

TWO DEGREES WARMER: HOW OUR UNDERSTANDING OF WEATHER AFFECTS  
OUR UNDERSTANDING OF CLIMATE CRISIS

Masters Research Project

in partial fulfillment of the requirements for the degree of

MASTER OF ARTS in ENVIRONMENTAL EDUCATION AND COMMUNICATION

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## Literature Review

### The importance of language

A review of literature related to climate change communications illustrates the importance of language in conveying key messages to target audiences in this field. Nerlich et al. (2010) note that investigations into climate change communications must look at the role of language. “(It) is suspected that processes of habituation and desensitization could reduce people's attention to news about impending catastrophes...(Communicators must) look beyond simple transmission models or public understanding models of the relationship between expert knowledge and ‘lay knowledge’” (Nerlich et al., 2010, p. 103).

*The Guardian* newspaper recently updated its style guide to reflect the different language required to talk about climate. “We want to ensure that we are being scientifically precise, while also communicating clearly with readers on this very important issue,” said the editor-in-chief, Katharine Viner. “The phrase ‘climate change’, for example, sounds rather passive and gentle when what scientists are talking about is a catastrophe for humanity” (Carrington, 2019). This is an illustration of the communications challenges of the climate crisis and the need to have a separate vocabulary for climate action.

In writing about human apathy about the climate emergency, Foer (2019) notes that big emergency events like John F. Kennedy’s assassination or 9-11 capture the public’s attention, and everyone remembers where they were when they happened. But creating this kind of momentous feeling is difficult for an ongoing crisis like climate. “...the instinct (*is*) to present

climate change – when it is presented at all – as a dramatic, apocalyptic event in the future (rather than a variable, incremental process occurring over time)” (Foer, 2019, p. 20). This illustrates the difficulty in communicating the urgency of climate action.

There have been several key studies of the use of language in environmental education. Bowers (2001) argues that the language and metaphors used to discuss natural systems are based on an Anthropocene model that fails to recognize the human activities that are intertwined with the meaning of ecology and fails to generate the proper, in his opinion, level of responsibility for environmental degradation.

Flottum’s (2017) book about language and climate change discusses the role of linguistics in climate change, including a discussion about framing and selecting narratives. There is a strong argument that political actors and grassroots activists have used specific language in attempts to generate support for climate change policies, with quantitative and mixed method studies to empirically justify the point that choice of language matters in environmental communications.

In a frank article from an expert on climate change communications, Hassol (2008) offers some practical advice to scientists to improve their communications skills in order to improve public understanding of climate science and climate change. She emphasizes using plain language, avoiding jargon and unnecessary abbreviations when a scientist is explaining complex concepts to a non-scientific audience. She argues that the onus is on scientists to become better communicators to maintain their credibility as experts on the subject.

McEvoy et al. (2013) examined the importance of framing and language used to discuss climate change and weather extremes. They argue that framing the discussion of adaptation to climate change in a positive light can positively affect policy-making and outcomes. The researchers define framing based on recent literature, and provide examples from case studies in Australia. Their conclusion is that the idea of resilience is becoming more of the way scientists and policy makers are framing the notion of climate change adaptation, but that this has not yet resulted in action or research in a context of climate change adaptation.

### The language of weather

While there does not appear to have been much study to date about the specific crossover of terminology and language between weather forecasting and climate action, Sivle and Aamodt (2019) do discuss how the language used by meteorologists in their weather forecasts is received by those hearing the forecasts, and whether using technical or non-technical language is a stronger form of communications in this context. They emphasize the need to understand who the audience is in choosing language for these communications, as evidenced from their study that concluded that technical language was appropriate for professional meteorologists, but that non-experts should be addressed in more plain language terms.

Weyrich et al. (2019) also examine the language of weather forecasting, and specifically examined the effects of having different weather forecasting providers put out warnings with messaging that is not consistent across all providers, and the effect this has on people's actions based on those warnings. They emphasize the need for consistency in communications, both in words and visuals.

There have been media articles published about the communications challenges facing the climate-action movement (New York Times, 2019), and many stories written in mainstream media about the history of weather forecasting (Moore, 2015). There is a gap, however, in bridging this grey literature (information produced outside of academic publishing and distribution channels, such as news articles, government documents, speeches, newsletters etc.) to an academic review of the effects of conflating terminology in two different situations of weather and climate and the impacts this has on communications objectives.

The findings in the literature was aligned with what the experts I interviewed for this project discussed, such as the challenges of precision in finding the right tone and language for weather forecasting, and in identifying that scientists are often not strong communicators of climate science. While my research corroborated much of the academic literature reviewed, it went further to explore issues not covered in the literature, and helped bridge the gap I identified through informative interviews with experts that directly address the communications challenges of the terminology used to discuss weather and climate.