

Full interview and responses – following offsetting piece in Nature:

Anderson, K. The inconvenient truth of carbon offsets. *Nature* 484, 7-7 (2012).

Reported in: <http://conservationbytes.com/2012/06/19/whos-responsible-for-climate-change/>

Questions

- 1) In your recent commentary in Nature, you made a strong argument that carbon offsets merely create a false impression of responsible air travel and should be scrapped. Your take home message is that the real solution to air travel emissions is to avoid unessential flying. Some criticisms of your commentary posted in the Nature website are listed below. What is your response to them?

Comment: *And when I do fly or drive, I purchase offsets. But I don't view the availability of offsets as an excuse or encouragement to fly or drive more often. My personal approach to this is to fly (and drive) only as a last resort when no other alternatives are available or practical (e.g., I could have taken the train to a recent family member's funeral but it would have taken 46 hours round-trip compared with a 6-hour round-trip flight).*

Kevin's response: *Not really a criticism – just their choice. However, the last resort offset is still not an offset. It may help with development projects or welfare issues but it is not an offset and should not be considered or described as such*

Comment: *Is it only me or does this attitude seem silly. It's a bit like arguing that you should not use condoms because it encourages sex. Like sex, carbon-generating activities will happen. Protecting yourself from the consequences is sensible, whether or not it encourages sex.*

Kevin's response: *Offsetting does not protect from the consequences unless the money is spent on adaptation issues. But if it is it is still not an offset – it still does not negate the emissions released (as I argue, it likely increases emissions over the above the emissions being offset). I am not opposed to adaptation measures – or that we fund those in poorer communities; but again this has nothing to do with offsetting so why refer to it as such.*

Comment: *It is like saying recycling doesn't make sense because our first priority should be focusing in not producing waste.*

Kevin's response: *A nice quip – but the parallel is really meaningless; we're not recycling the CO₂ molecules. In practice, I am arguing that were adding more waste; we dump some rubbish into the environment and then pay for others to develop processes by which they also can dump rubbish – overall an increase in total rubbish dumped; no recycling or offsetting in sight – just our conscience saved.*

- 2) The definition of 'unessential flying' is a personal one and not always straight forward. For instance, strong advocates for climate mitigation like James Hansen and David Suzuki fly a lot to engage the public or governments, and presumably believe that their trips have some chance of producing a net benefit to the atmosphere. Some of us avoid flying for holidays but will board a plane to visit aging relatives. In your opinion, would guidelines that define an acceptable flight (e.g. ratio of emissions to a ranked benefit of the trip) lead to more responsible flying decisions by individual or would they merely confuse and irritate most people?

I've not yet met anyone or any organisation that considers they are not the exception who should be able to emit more than the mean level for say 2°C. Broadly I take the view that if we emit more than we consider is appropriate as a mean level, we must be clear about who should emit less to compensate for our excess emissions – none of those criticising my arguments identified those who would have to compensate for their 'essential' emissions. – Below is a section from a piece I wrote in relation to a train journey I took from Broadbottom to Beijing: (<http://www.tyndall.ac.uk/online-tools/personal-blog/kevin-anderson-2>) – in blog-style it tries to make the point about all us 'exceptions'...

Relative dimensions in distance, time, and emissions

If we accept temperature as an adequate proxy for our various concerns around climate change, then what we know is that for staying below 2°C or 4°C, the climate is only really concerned with our cumulative emissions over a relatively short period of time. This period is longer than the Broadbottom-Shanghai train journey, but only stretches about as far as 2020 for 2°C and very approximately 2030 for 4°C (there is some maths behind this, linked to how high we are on the emissions curves, the real emission growth trend, realistic peaks and what carbon budget we've squandered already).

Coming back to the train and its emissions relative to other transport modes; from a system perspective, it's a good enough approximation to consider the CO₂/km for planes, trains and automobiles to be similar. Ok, alone in a Ferrari with your foot to the floor will be many times worse than sardined into one of Easyjets relatively new aircraft. Similarly, four people cosyng up in a diesel Fiat Panda will knock the socks off any scheduled airline (i.e. be much lower CO₂ emissions). But put a couple of academics in a diesel Mondeo and any disparity in emissions between the modes over the same distance will be lost in the system noise. The difference, of course, arises from the distance we deem reasonable – and really this is less about the distance and more about the time.

Attending an essential conference to save the world from climate change in Venice, Cancun, or some other arduous holiday resort, is perfectly doable by plane (though emission trends don't seem to have registered the sterling work we have achieved at such events; perhaps if we flew to more of them, emissions would really start to come down – we may even spot some flying pigs enroute).

