



Methane amount (left) and methane annual increase.

Sophie's Planet #2: Chapters 2 & 3 (Grandparents and Parents)

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Coronavirus and human-made climate change are analogous. Their ‘*delayed response*,’ weeks for Coronavirus and human generations for climate, makes them dangerous, as I [noted](#) last week. These lags allow problems to grow before we notice them, making solution difficult.

‘*Flattening the curve*’ is another analogy. Climate is a bit more complicated in the sense that there are multiple curves that must flatten and decline to restore our climate and they have different time scales.

Methane is an example. We began to flatten the methane curve in about year 2000, as sources of methane stabilized. Methane’s lifetime in the air is only about 10 years, because it is continually removed by reaction with the natural atmospheric cleanser, the hydroxyl radical (OH).

The flattening was short-lived, because we introduced a new source, ‘fracking,’ and because regional climate changes associated with global warming increase wetland and permafrost emissions. Human-made methane sources can be reduced, and, indeed, must be reduced. We can get methane to decline even as global temperature continues to rise for a while longer.

With declining methane and declining CO₂ emissions, we will eventually get global temperature to peak and slowly decline. In that case, amplifying feedbacks can work in the opposite sense, thus decreasing methane emissions, making it easier to get further decline of methane amount.

Climate is a solvable problem. We should not frighten children by implying that their world is doomed. *Sophie's Planet* aims to clarify the story, by describing the way that I learned it. It is, therefore, necessarily auto-biographical.

I am sending out draft chapters for fact checking. If you are locked away, need something to read, let me know if you find any flaws. [Here](#) are Chapters 2 & 3. Chapter 1 described the generation of my great grandfather, a carpenter from rural Denmark who pioneered a large farm, built a good house for himself, his wife and 11 children. What about the next two generations?

I opened a Twitter account @DrJamesEHansen, (<https://twitter.com/drjamesehansen>), but will minimize interactions until the book is finished.