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### The 5 Stages of Climate Grief

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## The 5 Stages of Climate Grief

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The global warming topic seems to now be saturating the media. Newspapers, television, weekly magazines and endless Internet sites all have summaries of the science, and wide ranging discussions of what society should do next. The global warming trends and projections are sobering, even frightening, eliciting puzzling responses from the public.

As a professor and climate scientist at the University of Montana, I have been giving public lectures on "The Inconvenient Truth for Montana" for at least 5 years, and these speaking engagements occur now almost every week. Also, as a chapter lead author of the most recent Intergovernmental Panel on Climate Change (IPCC) report, I wrote about both the level of scientific consensus and uncertainty, for global warming and impacts for North America. My speeches cover the newest evidence of increasing hurricane intensity, larger wildfires, melting glaciers, and sea level rise that are being implicated with climate change. Individual reactions to my presentations are wide-ranging, from anger to depression, and it has been difficult for me to understand this wide spectrum of emotions.

I recently took a fresh look at the widely recognized concepts on the "5 stages of grief" that Elizabeth Kubler-Ross defined back in the 1970s to summarize how people deal differentially with shocking news, such as being informed that they have terminal cancer. It seems that these stages of grief provide a very good analogy to how people are now reacting to the global warming topic, so I have formulated my "5 Stages of Climate Grief" as follows.

The first stage DENIAL, are the people that simply do not believe the science that the earth is warming, or secondarily that humans are the cause. Despite seeing a 50 year record of global atmospheric CO<sub>2</sub> rising every year since 1957, and global air temperatures of the last dozen years in a row being the warmest in a millennium, they dismiss these trends as natural variability. These people see no reason to disturb the status quo. Most people rightfully started at this stage, until presented with convincing evidence. That convincing scientific evidence recently summarized in the 4th IPCC report has, according to opinion polls, dramatically reduced the number of people in Stage 1.

Many people jump directly from DENIAL to Stage 4, but for others, the next Stage 2, is ANGER, and is manifested by wild comments like "I refuse to live in a tree house in the dark and eat nuts and berries". Because of my public speeches, I receive my share of hate mail, including being labeled a "bloviating idiot", from individuals that clearly are incensed at the thought of substantially altering their lifestyle. My local newspaper has frequent letters to the editor from people angry to the point of irrational statements hinting darkly about the potential end of modern civilization.

Stage 3 is BARGAINING. When they reach this stage many people (such as self-righteous

radio talk show hosts) who used to be very public deniers of global warming begin making statements that warming won't be all that bad, it might make a place like Montana "more comfortable". It is true that the building heating requirements for my hometown Missoula have decreased by about 9% since 1950 due to milder winters. At this stage people grasp for the positive news about climate change, such as longer growing seasons, and scrupulously ignore the negative news, more intense droughts and wildfires, and no glaciers in Glacier National Park by 2030. Most importantly, at this stage people are still not willing to change lifestyle, or explore energy solutions that are less carbon intensive. They seem willing to ride out this grand global experiment and cope with whatever happens.

Many people at my lectures have now moved to Stage 4, DEPRESSION. They consider the acceleration of annual greenhouse gas emissions, the unprecedented speed of warming, and the necessity for international cooperation for a solution, and see the task ahead to be impossible. On my tougher days I confess to sinking back to Stage 4 myself.

The final stage ACCEPTANCE, are people that acknowledge the scientific facts calmly, and are now exploring solutions to drive down greenhouse gas emissions dramatically, and find non-carbon intensive energy sources. Two factors are important in moving the public from DEPRESSION to this ACCEPTANCE stage. First are viable alternatives to show that reducing greenhouse gas emissions is possible without the end of modern civilization. It is very heartening to see wind turbines, LED lighting, thin film solar and hybrid cars on the market **right now**, not some vague future hope. Second is visionary national leadership, a "Marshall Plan" level of national focus and commitment, so everyone is contributing, and the lifestyle changes needed are broadly shared, in fact becoming a new norm. Progress on that front has not been good so far. An obvious flaw in this analogy is that many people are simply ignoring the global warming issue, a detachment they cannot achieve when they are personally facing cancer.

It is both welcome and important that some leaders of the business community, from DuPont, General Electric and WalMart down to the smallest entrepreneurial startups are now strongly pursuing goals of de-carbonized energy, improved efficiency and conservation. Large social changes always unavoidably breed pain for some and new opportunity for others, depending much on how rapidly people react to new realities. We really need most of our political, business and intellectual leaders to reach Stage 5 ACCEPTANCE in order to move forward, as a nation, and as a global citizenry. There is no guarantee that we can successfully stop global warming, but doing nothing given our present knowledge is unconscionable. How otherwise can we look into our grandchildren's eyes?

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