catastrophe* is projected for the future, the implication is that an extremely serious event (something 'very, very bad' happening) triggers many serious events to take place in an ongoing fashion causing great harm to people. It is understood, furthermore, that the situation in the place concerned is irrevocably changed, and this situation will, so to speak, echo through time 'for a long time after'.

The arena of climate compounds is a shifting space, as attested by the statistics given in Ions and Wild (2021), and ongoing additions to dictionaries.<sup>10</sup> No doubt different expressions may be more effective in different contexts and with different audiences. For example, the dramatic scale and ongoing implications of *catastrophe* means that it has great affordances for speech acts like warnings, portents, and so on, such as that uttered by the UN Secretary General. The partial explications [A]–[C] show what is at play.

To be clear, we in no way wish to imply that there is, or could be, an ideal nomenclature for talking about climate change, ecological breakdown, and so

---

10. Readers may be interested to know how the three terms differ from 'climate disaster' or 'natural disasters'. 'Climate disaster' can be used as a count noun for individual disasters, such as wildfires or cyclones, when they are being attributed to climate change. It contrasts with the more traditional 'natural disaster', which is often now disfavoured in specialist circles in preference for simply 'disaster'. Less often, 'climate disaster' can be used in a non-count way in a similar fashion to the three mobilizing expressions although it is, thus far, used less often than they are. The exact semantics of the word *disaster* are beyond the scope of the present article.

on.<sup>11</sup> If anything, the tendency towards ‘ecological correctness’ (Stibbe, 2010), that is, insisting on ‘correct’ vocabulary, may well have an inhibitory effect on public discussion. Our point is not that there is a single ‘one right way’, but that it can be helpful to get a better understanding about what these various mobilizing expressions mean.<sup>12</sup>

#### 4. ‘Public inquiries’ as shapers of climate discourse

In this section, we shift from words to discourse: specifically, to ways in which public inquiries act as an institutional shaper of climate-related public discourse. The connection may not be immediately apparent, but in Australia at least it is mediated by widespread concern with ‘extreme weather events’, such as floods and bushfires. For example, there was the Commission of Inquiry into the 2010–2011 Queensland floods, and, in wake of the 2019–2020 bushfires, the Royal Commission into National Natural Disaster Arrangements and the New South Wales Bushfire Inquiry 2020 (see Bromhead, 2020, 2021b).

Australia has more public inquiries into extreme weather events than other comparable countries: approximately 140 between 2009 and 2018 (Cole et al., 2018; Pyne, 2020). These inquiries have attracted criticism from public policy professionals on a number of fronts, yet their importance to the shaping of discourse on climate has also been recognized. Public inquiries, whether into bushfires, conduct of banks, or any other issue, consist of speech and writing, but they also generate discussion of their processes, their blindspots, and many topics related to the subject matter. In a nutshell, public inquiries provide an institutional framework for public conversations.

Although there are different kinds of public inquiries (judicial inquiries, royal commissions, and so on), from a discursive point of view they all share certain features. Looking at these across time, first come public speech-act verbs such

---

11. If anything, the story of *climate emergency* and *climate crisis* may indicate the limits of language reform. Hopes may ride on the adoption of each new term as mobilizer, only to be dashed by subsequent climate inaction (see Feldman & Hart, 2021).

12. It is also important to acknowledge that such expressions may trigger indexical meaning by virtue of being associated with certain people who are perceived to ‘talk that way’. For example, for some people in remote Australia the expression ‘climate change’ is so strongly associated with well-off city dwellers that it is a roadblock to further discussion. The same people, however, may be comfortable talking about how ‘the heat’ is getting worse each year (see McCarthy, 2021, on the ‘deep listening tour’ of Susan Harris Rimmer and Elise Stephenson). In this way, ‘the heat’ represents a local meaning, which is part of existing environmental knowledge of the communities (Foxwell-Norton, 2017).

as *call for*, followed by *announce* (and its associated noun *announcement*). The announcement is accompanied by discussion of the *terms of reference*, which determine the inquiry's scope and guiding questions. The examples below come from Australian public media. The call, announcement, and public discussion about the terms of reference are already catalysts for public discourse.<sup>13</sup>

- (11) a. He is *calling for* an independent inquiry into how the Adelaide outbreak started ...  
 b. Former Prime Ministers *call for* a royal commission into media diversity...  
 c. Premier Colin Barnett has *announced* a public inquiry into the Waroona bushfires...

