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May 2004

Regulars

Pluschat



This issue's *Pluschat* topics

- [Editorial trends](#) – According to current trends, this editorial will never get written!
 - [I've got your number](#) – Soon the maths-phobic will have nowhere left to hide.
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Editorial trends

According to current trends, this editorial will never get written. I've so far started it twice and both times I deleted the few lines I'd actually managed to write, so extrapolating from this you can clearly see that the end result of all my efforts will be a blank space where the editorial should be. You are, however, not looking at a blank space but a finished editorial, so something must surely have gone wrong with my calculation.

The answer is, of course, obvious – the trend didn't continue. But perhaps the real answer is that it was never a trend in the first place. After all, one morning's two failed attempts to write an article is hardly a comprehensive data set, is it? Especially when other relevant data was conveniently omitted – I have, in the same morning, finished editing a book review, written several emails and begun to transcribe a taped interview. So actually, according to current trends, I'm being incredibly productive at the moment and this issue of *Plus* will be bigger than ever!

So what is a trend? Do quarterly figures which show a higher number of burglaries than committed in the previous quarter prove that the current trend is for rising theft? Or might they be no more than a seasonal glitch based on something as unexpected as, say, the mild Spring weather inducing more home owners to go out more often, thereby providing more opportunity for theft? If we then compare our quarterly figures with those from the same period last year and find that, surprisingly, they are lower, can we say with any confidence that current trends show that burglary is actually on the decline?



Within six generations, this burger will reach to the moon and back. Image [DHD Photo Gallery](#)

Now let's look at another current trend which is making big headlines at the moment: obesity. The International Obesity Task Force recently announced that, based on current trends, over 40% of the population of the UK could be obese within a generation. They don't go on to say any of the following, but presumably, based on current trends, they could. Within two generations over 60% of the population will be obese and life expectancy will have plummeted; within six generations the entire population will be obese and life expectancy will be so low people will barely be able to produce dangerously obese babies before their life expectancy catches up with them.

Fortunately this will never happen regardless of current trends, because as everybody knows – or at least should know – trends are not guarantees. In his excellent book, "How to Lie with Statistics" ([reviewed](#) in this issue of *Plus*), Darrell Huff puts it most elegantly: "The trend-to-now may be a fact, but the future trend represents no more than an educated guess. Implicit in it is 'everything else being equal' and 'present trends continuing'. And somehow everything else refuses to remain equal, else life would be dull indeed."

Which brings me nicely on to the fact that Huff's book is commemorating its 50th anniversary this year. It's a priceless gem, as relevant today as it was when first published, and we have a review of it in this issue. If you haven't read it yet, you really ought to. If you have read it, you really ought to read it again. And if you already have read it again, well, according to current trends, you'll be reading it again and again and again.

I've got your number



The relationship between society and the individual is changing inexorably as the consequences of our vast computing power finally become plain. As has often been commented, we live now in the age of information, and, in a digital world, that information is inevitably reduced to numbers: biometrics in the proposed national ID cards, information on our taxes, state of health and benefits received held on various government databases, our credit records (held by private companies) and so on. It is fast becoming impossible to remain oblivious to all these numbers: for example, if you want a mortgage the bank will run a credit check and approval for the loan will depend on the outcome.

There is high-powered mathematics involved in these databases: the complex statistical techniques of datamining are being used to spot fraudulent credit card use, and not so long ago the mathematical science of biometrics didn't even exist. But the public are not generally aware of this aspect of the age of information; they are unlikely to be enthralled by the cutting edge research needed to scan an iris. Rather, they feel that they are being counted, and depending on their attitudes to the law and state, they may or may not appreciate the sensation.

The increasing importance of number in our private lives is both an opportunity and a challenge for mathematicians and statisticians. On the plus side, people are waking up to the importance of numeracy and the professionally numerate. On the minus side, if people start to resent the increase in data collection, then mathematicians and statisticians may be blamed along with the government. Could we end up with a public image that is no longer nerdy and irrelevant, but instead on a par with tax collectors and parking attendants?

If you have anything to say about these or any other topics that might be of interest to *Plus* readers, email plus@maths.cam.ac.uk. Let us know if you are happy for your email and our response to be published in *Plus*. (We may edit emails before publication.)



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