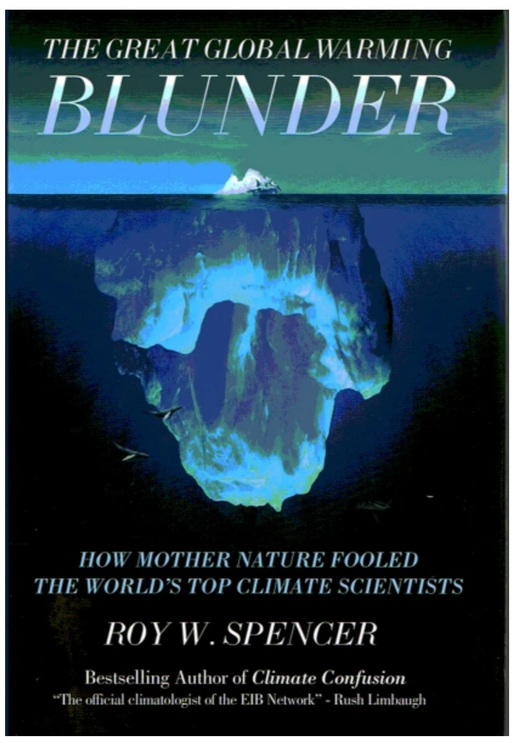
The Great Global Warming Blunder



This is an interesting book from Dr. Roy Spencer, whose blog I visit nearly daily.
The book is focused on one single subject: what is the real relationship between climate forcing and global temperature response. I.e. if dF = lambda*dT (where F = forcing in Wm-2 and dT = temperature increase cause by dF in Celsius or Kelvin) what is lambda?

This question assumes that the relationship between forcing and temperature is linear; this is the current IPCC consensus, and R. Spencer does not oppose it. He calls the parameter lambda the "global feedback parameter"; others (like Lindzen and Chu use a different notation: they replace lambda by lambda/(1-f) where f is the sum of the feedback parameters). Be it as it is, for Spencer the slope of the graph of dF versus dT is the dominant parameter pointing to a positive or negative feedback. The imbalance in forcing dF is measured since a couple of years by satellite (CERES), and for dT he says it will be best to use SST (sea surface temperature).
Without going into the details, his conclusion is simple: warming creates water vapour, water vapour creates clouds, clouds in a general have a cooling effect: the whole atmospheric system uses clouds as a self-stabilizing negative feedback. This is not the IPCC consensus, where increasing water vapour (a potent greenhouse gas) is seen as a positive feedback, increasing a small warming of 1.5°C caused by rising CO2 levels at least to a double value of 3°C.

The book is easy to read, but I have one complaint. R. Spencer tried to avoid any formula and mathematics; this is a pity. I would have preferred (at least in the addendum) a more rigorous mathematical/physical explanation. What comes as a surprise is that his very simple model: dT/dt = [F – lambda*dT]/Cp can explain (using a plausible time-lag and an assumption on the thickness of the ocean layer warmed up) most of the last century global temperature variations. It seems that the natural oscillations (like PDO and AMO) causing cloud cover changes play a much bigger role than increasing levels of CO2.

I suggest to read this book, but to read also the paper of Lindzen and Chu.

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