During the life of the inquiry, which is rarely less than six months but generally no more than two years, there are *submissions* and *public hearings*, and, often, *interim reports*, prior to the release of the eventual *final report*, with its *findings* and *recommendations*; see examples below. All these processes and stages are based on verbs for speech acts and speech events. All attract reports and commentary in public and social media. In this sense, public inquiries can be considered 'shapers' of public discourse.

- (12) a. The commission handed over its *interim report* yesterday ... following more than 1600 *submissions* and weeks of *public hearings*.  
 b. The disability royal commission *finds* there was an absence of consultation ...  
 c. The inquiry delivered 77 *recommendations* for improvement, yet precious little has happened since.

A *public inquiry* is a response to a perceived serious problem, and the perceived imperative to understand how and why it happened, whether it could have been avoided (often, by identifying shortcomings in government policy and/or wrongdoing by public officials, see Murphy, 2019), how it can be remediated, and, especially, how the likelihood of similar events can be reduced in the future. It will be helpful to spell out the purpose of a public inquiry in simple words, as in [D] below. It is framed in terms of a collective, using the pronoun 'we', while keeping the specific identity of the subject vague. 'We' can cover those specifically conducting the inquiry, the government who commissioned it, and, going more

---

13. Anna Wierzbicka once remarked: "It would not be an exaggeration to say that public life can be conceived as a gigantic network of speech acts" (cited in Goddard & Wierzbicka, 2014, Chapter 7, 156–183).

broadly, the citizens of the relevant jurisdiction, on whose behalf the inquiry is taking place.<sup>14</sup>

**[D] Partial script for the purpose of a ‘public inquiry’**

(e.g., into floods, conduct of banks, conditions in aged care, etc.)

something very bad happened in this place

we want to know how it happened, we want to know why it happened

we have to know

if something like this happens again, we want to know what it is good to do

we want to know what people can do

Going back to criticism of *public inquiries* into extreme weather events, one frequently raised issue is the absence of explicit discussion, within the inquiries themselves, of climate change and the need for mitigation (reducing carbon emissions could help slow down the increasing frequency and severity of extreme weather events). Part of the nature of public inquiries into ‘extreme weather events’ is precisely that they are focussed on single event (e.g., fire, flood) at a specific time, such as Queensland Floods 2010–2011 or bushfires in NSW 2019–2020. In this sense, they tend to be ‘event-near’ in scope, concentrating on people’s actions before, during and after (see script [E]). This makes it difficult to discuss an ‘event-distant’ subject like climate change mitigation in their recommendations, as the terms of reference do not allow concerns that far removed from the actual event. It is very difficult to argue that any individual event is *caused* by climate change per se. At best, climate change may be mentioned as a factor in exacerbating an event (as in the final report of the New South Wales public inquiry into the Black Summer bushfires).

**[E] Partial script for the scope of a ‘public inquiry’ into an extreme weather event**

something very bad happened in this place.

e.g., there were bushfires, there were floods.

we want to know what people did before the bushfires/floods

we want to know what people did during the bushfires/floods

we want to know what people did after the bushfires/floods

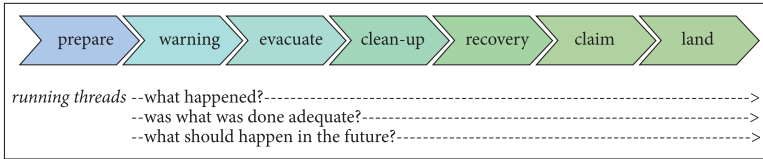
we want to know what happened because these people did these things

To illustrate the distinctive characteristics of the discourse attracted by public inquiries, it is helpful to compare the structure of witness statements to the 2011 Queensland Flood Inquiry and personal stories as reported in the media. In witness statements, the topics people speak about and the threads that run through

---

14. The word ‘we’ has been proposed as a ‘semantic molecule’ (Goddard & Wierzbicka, 2021). For uses of ‘we’ in public/political discourse, see Fairclough (1995) and Petersoo (2007).

their accounts are bound by the terms of reference of the Inquiry.<sup>15</sup> This leads to stories that are largely about things that can be changed by government, situated within a discourse of reform, even one of blame.



