

Hodgson's Choice

A wild ride ...



© 20th Century Fox

The planet ravaged by superstorms as a result of abrupt non-linear climate surprises? Is this a believable scenario? Simon Hodgson talks to Michael Molitor, the Science Adviser on the 'The Day After Tomorrow'.

The Day after Tomorrow is a blockbuster with a difference; the first environmental disaster movie shows the world battered by the effects of abrupt climate change. With freak snowstorms in London and a storm surge drowning

New York you might think that all pretence at scientific credibility has been abandoned. Not so. The film had an expert science advisor, Michael Molitor, a man with an array of degrees and relevant experience behind him.

"Listen, this is a Roland Emmerich, Independence Day blockbuster. There's going to be some wild exaggeration, but we wanted the basic fundamental idea behind the film to be robust", Molitor states when I meet him. "The core ideas

– that humans are modifying the climate, and that modification could produce abrupt non-linear changes – are entirely accurate", he asserts. "It's just that things happen too fast."

You could say the same about Molitor – he's like a whirlwind. As we sit drinking our coffee, his stories gush out, tripping over themselves in a breathless narrative. He seems to have had more jobs than most sane people will admit to, starting appropriately enough with a degree in Earth Science and International Political Economy. He's taught at Harvard, worked at Berkeley, advised BP and managed Climate Change Services for global consulting firm PWC. How on earth did he end up working with 20th Century Fox on a film?

"I taught this Responding to Climate Change Course at Harvard", he explains, "and I had this kid in the class whom I ended up mentoring for several years after and his roommate was Jeffery Nachmanoff, the screenwriter on the Day After Tomorrow. So I got a phone call out of the blue: 'Hi – you don't know me but I'm writing a screenplay on climate change. Would you be interested in helping us?'"

It's just one random occurrence in a rollercoaster career. Molitor originally started researching the geochemistry of the ocean floor. He moved to the Scripps Institution of Oceanography, where a chance meeting with Roger Revelle, the 'father of modern climate science' convinced him that the biggest problem in his lifetime would be climate change, and that he should shift his focus to study how carbon cycles through the Earth system. He followed the advice and has been working in the field ever since. "It's my life", he candidly admits.

After a fixed term position at Harvard, Molitor got a job at Berkeley, with a big fund to create a campus-wide global environmental programme. "Six months after I got on campus, the Governor announced an \$11bn shortfall in the State budget and they started

pulling back cash. Every dollar that wasn't allocated was gone." Overnight Molitor's job changed from making appointments and setting up research to running round the country trying to raise money. It was a frustrating time, and he was, by his own admission "fried" at the end of it.

He kept moving, including Columbia and Scripps again, until he found himself at one of the 'COPs' (Conferences of Parties implementing the Kyoto Protocol) in Buenos Aires. Over lunch he met the team from BP, whose CEO, Lord Browne, had unilaterally committed the company to reductions in its greenhouse gas emissions, but who were struggling with tracing carbon in their system. Molitor sketched out a schematic carbon map on a napkin, as a result of which BP flew him to London to present to the senior executives. He spent 18 months working as a consultant to BP, commuting between California and London.

Finally he met PWC, who were fielding climate change questions from other leading clients. PWC offered him a job, and he ended up running their climate change services. Things were going well. "There I was a happy-go-lucky guy living in London with a good salary, flying 300,000 kilometres a year" he explains.

Time for another abrupt non-linear change: the US Sarbanes-Oxley act, introduced in the wake of the Enron scandal, placed severe restrictions on auditors mixing audit and non-audit work. "90% of our work was for PWC's

audit clients" says Molitor. "When Sarbanes Oxley came out, the hammer fell."

Advising a film maker is beginning to sound like it's all in a day's work for Molitor. His early discussions were an entertaining mixture of science and commerce. "We know there is this idea that the way that humans are modifying the climate could lead to nonlinear abrupt changes, so we worked through some scenarios. I talked about methane in the permafrost and the thermo-haline circulation of the North Atlantic."

But Molitor felt they could go further. "There are some surprises that we're aware of, but there are some non-linear surprises out there that we don't know about. You don't need to restrict yourselves to the ones that we know". The reply came back: "No, we love this North Atlantic story, because it's simple to tell in a movie and it affects two of our biggest movie markets – Europe and North America." Job done.

The science has certainly attracted criticism, but Molitor says that he went into the film with his eyes open. "When they started showing me the stuff, I said 'Listen guys, this is outside the boundaries of science'. Then it dawned on me that I'm one person trying to have an impact on this problem. I kept thinking 'where is my impact greatest?' Does it matter that some of this stuff is inaccurate? Roland Emmerich is a genius at getting several hundred million people into the theatre. We're making squat progress on this problem. If people see

this movie and think: 'wait a minute, it's not just songbirds in Britain disappearing or maple trees in Southern Ontario. There's a possibility that the way we're modifying the climate could lead to huge climate surprises'. If people simply stop and ask themselves if that's a realistic possibility, if you can get several hundred million people to think that, you've done more to advance on this problem than anything I've ever been involved with in my entire career."

And he's certainly pleased with the results. "It is impossible to guess what influence the film will have on the American psyche. We ran a private screening for Al Gore, so it is clearly having some influence on the political life" he explains. And personally? "I was on 60 Minutes Australia, a Fox Special, Discovery Channel in the US and Canada. I was even on Richard and Judy!"

So he's gone from teaching at Harvard to creating a film with tornadoes in Los Angeles and 60ft snowdrifts in London. "It's a wild ride" he says. I spend the journey home wondering whether he's referring to the film or his career so far.

*Simon Hodgson is a senior partner at Acona, where he heads the Group's sustainable business practice.
simon.hodgson@acona.com*

Acona is a management consultancy focussed on understanding risk and improving performance.

IEMA Members Offer...

...reduced rate subscription to Green Futures.

As an IEMA Member you can subscribe to Green Futures* at the reduced price of £18 per year.

For further details and an order form please contact Kellyleanne at kellyleanne@iema.net or go to www.iema.net/shop

*Green Futures is published by Forum for the Future.



iema INSTITUTE OF ENVIRONMENTAL MANAGEMENT & ASSESSMENT