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Why I do not fly

I do not fly. I refuse to get on an airplane. When people ask me for an explanation, friends who have already tried to convert me hurriedly change the subject, aware that I am prepared to talk about not flying until the cows come home. But as I sat on the hill above the town early this morning, in the sun, smelling the yellow gorse (which is in flower), and watching an airplane leave a vapour trail silently high above, I thought I'd put down a few thoughts on the subject.

Let's start with the obvious point, which is no less pertinent or true for it being obvious. There is a fear factor underlying my decision. Nobody can be unaware that airplanes do not always come gracefully and gently into land when a crisis occurs. If something goes wrong with a car, you can get out and walk. If something goes wrong with a boat, it floats. If not, then it sinks and you swim. But if something goes wrong with an airplane, your options are limited. The resultant anxiety is natural, common, and (if you ask me) fascinating whether you suffer from it, benefit from it, or couldn't care less. It shows how people think about risk in a number of different ways, and it says much about the nature of fear, and people's perceptions about what fear is.

The most common argument I hear is this: the chances of dying in an aircraft crash are statistically negligible – you are far more likely to die in a car crash – so, if you are prepared to drive a car, why don't you get in an airplane?

On the face of it this has some substance to it. In America there are eight deaths per million people on average every year from aircraft disasters compared to 241 per million in car crashes. Thus US citizens are about thirty times more likely to die in a car than on an airplane. If you prefer to measure the various risks by distance travelled, air travel seems safer still. There are 0.05 deaths per billion kilometres travelled by air and 3.1 deaths per billion kilometres travelled by car, so travelling by air is 62 times safer.[1]

However, there are two big problems with this approach.

The first lies in the misleading way in which both these statistics have been presented. To talk about deaths per head of the population should fool no one: people more regularly drive than fly in the USA, so relating aircraft and car deaths to simple population levels results in meaningless figures. It is like saying that horse riding has become much safer

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[1] Table from numberwatch.co.uk quoting a table compiled in October 2000 by Roger Ford for the magazine, *Modern Railways*, based on UK government statistics collected by the Department of the Environment, Transport and the Regions.

since 1920 because the number of deaths per head of the population has gone down, whereas the actual reason has more to do with the fact that many fewer people ride horses.

Less obviously, the comparison on the basis of deaths per billion kilometres travelled is also misleading. Of the nine types of transport commonly categorised (air, bus, train, van, water, car, bicycle, foot and motorbike) air is by far the safest when calculated in this way. But by number of journeys, it is the third most dangerous, being almost three times as dangerous as choosing to travel by car.[2] The grounds for saying that you are 'far more likely to die in a car crash' are based on the fact that airplanes cover such great distances.

Let me put it like this: would you prefer to suffer a fatal accident at the beginning of a long flight or at the end? I expect you will agree that it really doesn't make much difference. But it makes a huge difference as far as the statistics are concerned. A plane that crashes after 2,000km of a flight with the loss of all on board would be regarded as a thousand times safer than one that crashes after just 2km, with the same loss of life.

The degree to which this deaths-per-billion-kilometres argument is misleading is revealed by applying it to travel by space shuttle. There have been five shuttles built: two of which (Columbia and Challenger) have been destroyed with the loss of all seven crew, a total of fourteen deaths. Collectively they have gone into space 134 times and flown in the region of 537,114,016 miles (864,401,219km).[3] That is a fatality rate of 16.2 deaths per billion kilometres – more than five times as dangerous as driving a car but still not as dangerous as cycling (44.6 deaths) or riding a motorcycle (108.9 deaths). On this basis it would be fair to say that space flight in a shuttle is reasonably safe and *much* safer than walking (54.2 deaths per billion kilometres). But consider the risks in relation to flights: the fatality rate is the equivalent of 104,477,612 deaths per billion flights. Pretty damn risky, you'll agree; and statistically 63,706 times more dangerous than riding a motorcycle (1,640 deaths per billion journeys). So, which do you consider safer: going into space or walking to the shops? If you're sane, you will acknowledge that the vast distances covered by space shuttles distort the relative probability of disaster, making them seem far safer than they really are.

Clearly, this applies to airplanes too: only the 'fatalities per flight' measure has meaning. The number of miles an airplane travels safely is immaterial if it crashes on landing. Hence you have to calculate your risk according to the number of times you get on an airplane. And by this reckoning you are almost three times as likely to die from each decision to fly (117 deaths per billion journeys) as you are from each decision to get in a car (40 deaths per billion journeys). In case you're wondering, travelling by bus is the safest way to get around (4.3 deaths per billion journeys).[4]

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[2] *Ibid.*
[3] Data from NASA:
http://www.nasa.gov/pdf/566250main_2011.07.05%20SHUTTLE%20ERA%20FACTS.pdf.
Downloaded July 2014.
[4] Table from numberwatch.co.uk quoted above.