**Figure 1.** Discourse topics and running threads in witness statements to 2011 Queensland Floods Inquiry (after Bromhead, 2021b)

A different story structure is found in accounts by bushfire survivors of Black Summer published on the Australian Broadcasting Corporation website (ABC, 2020). Many examples can be analysed as personal narratives consisting of three parts: (i) introduction, (ii) action and climax, and (iii) a lesson learned (Labov & Walezsky, 1997; Propp, 1927/1968). For example, in the introduction to one bushfire survivor story, a police officer in the Australian state of Victoria is determined to stay and defend his home in a bushfire. In the action and climax of the story, a fire threatens his property but it is more serious than expected. The man abandons his plan and flees to safety, driving through flames. The story ends with a lesson learned: the man believes that ‘staying and defending’ was a poor decision, and that ‘fire makes up its own mind’. The moral is that bushfires are unpredictable and that householders may be powerless against them.

The discussion in this section helps bring to light some ways in which *public inquiries* are intertwined with discourses about extreme weather. Public inquiries may exclude mention of climate change mitigation; however, the findings can inform climate adaptation measures, such as improved warning systems and climate-informed land planning, which need to be undertaken in order to survive in the face of more frequent and severe extreme weather events.

15. Terms of reference of inquiries into extreme weather are based on what is known as the ‘disaster management cycle’. However, the terms of reference are not the sole determinants of the structure of witness statements. In analysis of the collection of flood witness statements, the discourse topic ‘clean up’ was added although it had not been included in the terms of reference. However, analysis of a collection of a similar number of bushfire witness statements from the 2009 Victorian Bushfires Royal Commission only yielded a small fraction of cases of discussion of ‘cleaning up’, although other discourse topics remained much the same (Parliament of Victoria, 2010). This is clearly related to the difference between the material nature of fires and floods.

## 5. ‘The economy’ in climate discourse

The *economy* tends to loom large in climate change discourse for a range of differing and sometimes antithetical rhetorical purposes. For example, in cameo: (i) ‘We can’t do such-and-such to reduce climate change. It would ruin the economy’; (ii) ‘We must do such-and-such to reduce climate change. Otherwise it will ruin the economy’. Here we ask how understanding the semantics of *the economy* might help inform better climate messaging. In everyday English, according to Goddard and Sadow (2021), two main meanings can be discerned: ‘economy-1’ and ‘economy-2’, notwithstanding that some sentences, for example, *It’s good/bad for the economy*, are ambiguous between the two meanings.

‘Economy-1’ is a very ‘on the ground’ concept, anchored in individual experience of prices, wages, employment, and the cost of living. Contextual diagnostics of this meaning include surrounding talk of shops and businesses being open or closed (very salient during the COVID-19 pandemic), and of people’s wages and jobs. Here are some typical examples.

- (13) a. We need to re-open (re-start, etc.) *the economy*.
- b. It was (wasn’t) necessary to close (shut down, etc.) *the economy*.
- c. *The local economy* really needs a boost and this event will be a windfall for our cafes, clubs and hotels.

‘Economy-2’ reflects a broader, more international, perspective than ‘economy-1’ and awareness of a greater range of “economic activities” and actors. It is commonly found on business pages and in business programs on TV and online media. Linguistic diagnostics of ‘economy-2’ include the possibility of plural form, that is, the word *economies*, the presence of economic jargon in nearby co-text, and the use of the word in international contexts and phrases, such as *the domestic economy* and *the global economy*. The ‘economy-2’ meaning is also associated with the adjective *economic*, and with the nouns *economist* and *economics*. Some examples follow.

- (14) a. It’s looking like a positive week for *the Australian economy*.
- b. New technology ... actually moves jobs from one part of *the economy* to another.
- c. China has *the 2nd biggest economy* in the world ...

We can clarify the differences by comparing partial explications for the two senses. [F] gives a partial explication for ‘economy-1’. It starts by describing a very positive situation for people in a country, namely, when people there are routinely buying things of many kinds in many places, doing many things because they are paid to do so, that is, for wages, and doing many other things with money, for

example, paying rent, banking. In such a situation, according to the ‘economy-1’ concept, people there can have plenty of money and do many things as they wish. On the other hand, when it is not like this, it is very bad for people there. Many people have little money, lack opportunities to do as they wish, and may not even have enough to eat.<sup>16</sup>

**[F] Partial explication for ‘the economy-1’**

people often say things about ‘the economy’ when they are thinking like this:

- a. it is very good for people in a country when it is like this:
  - every day people in many places there buy things of many kinds,
  - they do many things because other people pay them to do so,
  - they do many other things with money
 when it is like this, people there can have money, they can do many things as they want
- b. when it is not like this in a country, it is very bad for people there
  - many people there have little money, they can’t do many things as they want,
  - some people there can’t eat much every day

The full explication for ‘economy-1’ has an additional section (see below), but we can disregard this for the moment. The main point of relevance is that the ‘economy-1’ concept powerfully connects with people’s lives.

