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Editorial: Big Brother is surfing you

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Your web search behaviour can be used to send you targeted adverts

The announcement that some internet service providers (ISPs) are planning to use Phorm has highlighted concerns about what information ISPs hold about their users and what they do with this information. Phorm <www.phorm.com>¹ is a company that provides targeted advertising services. It uses software to analyse the websites browsed by an individual user, identifies their browsing behaviour, categorises their interests and then delivers adverts targeted to that user. The company says these data will be collected anonymously and that they will not know the identity of the user or what sites they browse. The Phorm software intercepts the user's web request. The first time a user encounters Phorm, they are allocated a unique random number via cookies (this number is permanent and is re-used on future encounters unless the cookies are deleted). Phorm has set up a set of product categories. As a person browses the web, sites visited are compared to the product category definitions and

a matching product category is 'attached' to the user's unique number. No permanent record is kept of sites visited. When a user visits a site of an organisation that is participating with Phorm (in their Open Internet Exchange), they are shown adverts that are targeted to the product categories 'attached' to their unique number. Phorm is just one example of companies seeking to find ways of making money from the huge amount of information about consumers' habits that exists on/in the web, mostly left there inadvertently and unknowingly by the consumers themselves.

Without going into complexities about how the technology works,^{2,3}

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the main concerns of critics of Phorm are: (i) the breaking of the principle that information about users' behaviour should be regarded as private, irrespective of whether or not the users' identities are kept confidential; (ii) how well Phorm can protect users' identities; (iii) the legality of Phorm intercepting telecommunications traffic; and (iv) how safe Phorm is against malicious attack from third parties.^{4,5}

Another major concern about Phorm is the requirement for people to opt out of the service if it is offered by their ISP. This opting out may require configurations of the user's computer or use of add-ons. And it appears that the web traffic of a person who has opted out may still pass through the Phorm system, but without the final categorising step. In my opinion, the requirement to opt out of infringements of one's liberty rather than choosing to opt in should be illegal. Phorm is offering the electronic equivalent to the 'tick this box if you don't want to receive junk mail from us' that you get on every form when you buy a new product or service – or even worse, 'ring this expensive phone line, if you don't want ...'. The Information Commissioner's Office has issued a statement⁵ that suggests that use of Phorm must be on an opt in basis to meet the requirements of the Privacy and Electronic Communications Regulations 2003 (PECR). However, this opt in might only be at the level of accepting the ISP's terms and conditions. And, as described at the beginning of this paragraph, what you have to do to bypass Phorm hardly fits my definition of opting in. To really offer an opt in option, a user must

only have to do any actions if they want the service, not if they don't.

Some of the website owners who are not part of Phorm's Open Internet Exchange also have concerns. It is very difficult for a website owner to prevent Phorm from harvesting the fact that a person has visited their site. And it could be considered that a site owner is unwillingly, possibly unknowingly, providing marketing information for its rivals.

There was a furore back in 2006 when AOL Labs published the search queries from 650,000 users.⁷ Though these data did not contain any user information, privacy experts claimed that it was still possible to identify people and to link them to potentially sensitive, embarrassing or even criminal information. The author of the article suggests that a partial solution to dealing with abuse of data about users' web behaviour is to require ISPs to delete their user's search enquiries as soon as they have been routed to their requested site.

Why does this matter in the health field? Looking for health information is a common reason for using the web, and often people prefer the anonymity of the web to look for information on embarrassing conditions or on conditions that still carry nuances of disapproval or even discrimination. How would you feel if you were sitting (uncomfortably) on a crowded train using your laptop to look at the web and an advert popped up for pile cream? Or more worryingly, you were with your laptop at a work meeting and an advert popped up for an antidepressant or for an antiretroviral drug?

But do most of us care about the loss of more of our privacy? We have accepted having more security cameras than any other European country. The loss of our privacy in the public space was sold to us on the basis that it would cut crime and make us safer. However, a recent announcement⁸ by a senior police officer stated that: 'Massive investment in CCTV cameras to prevent crime in the UK has failed to have a significant impact, despite billions of pounds spent on the new technology'. Big Brother is indeed watching us, but to what purpose?

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Report and evidence from an extensive inquiry 'into the growth of public and private databases and those forms of surveillance directly relevant to the work of the Home Office'. The report notes that: 'The potential for surveillance of citizens in public spaces and private communications has increased dramatically over the last decade, making it possible for what the Information Commissioner calls "the electronic footprint" we leave in our daily lives to be built up into a detailed picture of our activities. This has prompted growing concern about a wide range of issues relating to the collection and retention of information about individuals.'