MOST of us are aware that we should protect our personal data, but put on the spot, few are likely to know exactly how it could be used, and by whom.

The most obvious threat comes from fraudsters who use personal details to ‘take over’ bank accounts. Data analytics, which involves analysis of the data trail left by individuals on a daily basis, is altogether more subtle and not necessarily as sinister.

Most data analysis takes place at the aggregate rather than the individual level, looking at patterns and trends in data and using this information to influence decision making. A fascinating recent example is the launch of the ‘Google Flu Trends’ service.

Engineers at Google found that the location of searches for ‘influenza’ and flu-type symptoms correlated closely with the actual outbreaks of the virus recorded by the US Centres for Disease Control. They are consequently now analysing statistics on a daily basis and using this information to provide predictions of future outbreaks which are, according to the engineers, up to two weeks ahead of the federal government. This data could prove invaluable in speeding up the response of health services to major flu outbreaks.

Now there’s talk of using sensors in mobile phones to collect data on the surrounding physical environment, with the potential of creating localised weather reports; predictions of seismic movements and even changes in health. As part of its ‘Mobile Millennium’ project, Nokia is currently recruiting up to 10,000 motorists to use phones which contain a GPS chip, using this data to monitor traffic conditions in specific geographical locations.

A leading national paper recently reported that a major supermarket found itself in deep water when, unknown to the management, patterns in purchasing emerged for expectant mothers. Subsequent targeted advertising and direct mail caused considerable embarrassment to women who had not yet informed their partners of the news.

The rise of data analytics should, therefore, be treated with caution. With knowledge comes power. Always check how personal information will be used, read the small print, be wary of signing up to anything from unknown senders.

Businesses have a duty to ensure that personal information, particularly that which is sensitive to the individuals involved, is sufficiently protected. In the wrong hands, it presents a real and direct threat to personal liberty.

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