The rhetorical power of *the economy* is amplified by the existence of the ‘economy-2’ meaning. It is partly explicated in [G] below. ‘Economy-2’ implies a greater range of ‘economic activities’ (doing things of many kinds for money and with money) and awareness that the money involved belongs not only to ordinary people, but also to banks, governments, and companies. Very roughly, ‘economy-2’ represents a folk understanding of what economists call the macro-economy.

**[G] Partial explication for ‘(an) economy-2’**

- a. it is like this in many countries on earth:
  - people there do many things of many kinds for money (i.e., because they want to have money), at the same time they do many things of many kinds with money
  - many things happen because of this, this is good for many people there
- b. when people do these things with money, much of this money is not in people’s hands, it is in banks; some of it belongs to people, some belongs to the government, some belongs to something called ‘companies’

---

16. The words/expressions ‘money’, ‘have money’, ‘buy’, and ‘pay’ are all semantic molecules explicated in Goddard, Wierzbicka, and Farese (2022).



Importantly, the explications for both ‘economy-1’ and ‘economy-2’ have an additional section about the existence of economic experts and economic expertise. The exact phrasing of this section is slightly different in each case and we do not need to examine it in detail here. The main point, for present purposes, is that both concepts bring with them the idea that *the economy* is something big and complex and that to understand and discuss it requires knowledge and terminology beyond the ken of ordinary people.<sup>17</sup> This helps explain why a statement like ‘It will ruin the economy’ can have such an immobilizing effect on climate action discourse, and, it might be added, on other discourses connected with ‘social justice’ issues, for example, calls for free childcare, better education, housing for the homeless.

In saying this, we are emphatically not saying that climate action advocates should ignore *the economy*, or try to set economic considerations aside. Far from it. For more effective climate action communication, the challenge is to find ways to work with (or, when necessary, to work around) ‘the economy’ concept. At one level, this is widely accepted. Climate action advocates are already adept at deploying economic arguments in favor of swift action towards a more hopeful and more secure economic future (e.g., Climate Council, 2020).

Even so, what our analysis brings into focus is the fact that these arguments are mostly focussed on ‘economy-2’, that is, on a relatively broad and non-localized concept of the economy. They are not focussed on the everyday, experience-near concept ‘economy-1’, which, to put it simplistically, is all about ‘how we do things around here’: about jobs, wages, prices, putting food on the table.

To make this more concrete, we conclude with a brief look at aspirational, future-oriented climate discourse expressions, such as *low carbon economy*, *clean energy economy*, *net zero economy*.<sup>18</sup> Corpus evidence that these expressions are future-oriented comes from the verbs and associated nouns that typically precede them: verbs such as *shift to*, *move to*, *transition to*, *develop*, *build*; nouns such as *transition (to)*, *progress (towards)*, *a vision (of)*, *proposals (for)*, *a demand (for)*. It is also relevant that they strongly tend to occur with the indefinite, rather than the definite, article, for example, *We need to transition to a low carbon economy*.

---

17. There is also an implication that the economy works on rules of its own, without reference to human concerns such as values, morality or ethics; cf. Smith and Wilson (2019) on the need to re-humanize economics.

18. Other important ‘economy phrases’ in this space are *green economy* and *sustainable economy*. These, however, are well established expressions and are not tied exclusively to climate change. Both modifiers (i.e., *green* and *sustainable*) are found with a wide range of other nouns, such as *industry*, *agriculture*, *fashion*, *technology*, *development*, *investment*, *business practices*.

[H] below is an attempt to ‘zoom in’ on the semantic content of the term (*a*) *low carbon economy*. According to this, the expression invites a re-framing of conventional ways of thinking about the economy which consists of three moves or steps, labelled (i) to (iii). Step (i) acknowledges conventional thinking but challenges the assumption that the economy can continue as it is. Step (ii) identifies a serious problem with the current situation; namely, ever-increasing amounts of carbon dioxide (‘carbon’) in the air and consequently more frequent and ever-worsening extreme weather events (‘things like cyclones, heat waves, bush fires, floods’). Step (iii) holds out the possibility that far-reaching change is possible (‘it doesn’t have to be like this. People can do many things differently, so can governments, so can companies’) and envisages that if such changes are implemented, ‘the economy will be different in many ways’ and that this outcome will be very beneficial (‘very good for many people in many places’).<sup>19</sup>