The second big problem with the 'you are far more likely to die in a car crash' statement is that, even if it were true, it would be a purely a statistical argument, a quantification of risks. This is a common way of arguing but it actually is nonsense. No risk is purely quantitative; every risk has a qualitative element to it too, in terms of the nature of *what* is being risked. In other words, you need to consider *what* is being risked, and what you have to lose, and not just what you have to gain.

To illustrate this, consider the series of decisions from 1989 by the UK government to take precautions against variant Creutzfeldt-Jakob Disease (vCJD) arising from eating the offal from beef infected with BSE.

- There were 163 cases of vCJD (including new vCJD) deaths in Britain between 1989 and 2008 (out of a population of roughly 60 million) – a risk of roughly 1 in 370,000 over twenty years.
- Over a similar twenty-year period (1988-2007) about 33,500 people worldwide were killed in commercial aircraft crashes (out of a population of about six billion).[5] Thus, if you fly no more frequently than the worldwide average, this amounts to a 1 in 179,000 risk over more or less the same twenty years. However, many people in the world do not fly; the worldwide average number of flights is only a sixth of a flight every year, or one flight every six years (as the total number of commercial passenger-flights made each year worldwide is 1.09 billion, according to Boeing).[6] Therefore if you fly more regularly than once every six years, your risk of being fatally involved in an air crash is greater than 1 in 179,000. If you take two flights every year – one to go on holiday and one to return, for instance – your risk is about 1 in 15,000 over twenty years. That is about twenty-five times the likelihood of dying from vCJD in 1989-2008.

Clearly it is not just the numbers that count, it is what they relate to that matters too. It was not the statistical likelihood of people catching the disease that meant it was worth culling 4.4 million cattle, paying billions of pounds in compensation, and ruining the entire British beef industry for several years to eliminate the risk altogether. It was the nature of the disease. Few people would willingly and knowingly eat beef from a BSE-infected cow today, even though the risk of contracting vCJD is demonstrably less than that of dying in an aircraft crash.

If you have any doubt that the way we appreciate risk is connected to the nature of what we are risking, consider the opposite: risk related to reward. Imagine you have a one-in-ten chance of winning a large sum of money, say £10,000,000. If the stake you have to bet to take that one-in-ten chance is one penny, then there would be no harm in placing that bet: you have almost nothing to lose and much to gain. It is much the same if that stake is £1 or £10. At £100, perhaps you would start to twitch: the 90% chance of losing £100 starts to become more significant. When the stake gets to £100,000, and you have a 90% chance of losing it, the likelihood of losing your stake will probably prevail over the one-in-ten chance

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[5] Data from the Aircraft Crashes Record Office. Downloaded 2008.
[6] Statistic downloaded from http://www.boeing.com/commercial/safety/pf/pf_howsafe.html in 2008.

of winning the £10,000,000. Now consider the stake is your life and the lives of your children. Although the probability of winning is still one-in-ten, and has not shifted at all, your propensity to take the risk has shifted entirely. Unless you have suicidal tendencies, the 90% chance of you and your family losing your lives is far more significant than the one in ten chance of winning £10,000,000. The risk relates to what you have to lose as well as what you have to gain.

Back to airplanes. How do you really want to die? An airplane crash is not my preferred option, obviously, and it is probably not yours either. But you *are* going to die; all those probabilities do add up to a 100% certainty. You probably want to grow old, have time to put your affairs in order, then keel over of a heart attack at the age of 110 having just beaten your twenty-four year-old neighbour at tennis. Whatever. The dramatic announcement is something we all fear: 'I'm sorry to have to tell you, Dr Mortimer, that you have x months/years to live.' Even that would be better than realising I am in a metal box which is going to turn into an intense inferno in a minute's time. It would be like being tied to a railway track in a Western – here comes the train, it's not slowing down, and it's not going to swerve suddenly at the last minute. No chance to put my affairs in order. No time to reflect on my few achievements. No way to reassure my loved ones, or save them if they are tied there with me. Hardly any time to come to terms with my non-existence. Simply complete obliteration in a terrifying instant. If you are an atheist, there isn't even the consolation of heaven or an afterlife. That to my mind gives the risk of dying in an airplane a pretty distinctive and intense character. If the worst were to happen, it really is the *very* worst which can happen.

