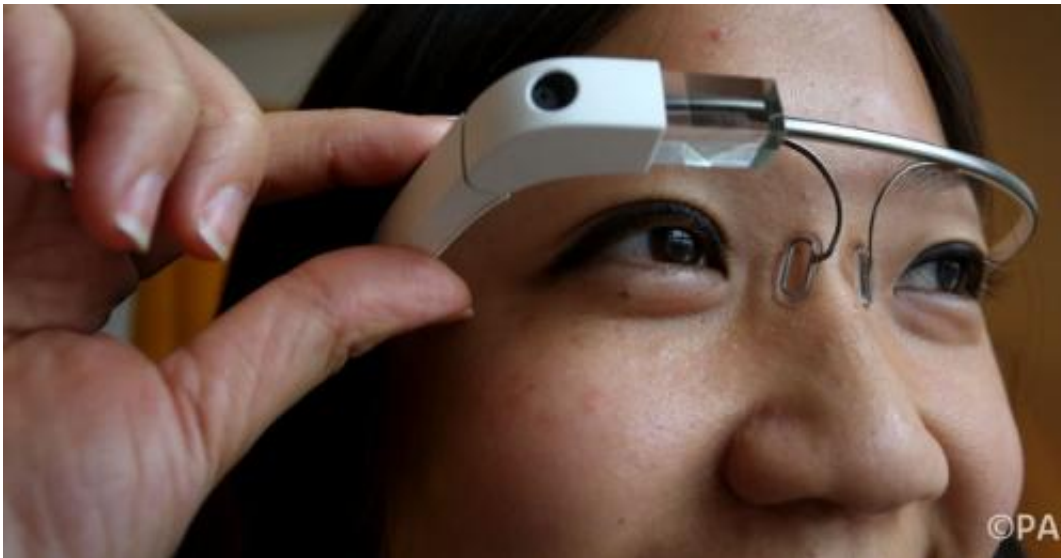


# Wearable computing and privacy invasions you might want to think about now

September 15 2014, by Tom Foulsham

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You lookin' at me? Credit: Gareth Fuller/PA

Are you being recorded? Thanks to the [ubiquity of CCTV](#) and camera phones, the answer is more than ever before likely to be "Yes". Add to this the growth of wearable technology such as [Google Glass](#) and people are increasingly exposed to devices that can monitor and record them, whether they realise it or not.

The [privacy implications](#) are obvious, but also interesting to psychologists such as myself, are how such invasions of privacy – real or perceived – change the way people behave in [everyday life](#).

My colleagues and I have been examining the ways people change their behaviour when they are being recorded. In a typical psychology experiment, participants are aware that they are being watched, and a range of equipment monitors their responses, from computers and cameras to eye-trackers and electrodes. Do people in this scenario behave the same way as they'd behave, unwatched, in everyday life? While this may be true for some people and some behaviour, it is not in all cases. Thankfully, with some ingenuity, we can investigate whether being monitored changes how people behave. This should be a crucial topic for psychologists.

Research using eye-tracking devices, led by [Eleni Nasioupolous](#) and [Alan Kingstone](#) from the University of British Columbia, [Evan Risko](#) at the University of Waterloo in Canada, and myself, provides a good example. In several situations participants were left alone in a room with a calendar featuring a scantily-clad female, behind which lay a hidden spy camera. When people were free of any recording device, they usually looked at the calendar. However, when they wore an eye-tracking device, which records the wearer's field of view and their eye movements within it (just like Google Glass) they stopped behaving naturally and avoided looking at the saucy image.

In other words they were aware that what they were looking at was being watched and changed their behaviour accordingly. This reinforces our natural assumption that we can't take for granted that people will behave normally when they know they're being watched, both in lab experiments and when using wearable technology out in the world.

Those aware that what they are looking at is being monitored seem to act in a more socially acceptable manner, something that is consistent with a range of behavioural research. The presence of others leads us to act in a way that [converges with social norms](#). Security cameras – even a [picture of someone's eyes](#) – can have the same effect [by implying that someone](#)

[is watching](#).

In [our recent paper](#) published in the British Journal of Psychology we varied the amount of time that people had to get used to wearing the eye-tracker. Surprisingly, we found that even after only 10 minutes of wearing the equipment, users essentially forgot about being monitored and started acting normally again. Soon enough the socially acceptable behaviour associated with being watched dissipated and they again spent time, for example, looking at the calendar.

But while the implied social presence of another watching the participant's behaviour wore off surprisingly quickly, when they were reminded that they were wearing the eye-tracker they once more reverted to a socially acceptable pattern of behaviour and averted their eyes.

So what does this mean for privacy in the age of Google Glass and other wearable smart devices? We shouldn't assume that people will be sufficiently self-aware to regulate what they're doing while using [wearable technology](#). Our research shows that users can easily forget that they are recording (or being recorded) and even with the best intentions could violate the privacy of others.

This is good news for those of us who seek to measure and understand natural behaviour, and particularly for using eye-trackers to achieve this. However it could be bad news for those who champion the use of [wearable computing](#) in everyday life. With even short periods of use, people may stop being aware of their own actions and in doing so end up recording things they would rather not be seen – look away now if you value your privacy.

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## Source: The Conversation

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