**[H] An explanatory text for the expression *A low carbon economy***

Often when people say ‘a low carbon economy’, they are thinking like this:

- (i) Many good things happen now because the ‘economy’ is like it is now. Many people think: “It is good like this, it can be like this for a long time”. It is not good if people think like this.
- (ii) It is not good because every year there is more and more of something called carbon dioxide (CO<sub>2</sub>) [“carbon”] in the air. It is like this everywhere on earth. Because of this, many very bad things are happening in many places in many countries, things like cyclones, heat waves, bush fires, floods. Things like this happened before, now they are happening more and more. Sometimes they were very bad before, now they are often very bad. Soon they will be very very bad.
- (iii) It doesn’t have to be like this. People can do many things differently, so can governments, so can companies. If they all do some things differently, the ‘economy’ will be different in many ways. At the same time, there won’t be more and more carbon dioxide (CO<sub>2</sub>) [“carbon”] in the air every year. This will be very good for many people in many places.

Assuming that the text in [H] is reasonably accurate, two observations follow. The first and most obvious is that the expression *low carbon economy* presupposes a

---

19. The expression ‘it doesn’t have to be like this’ is equivalent to ‘it can be not like this’. Likewise, the expression ‘they can do many things differently’ is equivalent to ‘they can do many things not as they do now’. It also should be noted that [H] uses several semantic molecules, including ‘year’, ‘air’, and ‘countries’. Research suggests that these words are likely to have equivalents or near-equivalents in most languages. In addition, [H] makes use of a collection of words (cyclones, heat waves, bush fires, floods) that are not likely to be cross-translatable to the same extent.

fairly detailed understanding, albeit at a folk level, of a key chunk of scientific knowledge about climate change. In a sense, then, *low carbon economy* is an insider expression. In and of itself, there is no problem with this, provided that climate communicators are mindful of the fact that it will not necessarily be well understood by many in the public at large.

The second point, which is less obvious, as it seems to us, is that the expressions like *low carbon economy* (*sustainable economy*, *green economy*, etc.) are essentially about ‘economy-2’. As such, they are not immediately connectable to ‘economy-1’, which is tied to buying food and clothing, paying rent, wages, jobs, the cost of living, and so on. The communication challenge is to find ways of speaking and thinking about a different economic future not only in terms of ‘economy-2’ (roughly, macro-economy), but also in terms of the everyday ‘economy-1’.

## 6. Concluding remarks

We have tried to show in this paper that applied semantics, NSM style, can provide new and helpful findings for understanding discourse on climate change, and thereby inform efforts to create clearer, more resonant, more effective communication about the imperative for climate change action.

Research findings from three disparate areas have been presented. Section 3 explicated the meanings of three mobilizing expressions in climate action discourse, *climate emergency*, *climate crisis*, and *climate catastrophe*, and commented on their different affordances in different contexts. In Section 4, the NSM methodology was used to clarify aspects of the discursive shaping of climate discourse; specifically, examining the role of *public inquiries* into extreme weather events. These inquiries can contribute positively to discussions of climate adaptation, but often neglect the need for action on climate mitigation. Yet even the existence of these institutionalized public conversations draws attention to the need for climate action. Section 5 focused on one of the dominant keywords in climate discourse, *the economy*. Disentangling two meanings of the word helped clarify why talk about *the economy*, if not carefully managed, risks shifting people away from the need for climate change action into a zone of worry and concern about their livelihoods.

Needless to say, the three examples have only scratched the surface. Looking more broadly, we see many other climate-related arenas that can benefit from applied semantics. It is well documented that many in the public do not understand communications from bodies such as the IPCC (Bruine de Bruin et al., 2021). Though sometimes framed as a problem in science communication, it

would be more accurate to see the problem in terms of the interplay of complex concepts from science, technology, and public policy (bureaucracy). On the climate science front, there is a need to provide simplified explanations of commonly used terms such as *greenhouse gas emissions*, *carbon storage*, *ecosystems*, and many more; and beyond just clarifying terms, there is the challenge of extending public knowledge, for example, on the role of the oceans in climate change; how deforestation and agriculture impact climate change; effects of climate change on the spread of diseases.<sup>20</sup> On the technological and public policy fronts, there is an ongoing need to decode the constantly expanding inventory of concepts such as *net zero*, *renewable energy*, *climate mitigation*, *climate resilient development*, *energy market*, and others. Nor should the ethical, legal, and social justice aspects of climate change be forgotten, such as people's responsibility for the world's children and future generations, and humanity's collective responsibility for life in all its forms (biodiversity) on planet Earth.

