

Statistics and the media

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"Don't believe everything you read" takes on a new perspective after you spend some time discovering how the media uses statistics.

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It's not always fun being a statistician. Suppose you were at a party, talking to someone you'd never met, and they happened to tell you they were a statistician. What would you do?

Say, "Wow, how interesting!" and ask them excitedly about the latest figures on exports of engineering goods?

Or notice an alleged old friend at the other side of the room, who requires your immediate attention?

Well, I can reveal that the friend-across-the-room option is used on 82% of such encounters. Statistics is boring. Well, isn't it?

Actually, no. I mean, obviously I'd say that, because I'm a statistician, but in fact the British public seems pretty keen to read statistics about the way we all live. The media are full of data from surveys on pretty well every aspect of our lifestyles. That's how we know that over five times as many of us have internet access than we did six years ago, that British men spend, on average, 25 minutes longer a day watching TV or listening to the radio and music than do British women, or that sales of used cars in Britain were worth over 2 1/2 times as much in 2005 as in 1995. Or that UK residents took nearly 43 million holidays abroad in 2004. [Data from Social Trends 2006, UK 2005 Time Use Survey, British Lifestyles Survey 2006.]

We do like knowing what our fellow citizens are getting up to. And, if the information is in the form of impersonal statistics, we don't have to feel guilty about spying on our neighbours. I became a statistician partly because I like poking my nose into other people's business — most people don't go quite to this extreme, but we're still interested.

This fascination certainly isn't unique to us Brits, either. The French seem even keener on statistics. They regularly publish glossy books on the topic, from which you can learn that there are 17.5 million pet dogs and cats in France, or that 13% of French people prefer to make love in the afternoon (as opposed to some other time of day). [Source: Francoscopie 2005. Francoscopie is published every two years by Larousse and sometimes gets onto best-seller lists.]

Can we believe any of this stuff? After all, there are lies, damned lies and statistics. Well, much of it comes from Government surveys, or surveys done by competent research organisations. They interview large samples of people, and they make sure their samples are representative. They generally avoid biased or leading questions. Their results probably aren't absolutely accurate in every detail, and they never tell you absolutely everything you want to know.

But they do tell you something useful, and are unlikely to be far from the truth. But some statistics in the media come from more dubious sources, ranging from the slightly unreliable to the totally invented (like my 82% figure for statisticians at parties...).

In America there's a research organisation called the Statistical Assessment Service that makes annual Dubious Data Awards to press stories that are particularly silly in relation to statistics or scientific logic.

My favourite is one of their Top Ten for the year 2000, a report of a survey where 70% of the people surveyed had tried to quit smoking, and not one had succeeded. Sounds depressing for anyone trying to give up — but close inspection revealed that the poll had specifically sampled only people who smoked. So anyone who actually managed to quit wouldn't have been asked.



Five out of six...? Newspaper delivery [by Indrarado via Flickr under CC-BY-NC-SA licence]

Usually you need to read the small print to make a judgement on the reliability of statistical information. Did they ask enough people? Which people did they ask? Was it just people who wrote in or called up? What were the people asked, exactly?

But this sort of small print often isn't there in brief press reports. If nothing at all is said about where the information came from, perhaps you should smell a rat. It's also worth thinking about who produced and published the data, and why.

For instance, Mintel, publishers of the British Lifestyles Survey, are a big (and well-respected) UK market research company. Presumably they provide this sort of information to the media because it's good PR. It keeps their name in the public eye, and helps them to sell the reports on things like Gastro-intestinal Remedies and UK Schoolwear Shopping Habits, from which they mainly earn their crust.

Of course, this doesn't mean there's anything wrong with the information they provide. Mintel certainly do use appropriate survey methods. But how would you know that, if you knew nothing at all about them? Be careful out there, but don't throw the baby out with the bathwater and ignore everything statistical just because some of it is rubbish.

So, should you talk to statisticians at parties? Perhaps you'll learn something fascinating. In my own career I've worked on things like the growth rate of certain kinds of grass, and the speed at which rubbish can be incinerated, and I'll happily tell you all about that...

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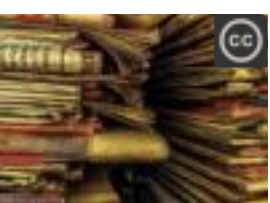
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