On this basis it is pretty obvious that it is unhelpful to quantify risk without reference to what it is that is being risked and what the reward might be. The statistical likelihood of something happening is probability, not risk. Risk is defined in relation to something that could be lost and something that could be gained: a cost-benefit decision. Or, to be more accurate, it is a danger-fear-need decision, like this:

[very small probability of crash]		[very high probability of successful journey]
x	vs	x
[fear of crash]		[need to make the journey]

Personally, I cannot make the above balance swing to the right with regard to flying. The one in 15,000 chance of dying in an aircraft over the course of twenty years, taking just two flights per year, might be small; but when multiplied by the fear of being in a crashing aircraft – total annihilation, which I frankly have difficulty treating as a small matter – the left-hand side of this balance is weighty. Thus the need to fly (on the right-hand side of the balance) has to be very great in order to make the flying justifiable. On the other hand, the desirability of being able to drive a car thirteen miles into the city and watch a film, buy things, get books for work etc is very significant, and amounts to a great 'need', so I take the risk. Having done so, and often, my fear of the crash event has diminished, so the decision is, in many ways, already made; I don't need to think about it. Hence I drive a car

and don't fly. I've never had enough need to forget my concerns for my own self-preservation with regard to flying. Of course, in the case of an emergency – if one of my children was in need of being flown back from abroad for urgent medical help, for instance – then the balance might well swing in favour of flying.

This is why I say a refusal to fly is not irrational. It is totally rational – the prioritisation of the character of an eventuality over its statistical probability. It would be irrational to take a risk without considering what one risks losing. In fact the decision not to fly is just as rational as the decision to fly. The person who is scared of flying but does so anyway sets aside the small probability of an accident because the rewards of making that journey outweigh the fear. The person who refuses to fly simply makes the same rational judgement the other way. It is quite different from a phobia, in which the sufferer is not in a position to make the decision.

We can go further than this. To say that a decision not to fly is irrational, because the probability of an accident is always small, implies that we should prioritise probability over all other eventualities, not just life-and-death issues. That's cynical. On that basis, no one should play the lottery because they should prioritise the huge chances of losing over the miniscule chance of winning. The UK government should have allowed everyone to eat BSE-infected meat because there was only a small risk of vCJD. If we all thought that way, none of us would attempt anything challenging, rewarding or difficult because the chances of success are too small. That way of thinking is an abuse of statistics. Very simply, if you are worried about being in an airborne calamity, and you can't or don't want to overcome that fear because the rewards of doing so are not great enough, then don't fly. Overcoming your fear won't make you any safer.

Of course, in the real world, it is not just the *decision* that is difficult. All the time before the flight you have to think about the prospect of actually getting on the airplane. I am not good with heights – I feel physically weak on the edge of a cliff, and a little dodgy at the top of a ladder – so a journey off the ground is a compete misery for me. And there's nothing I can do about it. It's not like driving a motorbike which is under my control to a far greater extent. I enjoy leaning over on corners and scraping my pedals on a bike, or driving a car fast along a country lane – because of the exhilaration of what I am doing, of feeling the control I have over the vehicle, and the knowledge that I will probably be able to react if something untoward should occur, at least to minimise the damage. In an airplane there is no thrill in the risk you are taking – not like there is on a bike. Everything is done *to* you in an airplane. You're imprisoned with all your fears. You are told where to sit, when you must strap yourself in, in which receptacle you may be sick, and what to eat and drink (if anything). You can't get out, or wind down the window, and half the time you don't even know what time zone you're in. If you decide to sing to yourself, the person in the next seat will probably elbow you in the ribs; and if your waking hours clash with what is supposedly a night-time flight, you may feel obliged not to speak for ages. And then, when you've finally landed safely, and have come to terms with the fact that your luggage has gone to another continent, you have a miserable time at your destination, thinking about how you've got to do it all again just to come home.

So I decided not to fly.

The moment I made my decision, I was happy with it. I felt a sort of freedom, which is ironic, I know, considering that flying supposedly enables you to go wherever you want in the world. But it was like the lifting of a weight off my shoulders. I no longer had to find an excuse not to get on an airplane. It was simply no longer a problem, like eating meat is not problem for people who become vegetarians. That taught me how the life rules we make for ourselves are not necessarily restrictive. Our decisions *not* to do certain things can be liberating. They become simply those things which people do not do. Some people eat pork and shellfish, Jews do not. Some people use birth control; Catholics do not. Some people believe in God; atheists and agnostics do not. Some people fly; I do not.