In general, the challenge for climate action communicators is to find ways of meeting people where they are at – by using ordinary words and local meanings whenever possible, and by adapting and building on those ordinary words and local meanings as necessary. Like other discipline experts in the humanities, semanticists, as specialists in the study of word meanings, surely have a professional responsibility here: hence, the applied semantics of climate change discourse. We would also like to think that applied semantics can play a part in helping to expose obsfucation and to combat deliberate disinformation about climate change. We see possibilities for applied semantic to find a place in school classrooms to help with age-appropriate discussions of complex topics and how the media addresses them.

As a final note, we would like to reiterate a point made at the onset, namely, that we do not see the NSM contribution to improved climate action communication as in competition with other linguistic approaches. Theoretical differences can and should continue to be debated in academic journals. In the applied arena, however, linguists of different persuasions need to set such differences aside and work together to consolidate our discipline's contribution to meeting the greatest challenge of our age.

---

20. There are parallels with the COVID-19 pandemic where the public was introduced to, and asked to comprehend, many novel terms and concepts from epidemiology and immunology.

## Funding




Research was supported by a Griffith University Climate Action Beacon project funding grant: ‘Words and meanings in everyday Australian discourse about climate change and climate action’. Helen Bromhead was also supported by a Griffith University Postdoctoral Fellowship (52586-PC12550-BROMH).

This article was made Open Access under a CC BY-NC 4.0 license through payment of an APC by or on behalf of the authors.








## Acknowledgements







We are grateful to Lauren Sadow who provided valuable comments and research assistance. Thanks also goes to Sheridan McDougall for manuscript assistance. In addition, we thank three anonymous reviewers who provided comments that helped us to improve the article.

## References

- ABC (2020). *Australian Broadcasting Corporation website*. [www.abc.net.au](http://www.abc.net.au)
- Bromhead, H. (2020). The semantics of bushfire in Australian English. In H. Bromhead & Z. Ye (Eds.), *Meaning, life and culture: In conversation with Anna Wierzbicka* (pp. 115–134). ANU Press. <https://press-files.anu.edu.au/downloads/press/n7194/pdf/cho6.pdf>
- Bromhead, H. (2021a). *Proof of concept for accessible disaster messages provided to government agencies*. Unpublished proof of concept.
-  Bromhead, H. (2021b). Disaster linguistics, climate change semantics and public discourse studies: a semantically-enhanced discourse study of 2011 Queensland Floods. *Language Sciences*, 85, 101381.
-  Bromhead, H. (2022). Tensions in talking about disasters: Habitual versus climate-informed – The case of bushfire vocabulary in Australia. *Australian Journal of Linguistics*, 43(3–4), 207–225.
-  Bruine de Bruin, W., Rabinovich, L., Weber, K., Babboni, M., Dean, M., & Ignon, L. (2021). Public understanding of climate change terminology. *Climatic Change*, 167(3), 1–21.
- Bullock, D. (2014). *Learn these words first*. <https://learnthesewordsfirst.com>
- Carrington, D. (2019). Why the Guardian is changing the language it uses about the environment. *The Guardian*, 17 May. <https://www.theguardian.com/environment/2019/may/17/why-the-guardian-is-changing-the-language-it-uses-about-the-environment>
- Climate Council (2020). *Effective conversations: How to convince friends & family that Australia should just get on with climate action*. [https://www.climatecouncil.org.au/wp-content/uploads/2020/10/Conversations-Guide-Economics-Climate\\_V4-FA.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2020/10/Conversations-Guide-Economics-Climate_V4-FA.pdf)
- Cole, L., Eburn, M., Dovers, S., & Gough, M. (2018). Can major post-event inquiries and reviews contribute to lessons management? *Australian Journal of Emergency Management*, 33(2), 34–39.

