

Science Poetry Promotes Public Perception: A Case of 21st-Century Environmental Communication



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Abstract

Bridging the gap between cutting-edge scientific discovery and public understanding is critical in translating innovation into action. This is especially true of climate and environmental science communication, as climate change has become one of if not the most pressing issues of our modern era. Though the effect of traditional media outlets has previously been investigated, the effect of social media on influencing public perception of climate change has only recently been investigated. These initial results suggest a promising positive impact of social media use on climate change opinion and action. Here, I report ongoing efforts to lend a public voice to cutting-edge scientific research. I studied hundreds of recent peer-reviewed scientific articles, as well as older seminal publications, in both the field of climate and environmental science and in the field of space and planetary science. I then composed original, four-line poems (composed of rhyming couplets) for each scientific article selected, for a total of 100 climate and environmental science poems and 100 space and planetary science poems. These poems were optimized for the Twitter platform and have been released over the past number of months. The “tweeting” of these poems is ongoing, but the two accounts responsible for the poem release have gained hundreds of followers, and the tweeted poems have earned hundreds of thousands of Twitter “impressions.” I suggest that in some small way, science poetry has a role in contributing to public understanding of climate change.

Keywords: Climate change; Environmental science; Poetry; Science communication; Social media; Twitter

Introduction

Climate change communication has become a salient topic in the past decades. In particular, there is a need to bridge the gap between research-based, near-unanimous scientific consensus on anthropogenic climate change and the faltering public understanding of the most basic facts surrounding climate change [1]. There is also a need for communication to convey some call to action, that is, an outcome beyond mere understanding [2]. Along with the great need for effective climate change communication comes risks inherent to mass communication [3], but, promisingly, reporting of basic scientific facts by traditional media outlets has in cases been shown to be overwhelmingly accurate [4].

As we move further into the 21st century, and as Millennials and Generation Z come of age, and importantly, of age to affect policy and public decision through the right to vote, advocacy, and action, so too do rising mediums of communication (non-traditional media) become salient. In particular, the rise of social media is highly of interest with regard to its potential to contribute to public understanding and opinion, and even in its ability to fuel grassroots movements and effect societal change. Only recently is research coming forth on the influence of social media on climate change opinion in particular, with recent promising results suggesting that social media can positively impact public knowledge and even behavior around climate

change [5-9]. Social media emerges as a critical component of climate change communication moving forward in the 21st century.

Science Poetry Program and Public Perception

I studied hundreds of peer-reviewed scientific articles from journals including Nature, Science, Nature Climate Change, Geophysical Research Letters, Proceedings of the National Academy of Sciences, Earth and Planetary Science Letters, Climate of the Past, Earth-Science Reviews, Nature Geoscience, Global Environmental Change, Environmental Research Letters, PLoS ONE, Climate Research, Nature Biotechnology, Deep Sea Research, Conservation Biology, and the New England Journal of Medicine. I reviewed both articles that represent a selection of the most well-known papers in the field as well as articles that cover exciting new developments in the fields of climate and environmental science in recent years. As a parallel project, I also studied hundreds of current and seminal peer-reviewed research papers on space and planetary science.

From this extensive review, I selected 100 climate and environmental science articles. I then wrote individual, four-line poems (composed of two sets of rhymed couplets) for each of the 100 scientific articles selected. The focus of these poems was twofold:

a) Communicate pertinent, accurate scientific information on climate science and

b) Create poetry of high artistic quality that could be enjoyed and understood by a broad audience. An example of three such poems is included in Figure 1.

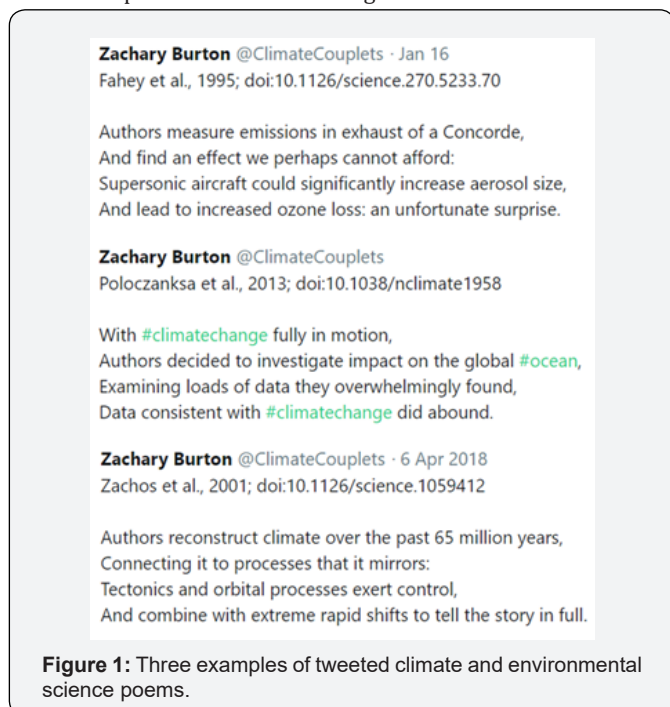


Figure 1: Three examples of tweeted climate and environmental science poems.

Using the Twitter social media platform, I have been tweeting dozens of these climate science poems under the account name @ClimateCouplets (the space science poems are tweeted under account @PlanetaryPoetry). The distribution of these poems via social media is still underway, though to date the two science poetry accounts have gained hundreds of followers and have made several hundred thousand Twitter impressions.

Conclusion

Climate change communication is an essential component to promoting public understanding and behavioral adaptation around climate change. As we move into the 21st century, non-traditional forms of communication become increasingly important and effective. Here, I briefly introduce that social

media in particular is becoming an effective means of informing public opinion and action around climate change. I outline a portion of my own science- and communication-based efforts to inform public understanding of climate change through the widely-used medium of Twitter. Based on positive reception and hundreds of thousands of Twitter impressions, I posit that science poetry can represent a contribution to elevating public understanding of science, and in particular, climate change science.

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