The second reason why I am now happy with my decision is similarly personal. The world is simply so much bigger for me than it is for most people. If I wanted to go to America it would take me a couple of weeks to get there. You could call this a form of determined looking backwards, or 'living in the past', and this would be quite right in my case. I cannot see anything wrong with it. What is so wonderful about being taken from one place and injected like a implanted cell into another? It certainly is not a superior form of travelling – it seems to me a far inferior one, for it places all the emphasis on the destination, not the travelling itself. *Growing* old is far more interesting than *being* old; the process of journeying is the real adventure. When travelling by train I see so much more of the landscape than I would in an airplane. I notice unexpected things: houses with strangely shaped roofs, flowers, bad drivers, a fat woman sitting in the sun on her doorstep, the way a man waves as he greets a work colleague, an old man walking along holding his grandson's hand. Such sights are simply not there to be seen up in the sky. Admittedly, there are good sights to be seen from airplanes too – the deserts of the Middle East impressed me, the Thames winding through London, the sunrise seen from above the clouds in the Far East – but on the whole there is little or nothing to see, do or experience. As cyclists say to tourists in cars, and walkers say to everyone: you see, hear and experience so much more if you travel slowly. Moreover, the world is simply much bigger for me than it is for someone who flies. The distance to China is just as far as it was in the days of Marco Polo and his contemporaries, and it would be a major adventure for me to get there. And you might say that makes me nearer to Marco Polo in outlook. But China – Cathay – is an extreme example; there is so much to see before even leaving Europe. To be mindful of that is reassuring: it helps me maintain a sense of distance, and with it a sense of place, which everyone used to accept as a matter of course but now which has been largely forgotten.

The third reason why I am happy with my decision is the important one. There is a huge cost in environmental damage and pollution. In addition, I can see for myself that airports blight large swathes of the landscape, cause traffic disruption, and create huge amounts of noise. When all this damage is basically unnecessary – we do not need aircraft to survive as a species or live well as individuals; we did not need aircraft to chart almost every corner of the globe – the cost in terms of damage done to the environment is itself a good reason not to fly. No one in their right mind would argue for the total cessation of flying in the near future; nevertheless it makes sense to think in terms of significantly reducing the number of

flights undertaken as well as the numbers of planes constructed, airports built and harmful gasses emitted. The idea that it is a mark of PROGRESS that anyone can take a cheap flight and travel a long distance easily, and to reverse this would be negative, is absurd. It is simply a characteristic of our time that people wish to see technologically supported self-indulgence as a positive development over previous ages. It makes as much sense as saying that having record numbers of prisoners in our gaols is a mark of progress, or living in overpopulated cities with inadequate infrastructures and rife teenage gun crime is a mark of progress, or any other feature of our time. Such views belong to the age which denoted all technological change and expansion as 'progress' – unaware of what it was they were 'progressing' towards. The end result of all this 'progress' is swathes of tarmac, hugely inflated energy costs, noise pollution, gas pollution, global warming, the extinction of many species. As I sat in the sun this morning, looking at that vapour trail, smelling the gorse, it seemed profoundly sensible and right to think that 'progress' should be aimed at preserving nature, wildlife, biodiversity, quiet, and clean air – the opposite of the by-products of aviation.

What all this says about me is not for me to say. Some people will incline to the view that, because they themselves have no problem flying, that I am allowing my 'imagination' to get the better of me. People who work with helicopters and airplanes everyday will no doubt scoff at the seriousness with which I treat the subject. They have a great need to fly, and the regularity with which they take off diminishes their fear, so the balance described above easily tilts in favour of flying. If the most important people in the world fly on a weekly or even daily basis, then who am I to refuse to run the tiniest risk? On the other hand, people who do not like flying might find some points of common ground here. They might well agree that, if you are aware of a slight risk of terrible disaster, it is wholly rational to eliminate it completely, especially if it is easy to do so. People's opinion of my rationality in this regard does tend to be a subjective judgment on their part. That is probably why I find the subject so interesting. If people are so worried about the fact that I do not fly, and believe I should not give it a second thought, what does it say about them? Why are so many men in particular keen to force the point that it is just plain fear – not any type of fear, or anything more sophisticated than cowardice – that stops me? Why is it that, even when you lay out the rationale of the argument not to fly, they shake their heads and treat you as if you have a problem? As mentioned above, a decision not to fly is based on exactly the same criteria as the decision to book a seat and take off. If I am crazy, then they are too. Or perhaps they just don't like admitting that they too are scared.

Since 1990 I have only once broken my rule not to fly. It was on the occasion of my honeymoon in 1997, when my wife and I had to go to Florence. One of our wedding presents was two nights at a very expensive hotel. Trains could not get us there in time. It was an exceptional occasion, so I made an exception to the rule. Fear, on that occasion had to take second place to need. Or, better still, love. I think she appreciated the gesture.

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