Instead, junk the plane and get together with a few other UK speakers heading to the same event, cram yourself in a trusty Fiat Panda and set off for Venice. Amazingly, somewhere around Dartford what was previously essential starts to take on a different hue – and by Dover a whole new meaning has evolved. Essential has become a relative term, dependent on: can we get there by plane?; are our friends also attending?; is it somewhere nice to visit (or name-drop)?; we will be taxied around?; stay in a nice hotel?; and not have to dip in our pocket for a penny because it's all on expenses!?

This is where the first major saving resides; slow forms of travel change fundamentally our perception of the essential. We consequently travel less (at least in distance), and given that air travel is the most emission profligate activity per hour (short of Formula 1 and space tourism) the emission-related opportunity costs are knocked into a cocked hat. Of course, as climate change specialists we are exempt from such analysis – our message truly is essential - so we're the exception that should be able to carry on as before.

Ah, yes, and business folk - we need them to drive the economy. Tourists – there's another real important economic driver (not to mention the great cultural gains from staying in Western-style hotels with like-minded folk and observing other cultures pass by the windscreens of our taxis). Next there are the pop stars and celebrities – the world would be such a dull place if they weren't able to prance about at some international festival or the other. The football & tennis players that must test their mettle in the international arena – and of course they need their fans to cheer them on.

We can then turn to whole industrial sectors who put forward an equally bewildering array of 'reasons' why it is they should be the exception and exempt from major emission reductions. This includes government departments, climate change think tanks and some NGOs – with the remaining less deserving sectors and individuals taking up the slack (I think this may be Ethel and Walt's local pet food shop – they'll need to make one hell of a cut – perhaps a bit of CDM would help). It really is a puzzler as to why emissions keep on rising – all the more so since fuel prices have rocketed to levels way in excess of any carbon price economists previously told us would collapse the economy!

Still, a few more international conferences and guidance from the carbon-market gurus will have us turn the corner on this one I'm sure.

Obviously these caricatures are so far from reality that we don't recognise ourselves in any of them - but nevertheless the message is clear. Travelling slowly forces us to travel much less and be much more selective in what we attend and to endeavour to get more out of those trips we do take; – fewer trips and potentially longer stays – not rocket science – just unpalatable climate change basics.

3) Has the airline industry responded to your criticism of carbon offsets? How?

No – not that I can recall

- 4) You have not flown for the last 7 years. This is a very strong ethical statement in which you lead by example. The costs to your professional life, I imagine, must be substantial. Tell me about the trade-offs of grounding yourself.

There are pros and cons – the pros arise from the much richer process of travelling through and in the world rather than hurtling over it. The journey and destination are not separate and though sometimes more challenging at the time the rewards, in my view, of slower travel typically outweigh the costs – not just related to the trip itself, but the different and more appreciative mindset it engenders. In terms of cons – this is the response I made to one of the comments posted following my blog piece referred to above (they enquired about flying to/from events so they could spend less time away from their families):

The family & friend issue is a thorny one to resolve - but ultimately it is all about family and friends. If the science is broadly correct and the emissions trend continues, then we're heading for enormous changes for many families and friends even in the medium term. These families and friends may not be ours - much more likely to be those with little income and in areas geographically more susceptible to climate impacts. So the choice then is about who's family & friends matter most? We choose to fly back to be with ours as quick as possible - so as not to be away for more than a few days - and the medium term repercussions are for another family in another place to perhaps lose their home, suffer food and water shortages, social & community pressures, wider conflicts, etc; i.e. have their family and friend relationships seriously undermined and potentially destroyed. Moreover, our reducing our time away from our families through fast (high carbon) travel now ultimately has longer term repercussions for our own children; are we rushing back for the sake of our own families or for 'our' engagement with our own families? This is a subtle but I think important distinction - are we concerned about our families only whilst we're around to enjoy and benefit from them - or we more altruistically concerned - regardless of our immediate returns? When we're dead and buried our children will likely still be here and reaping the repercussions of our action today; do we discount that value at such a level to mean that we always favour those family activities that 'we' can join in with?

I'm not talking about this solely in an abstract manner; my immediate family died prematurely leaving me with an Uncle in Australia who is getting on in years and not in great health. I last saw him in 2004 and have since stuck to the difficult decision not to return to visit him - other than virtually. Ok I may relent one day - but in the interim I have not been able to reconcile my desire to maintain a strong bond with an Uncle I get on well with and with whom I have many shared family memories with the fact that me visiting him jeopardises others' abilities to lead good family lives.

- 5) Are you alone in this decision not to fly, or have other colleagues joined in?

