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## Climate Change: Communicating What We Don't Know

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When it comes to communicating climate change, both our understanding of what we don't know and the uncertainties in the science are themselves core elements of our knowledge. That's to say, what we know about uncertainty is part of what we know. Failing to communicate uncertainty and the limits of our understanding is failing to communicate the full picture of climate change.

In 2023, after many years of writing, my book, *"Predicting Our Climate Future: What we know, what we don't know, and what we can't know"*, came out. The book is targeted at a public audience and addresses the many exciting, deep, conceptual and practical challenges that we face in climate change science and climate change social science. It aims to show that there are fundamental questions here that are simply fascinating in themselves: intrinsically interesting irrespective of the social relevance of the research.

In doing this it has to shine a spotlight on the many things that we don't know - particularly our limited ability to describe the climate of the future at local scales, and the consequences of climate change for the societies in which we live. Some might be concerned that doing this could undermine trust in climate science and work against our ability to tackle climate change. In practice the opposite is true. Acknowledging and presenting the limits of our knowledge upfront, increases the credibility of climate change information. It also provides a handle for people and diverse disciplines to actively engage with climate science and to bring their values and attitudes to risk into the debate.

Of course it is also important to be clear about what we do know: what really isn't open to debate and why. Here I will discuss how I approach this balancing act between communicating the exciting aspects of what we don't know while being clear about what we do. I will also discuss my experience of presenting these issues to public, academic and business audiences.

Further materials:

Stainforth, D., *"Predicting Our Climate Future: What we know, what we don't know and what we can't know"*, **Oxford University Press**, 2023.

(<https://global.oup.com/academic/product/predicting-our-climate-future-9780198812937>)

Stainforth, D.A. *The big idea: can we predict the climate of the future?*, **The Guardian**, 30<sup>th</sup>

Sept 2023

(<https://www.theguardian.com/books/2023/oct/02/the-big-idea-can-we-predict-the-climate-of-the-future>)

Podcast: *Instant Genius* - Can we predict the climate of the future?

Podcast: *Challenging Climate* - Models and uncertainty

Podcast: *Empty Space Inbetween* - In conversation with David Stainforth