

## Storms of My Grandchildren, by James Hansen

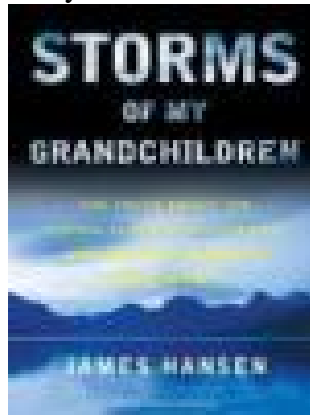
Rich Heffern | Feb. 10, 2011 | Eco Catholic

STORMS OF MY GRANDCHILDREN  
THE TRUTH ABOUT THE COMING CLIMATE CATASTROPHE  
AND OUR LAST CHANCE TO SAVE HUMANITY

By James Hansen

Published by Bloomsbury Books, \$16

Several years ago I volunteered my Honda Civic Hybrid for a local EPA project that measured the exhaust



gasses from its tailpipe. A team of technicians installed a measuring device in the trunk

with a tube leading out to the exhaust pipe. I drove the car for a week with this gizmo in place as it qualified and quantified the emissions.

The statistic you most often hear from reputable sources is that, for the average car, every mile driven produces about a pound of carbon dioxide through engine combustion processes. I've got 79,000 miles on my car, so I've contributed that many pounds to the atmosphere -- almost 400 tons -- in the last 7 years. Multiply me by millions and millions. The science -- at least at the tailpipe -- is pretty straightforward.

James Hansen, one of the nation's leading climate scientists, director of the NASA Goddard Institute for Space Studies, did research early in his career on the planet Venus, a perfect example of atmospheric carbon dioxide heating a planet -- the greenhouse effect. Now he has written a book detailing his struggle over the last 20 years to convince our government and the American public that climate change is indeed a serious challenge for the future. He offers the fruits of four-plus decades of inquiry and ingenuity. He sketches in the science of climate change.

"Humanity treads today on a slippery slope," Hansen writes. "As we continue to pump greenhouse gasses into the air, we move onto a steeper, even more slippery incline. We seem oblivious to the danger -- unaware how close we may be to a situation in which a catastrophic slip becomes practically unavoidable, a slip where we suddenly lose all control and are pulled into a torrential stream that hurls us over a precipice to our demise."

A strength of the book is the science. Hansen does a masterful job of laying out a very complex theory with a lot of parts in a manner where anyone capable of passing a high school physics class can probably easily

understand and those of us who can't will still get the most important parts while not losing a desire to move through those passages we don't completely grasp. His tutorials include lots of graphs and his lessons are framed in a way that easily and convincingly refutes the denialists who both falsely misrepresent our understanding of climate change and enjoy vastly more media coverage than they deserve.

Hansen reveals the relevant laws of physics coupled to the scientific community's observed findings which allows the reader to easily conclude how absurd, dishonest, and unscientific nearly all denialist claims that get traction in the media truly are. For example 2009's cool summer in parts of the Midwest which was relentlessly promoted by denialists like Matt Drudge as evidence is not a valid; Hansen rebuts by providing Figure 21, which shows how trivially small that cold area is relative to a vaster expanse of geography while the totality of the Northern Hemisphere experienced the second hottest summer in 130 years in 2009 with the most vulnerable and sensitive area being the hottest, the Arctic.

A second strong feature of the book: Hansen interweaves the science lessons with story after story buttressing and reinforcing his assertion that our government just doesn't get it and is not in anyway even remotely committed to successfully mitigating the risks of anthropogenic global warming in a timely fashion. Hansen names it "greenwashing". Hansen's evidence of greenwashing or outright opposition of science (in the case of the Bush Administration and the GOP) includes the Democratic Party that now controls the House of Representatives and the White House.

While it's easy to point-out how anti-science President Bush's administration was in practice which Hansen does a handful of times in this book; the biggest failure is one Hansen directly attributes to President Clinton. Hansen is convincing in arguing that "we the People" are the world's last chance; Kyoto, Copenhagen, and President Obama, though a science advocate, are not sufficient. Effective change will only happen when the U.S. government gets the message from us that we support the tough choices we need to take now that won't provide a payoff until years down the road.

Hansen blames the big money in politics for a lot of the evasion and denial that goes on.

He talks a lot about his two grandchildren. Indeed, this book is about their future, and all our grandchildren's future. He writes: "Storms of my grandchildren" when will these hit with full force? Already the air holds more water vapor than it did a few decades ago. The strongest of the storms that derive energy from water vapor "including thunderstorms, tornadoes, and tropical storms" are becoming stronger, and the associated winds and floods are becoming more extreme.

"But qualitatively different storms will occur when the ice sheets disintegration is large enough to damp high-latitude ocean warming or even to cause regional ocean cooling, while low latitudes continue to warm. Global chaos will ensue when increasingly violent storminess is combined with sea level rise of a meter or more. Although ice sheet inertia may prevent a large sea level rise before the second half of the century continued growth of greenhouse gases in the near term will make that result practically inevitable, out of our children's and grandchildren's control."

I could have done without the book's subtitle -- which makes it sound like a self-help book. Hansen's book is compelling reading. It will help you in a debate with a climate change denier. It will motivate you to take action.

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