To differing levels most of my immediate colleagues in Tyndall Manchester have certainly curtailed their flying – with the odd one or two adopting a no/very little flying policy. It is also important to note I do not have an explicit no fly policy – I try to avoid it and for almost eight years have not considered anything I have done sufficiently important for me to justify the emissions. One day I may fly – but I doubt I'll become a regular flier unless the sceptics are right or the fuel is net zero carbon – I'll not be holding my breath on either of these.

- 6) Last year you took the train to and from Shanghai to help open a new centre of Tyndall in that city. I have this image of you—the busy scientist—hanging out for days on end on a slow train to China while everyone else flies within hours to the same destination.

a. How many days did each leg of the trip take?

10 out and 11 back

b. How did you spend your time?

I'm a bit of an insomniac – so successfully managed to work about 18hr days – & loved most of it. Peaceful(ish), no internet, emails, telephone calls. Time to really think – watching a slowly changing world pass by. The time in China was very valuable to me in terms of getting a much better understanding of how poor a typical western academic's grasp of China is (my thinking and work has evolved significantly as a result). But despite the value of the destination (China) the journey was the most productive (& enjoyable) period of my academic career – I wrote a paper on the way out and almost completed another on the return.

c. Was your world view altered, or at least enriched by the trip? By conversing with fellow passengers and observing passing landscapes, what did you learn about climate change and its impacts on human society that you would have not learned inside an academic institution?

Touched on above. In terms of our responding to climate change, China was the most depressing and uplifting place I have visited. Emissions rocketing in a nation with a palpable can-do mentality that we have not had for many decades. I really do not think our western mindset can grasp what is happening there – we can observe the outcomes, the data etc – but the drive, the deep culture, philosophies etc are light years away from ours – not necessarily better, but different. And maybe in that difference hope resides – but if it does it had better make itself known soon! One particularly uplifting dimension of China to me – is that it appears not to give a damn about finance; – economics yes – but I got the strong sense that markets and money making are tools of a progressing society not society's master. I found this refreshing.

As for the journey – I've made several references to it above – but suffice to say a slow moving and perfectly comfortable (and pleasantly battered) carriage was a much more conducive environment for thinking and research than the increasingly money-driven (and admin-loaded) focus of British universities.

d. Would you take an equivalent trip again?

Yes – and will likely do so to China in the next couple of years or so. That's the great emissions-benefit of slow travel – it demands we do some things differently. I'll not go often, but when I do it will be with a programme of activities and not for a short presentation.

7) You are a critic of scientific meetings that demand air travel. When video conferencing replaces traditional scientific meetings, air travel becomes unnecessary and international colleagues can exchange ideas without emissions. The benefits to the atmosphere are obvious, but are there costs to science itself? Do virtual meetings, for instance, quench the buzz and energy of being together in one physical place which, as in a musical jam session, spark spontaneous and novel ideas? If yes, is this a trade-off we must accept, given the triage stage that we are in?

Yes – if it is a real trade off; but I'm not so sure it often is once opportunity costs are considered. There are research groups in my own University I don't adequately engage with – let alone ones across the UK. Culturally, I'd learn more by visiting some of the poorer parts of North Manchester – just 6 miles from where I work – I'd learn about fuel poverty, aspirations, the challenges of public transport, trying to rear healthy kids in damp and low-quality rented houses/flats etc. – a wealth of energy and climate change issues on my doorstep. Instead, I could order a taxi to an airport, fly to some exotic location, hail another taxi so I could hear talks I've read about before from people I saw at last months academic jamboree. We'd have a good time, eat nice food, stay in another hotel and generally feel we're part of a self-important clique solving a major world problem. Ok –we would have some academic arguments, discussions and perhaps leave upbeat about new avenues of research. But would any of this be more than I would gain from talking with other researchers in my own institution, country etc? Would the issues raised be any more challenging, interesting, important than what I'd learn in the poor North Manchester housing estate – or for that matter, on the energy consuming profligacy of the football and similar set living in Wilmslow or the Cheshire plains? There are many big issues on our doorsteps – and many of those considering them are based a short walk or train journey from where most of us are sitting.

Occasionally, international travel, preferably slow travel, may pay dividends over and above the opportunity cost of the trip and time away – but we must balance this. At the moment academics and other climate change policy makers etc spend more time on planes than they do on buses, trains or shanks' pony – but to what avail? Emissions are out of control – we're failing! Do we really think more international events, conferences and ever-expanding climate festivals of excess are going to solve the problem or provide new insights?? We need to think and act differently – and starting at home and leading by example would perhaps add gravity to our otherwise unattractive message.

For more on the China trip, go to: Anderson, K. *Final Musings: Slow and Low – the way to go.*
<http://www.tyndall.ac.uk/online-tools/personal-blog/kevin-anderson-2>