- doi Diget, I. S. (2021). Minimal English for health: Reader accessibility in public health communication about COVID-19 in Australia (with contrastive reference to Denmark). In C. Goddard (Ed.), *Minimal languages in action* (pp. 281–318). Palgrave.
- Diget, I. S., & Goddard, C. (2022). Conceptual semantics and public messaging: “Risk-benefit” discourse around COVID-19 vaccination. *Scandinavian Studies in Language*, 13(1), 303–331.
- doi Dörries, M. (2014). Anticipating the climate catastrophe. In N. Lebovic & A. Killen (Eds.), *Catastrophes: A history and theory of an operative concept* (pp. 181–197). De Gruyter.
- English Web 2015 (enTenTen15). Linguistic corpus. *Sketch Engine*. (www.sketchengine.eu)
- Fairclough, N. (1995). *Critical Discourse Analysis: The critical study of language*. Longman.
- doi Feldman, L., & Hart, P. (2021). Upping the ante? The effects of “emergency” and “crisis” framing in climate change news. *Climatic Change*, 169(1), 1–20.
- doi Fernández, S. S., & Goddard, C. (2019). Una aproximación al estilo comunicativo de cercanía interpersonal del español a partir de la teoría de la Metalengua Semántica Natural. [An approach to the Spanish communicative style of interpersonal closeness from the theory of Natural Semantic Metalanguage]. *Pragmática Sociocultural / Sociocultural Pragmatics*, 7(3), 469–493.
- doi Fløttum, K. (Ed.). (2017). *The role of language in the climate change debate*. Routledge.
- doi Forbes, A. (2020). Using Minimal English to model a parental understanding of autism. In L. Sadow, B. Peeters, & K. Mullan (Eds.), *Studies in ethnopragmatics, cultural semantics, and intercultural communication: Minimal English (and beyond)* (pp. 143–164). Springer.
- doi Foxwell-Norton, K. (2017). *Environmental communication and critical coastal policy: Communities, culture and nature*. Routledge.
- doi Goddard, C. (2018). *Ten lectures on Natural Semantic Metalanguage: Exploring language, thought and culture using simple, translatable words*. Brill.
- doi Goddard, C. (2021a). Natural semantic metalanguage. In X. Wen & J. R. Taylor (Eds.), *The Routledge handbook of cognitive linguistics* (pp. 93–110). Routledge.
- doi Goddard, C. (Ed.). (2021b). *Minimal languages in action*. Palgrave.
- Goddard, C. (2021c). “Minimal language” and COVID-19: How to talk about complex ideas using simple words. *국어문학회요망 [Korean Language and Literature Society]*, 77, 93–111.
- Goddard, C., & Sadow, L. (2021). “It’s the economy, stupid!”: The everyday semantics of a geopolitical key word. *Journal of Postcolonial Linguistics*, 5(1), 226–238.
- doi Goddard, C., & Wierzbicka, A. (2004). Cultural scripts: What are they and what are they good for? *Intercultural Pragmatics* 1(2), 153–166.
- Goddard, C., & Wierzbicka, A. (2014). *Words and meanings. Lexical semantics across domains, languages and cultures*. Oxford University Press.
- doi Goddard, C., & Wierzbicka, A. (2021). “We”: Conceptual semantics, linguistic typology and social cognition. *Language Sciences*, 83, 101327.
- doi Goddard, C., Wierzbicka, A., & Farese, G-M. (2022). The conceptual semantics of ‘money words’. *Russian Journal of Linguistics*, 26(1), 7–30. <http://journals.rudn.ru/linguistics/article/view/27193> [


