

Why We Can't Predict

Contributed by Ben
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An introduction to why I think most modern forms of prediction are a lot less useful and reliable than we think they are. Scott disagrees strongly so expect a response shortly.

If I asked you to name four big events that have occurred in the last hundred years what would you come up with? I imagine common items will be the world wars, terrorist attacks and the invention of the PC as we know it, that sort of thing. Now tell me exactly what you or someone you're very close to will be doing in ten minutes time. Hopefully you'll be as stumped as I am on that one. I can't tell you what I'll be doing a minute from now, let alone ten.

I'm going to hazard a guess that most the things on your first list are the sort of things which by definition couldn't really be predicted, if you predicted the existence of the computer (accurately) you'd have been a fair bit of the way to inventing it. If you'd predicted the First World War it could have been avoided. These events are big for the very reason that they weren't predicted, that's how we define big events, the ones that caused large changes we weren't expecting. The fact that we have this concept of a big event is an admission (albeit a subtle one) that there will always be some events we can't predict and that it is these events which tend to shape the world we live in.

As for predicting what we'll be doing in ten minutes time, if we can't make accurate short term predictions for ourselves and the people we are close to, how can we make predictions about events that result from the interactions of lots of such apparently unpredictable people?

I can't tell you what I'll be doing in ten minutes with one hundred percent certainty, but I can tell you what I'm likely to be doing, what I'm less likely to be doing and what I'm really unlikely to be doing. But what if the period is extended to an hour? I genuinely have no idea what I'll be doing in an hour, I probably won't be in Paris in fact I'll put my neck on the line and say I'll probably be in London, but other than that I've no idea.

The further into the future you go, the less useful such probability distributions are, in a years time I could be doing anything, why? Because two situations which may be deemed equally probable, for example whether I go to CostCutters in five or six minutes time, may have disproportionately different effects, I choose five and get the White Kinder Bueno I hoped for, I choose six and get hit by a car. With outcomes so dramatically different from a seemingly insignificant choice, surely the only predictions we can honestly make is that anything may happen?

I'll leave you with this example from the mathematician Michael Berry; if you hit a billiard ball hard enough that it will bounce 56 times, in order to accurately predict the position of the ball at the 56th bounce you would need to know the position of every single elementary particle in the universe. An electron 10 billion light years away would effect the ball sufficient to put your calculations off significantly. And that doesn't even involve free will.

For more on the problems of predicting markets based on patters [Click Here](#) for an article I wrote about whether or not the patterns we see in markets could be explained as nothing more than what would be expected from "random" data.

As ever, if anyone has any comments on what I've written, please add them below using the comment form or if your comments are too long (or too well written!) to be mere comments then please email them to me (ben.dixon@moneywhatmoney.co.uk) and I'll try and publish them as response articles (in your name of course).