Exploitation of that metadata bonanza needs to get personal

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ommunications Minister
Malcolm Turnbull's
legislation for a mandatory data-retention
scheme – which would allow companies to store customer records
for two years – could be a boon for
us all. Seriously.

Don't remember when you last visited the dentist? Your mobile phone metadata will tell you. Suspect a charge on your credit card statement is a business expense, but have no diary entry for that day? Metadata will detail your movements that day, and jog your memory. Forgot the dates of that fabulous holiday? Easy. Suspect you really are not going to the gym as much as you'd like to believe? Metadata doesn't lie.

And that's just location data from your mobile phone. Match this with your Google searches and your purchases at the supermarket, and you have the kind of data

richness that can predict your behaviour, and alert you to potential issues you didn't even know were coming: like depression, diabetes – even pregnancy.

Based on your purchases alone, Target (in the US at least) can predict – with an 87 per cent accuracy – if

you're pregnant six months before you're due. It matches your buying habits with your credit card, laybys, use of coupons, surveys completed, refund requests, calls to the customer help line, or if you've opened an email they sent you.

In one celebrated case, a father of a high school teenage girl in Minneapolis complained to Target about coupon offers she was receiving in the mail – addressed to her – for maternity clothing, nursery furniture and baby clothes. When a Target manager called to apologise, the father offered his own apology – he'd discovered his daughter was, in fact, pregnant.

The discussion about metadata has centred on terrorism. But only 2.5 per cent of the requests made under the Telecommunications (Interception and Access) Act for serious offences last year were for such investigations; most were for drug trafficking and organised crime. At least, that's what the agencies stated when seeking the data (every use of which, it has to be said, agencies are required to report back on how data was used and whether prosecutions eventuated).

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In the year to June 2013, there were a total of 319,874 authorisations issued: 97.8 per cent to law enforcement, but almost 7000 intercepts were for Commonwealth and state agencies, including 375 by Australia Post and 15 by Wyndham City Council in Victoria, one of which was used to track down a dog owner whose pooch had bitten an elderly man.

The data that's most valued are location, calls made and received, and the names and address of individuals – both calling and being called. But how much of this is being matched with credit card purchases, FlyBuy points, websites visited, email sent and received, tweets and Facebook

posts? No one knows, but if there isn't much of it happening now, there will be – the payoff is just too attractive, especially for intelligence agencies.

That's one of the attractions of "big data", as it's known. But it's not just the spooks and the retail giants who stand to gain; society

does too. The location and movement data generated by masses of people with mobile phones in tow can help cities plan smarter transport networks, prepare for big crowds at events, and even allow health authorities track or anticipate the spread of diseases such as meningitis, malaria or cholera.

Being able to track your own everyday movements, and match them with your entire digital footprint, might also bring you countless health and lifestyle benefits, such as predicting the onset of heart disease or depression.

Unfortunately, this personal use of big data (as opposed to its use by law enforcement, insurance companies and retail giants) is not being pursued.

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Allowing people to access their metadata – rather than just selling it to agencies or using it for marketing – might actually improve the lives of the people who are generating that data. And if they're generating that data, isn't it already theirs?

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