- Habermas, J. (1962/1991). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society* [Trans. Thomas Burger with Frederick Lawrence], MIT Press. (First published in German 1962)
- Hein, J. (2020). Europeanized places, Europeanized people: The discursive construction of Argentina. *Journal of Postcolonial Linguistics*, 5(1), 28–45. <https://iacpl.net/jopol/issues/journal-of-postcolonial-linguistics-2020/europeanized-places-europeanized-people-the-discursive-construction-of-argentina>
- Ions, R., & Wild, K. (Eds.). (2021, October 5). The language of climate change and environmental sustainability: The OED October 2021 update. *OED Blogs*. <https://public.oed.com/blog/the-oed-october-2021-update/>
-  Labov, W., & Waletzky, J. (1997). Narrative analysis: Oral versions of personal experience. *Journal of Narrative & Life History*, 7(1–4), 3–38.
-  Levisen, C., & Waters, S. (Eds.). (2017). *Cultural keywords in discourse*. John Benjamins.
- McCarthy, J. (2021). Queensland already counting the cost of climate change. In *Queensland*, 1 November. Advance online publication. <https://inql.com.au/news/2021/11/01/queensland-already-counting-the-cost-of-climate-change/>
-  Martin, J. R., & White, P. R. R. (2005). *The language of evaluation*. Palgrave.
-  Murphy, J. (2019). *The discursive construction of blame: The language of public inquiries*. Palgrave.
- Oxford Languages. (2019). *Word of the year 2019*. <https://languages.oup.com/word-of-the-year/2019>
- Parliament of Victoria. (2010). “*The Statements of lay witnesses*” 2009 Victorian Bushfires Royal Commission. <https://webarchive.nla.gov.au/awa/20100927012906/http://pandora.nla.gov.au/pan/96781/20100923-0223/vol4.royalcommission.vic.gov.au/index7ba7.html> accessed via archive.org Wayback Machine
- Peeters, B. (2017). Du bon usage des stéréotypes en cours de FLE: le cas de l’ethnolinguistique appliquée [Making good use of stereotypes in the French foreign language classroom: the case of applied ethnolinguistics]. *Dire*, 9, 43–60. <http://epublications.unilim.fr/revues/dire/816>
-  Peeters, B. (2021). From cultural to pedagogical scripts: Speaking out in English, French, and Russian. In C. Goddard (Ed.), *Minimal languages in action* (pp. 171–193). Palgrave.
- Penz, H. (2018). ‘Global warming’ or ‘climate change’?. In A. F. Fill & H. Penz (Eds.), *The Routledge handbook of ecolinguistics* (pp. 277–292). Routledge.
-  Penz, H. (2022). Communicating climate change: How (not) to touch a cord with people and promote action. *Text & Talk*, 42(4), 571–590.
-  Petersoo, P. (2007). What does ‘we’ mean? National deixis in the media. *Journal of Language & Politics* 6(3), 419–436.
- Propp, V. (1927/1968). *Morphology of the folktale* [Trans., L. Scott] (2nd ed.). University of Texas Press.
- Pyne, S. (2020). *The still-burning bush*. Scribe.
- Sadow, L. (2021a). *The Australian dictionary of invisible culture for teachers*. <http://ausdict.translatableenglish.com>

-  Sadow, L. (2021b). Standard translatable English: A minimal English for teaching and learning invisible culture in language classrooms. In C. Goddard (Ed.), *Minimal languages in action* (pp. 139–170). Palgrave.
-  Smith, V.L., & Wilson, B.J. (2019). *Humanomics: Moral sentiments and the Wealth of Nations for the twenty-first century*. Cambridge University Press.
-  Stibbe, A. (2010). Ecolinguistics and globalization. In N. Coupland (Ed.), *The handbook of language and globalization* (pp. 413–418). John Wiley & Sons.
- Thunberg, G. [GretaThunberg]. (2019, May 5). *It's 2019. Can we all now please stop saying "climate change"* [Tweet]. Twitter. <https://twitter.com/gretathunberg/status/1124723891123961856>
- United Nations (2021). IPCC report: 'Code red' for human driven global heating, warns UN chief. *United Nations News* 9 August. <https://news.un.org/en/story/2021/08/1097362>
- Wierzbicka, A. (1996). *Semantics: Primes and universals*. Oxford University Press.
-  Wierzbicka, A. (2002). Russian cultural scripts: The theory of cultural scripts and its applications. *Ethos*, 30(4), 401–432.
- Wierzbicka, A. (2018a). *Minimal English as a new and transformative tool for effective health care communication in English-speaking countries*. Paper presented at the International Symposium on Health Care Communication, 13 February, Canberra, Australia.
-  Wierzbicka, A. (2018b). Charter of Global Ethic in Minimal English. In C. Goddard (Ed.), *Minimal English for a global world* (pp. 113–141). Palgrave.
-  Wong, J.O. (2014). *The culture of Singapore English*. Cambridge University Press.
- Ye, Z. (Ed.) (2017). *The semantics of nouns*. Oxford University Press.

## Address for correspondence

Helen Bromhead  
Griffith Centre for Social and Cultural Research  
Griffith University  
170 Kessels Road  
Nathan, Queensland, 4111  
Australia

[h.bromhead@griffith.edu.au](mailto:h.bromhead@griffith.edu.au)

 <https://orcid.org/0000-0003-2675-7266>

## Co-author information

Cliff Goddard  
School of Humanities  
Languages and Social Science  
Griffith University

[c.goddard@griffith.edu.au](mailto:c.goddard@griffith.edu.au)



## **Publication history**

Date received: 22 June 2022

Date accepted: 26 April 2023

Published online: 27 July 2023