

# Let's face it, soon Big Brother will have no trouble recognising you

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Increasing use of face-recognition technology should worry us

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No social justice issue mobilises columnists more unflinchingly than their right to a prominent, contractually guaranteed byline photograph. Not me. Unlike fellow commentators whose idealised physiognomic representations remain deferentially untouched by comment editors for decades at a time, I abhor the mugshot perching smirkingly above this paragraph. Not a question of false modesty, you understand: more a desperate attempt to undermine the privacy-sapping consequences that face-recognition technologies are about to wreak on our lives.

This is the year when automated face-recognition finally goes mainstream, and it's about time we considered its social and political implications. Over the past few days, at trade fairs from Las Vegas to Seoul, a constant theme has been the unstoppable advance of "FRT", the benign abbreviation favoured by industry insiders. We learnt that Apple's iPhoto update will automatically scan your photos to detect people's faces and group them accordingly, and that Lenovo's new PC will log on users by monitoring their facial patterns.

Soon you will expect your mobile-phone camera to recognise your friends and photograph them only when a smile is detected, and to pass through airport security bearing not a ticket but your standard grin.

There will be plenty of life-enhancing applications of these technologies, which use feature-extraction algorithms to find patterns in skin texture and in the curves of the eye sockets, chin and nose. It could be fun to upload a photo to a website such as myheritage.com to see which celebrity you most resemble mathematically. More revolutionary still is the way shopping could be changed: malls could target consumers with special offers using digital display panels, such as NEC's Eye Flavour system, whose face-recognition camera determines a customer's age and gender so that "the most effective content" is displayed before it monitors their emotional reactions.

Naturally, some applications will be harder to sell publicly: some newspapers have already expressed outrage that St Neots Community College, in Cambridgeshire, is this week starting to scan pupils' faces to monitor latecomers. But overall - amid intense public debate about terror threats, street crime and "uncontrolled" immigration - the face-recognition camera is being sold hard as the solution to countless social problems.

Too bad it risks ruining the lives of those innocently caught up. Rob Milliron, a construction worker, had a close escape back in June 2001, when, while eating lunch in Tampa, Florida, he was photographed without his knowledge by a hidden government facial-recognition surveillance camera scouring for felons and sex-offenders. Police passed images to the press and, although Mr Milliron wasn't a match to a bad guy, his picture was printed in a magazine alongside the words: "You can't hide those lying eyes in Tampa." A woman in Tulsa called police to identify him falsely as her ex-husband wanted on felony child-neglect charges. When police surrounded Mr Milliron days later at his construction site, he had to point out that, yes, that was him in the photograph, but no, he had never married, never had children, and never been to Oklahoma. As he told the local newspaper: "They made me feel like a criminal."

Tampa scrapped its facial-recognition system two years later, citing its ineffectiveness, but not before Milliron had become something of a poster-boy for the technology's unreliability and its likelihood to trap the innocent amid its many "false positives". Since then, the War on Terror has amplified official interest in and financing for face-recognition trials as a means of identifying the supposedly high-risk - but, in projects from Newham in East London to Logan Airport in Boston, results have been flawed to say the least. In one high-profile trial, at Palm Beach International Airport, a facial-recognition system at a security checkpoint matched faces to those in its database just 47 per cent of the time. Ordinary passengers and other airport staff not meant to be recognised, meanwhile, triggered 1,081 false alarms in a month, risking interrogation or detention.

Yet just because, for the moment, such surveillance systems are flawed - their recognition befuddled by human ageing, outdoor light, poor image resolution, even facial hair - the extraordinary pace of development means that far more accurate screening systems are imminent. Researchers are developing sharply accurate scanners that monitor faces in 3D and software that analyses skin texture to turn tiny wrinkles, blemishes and spots into a numerical formula.

The strongest face-recognition algorithms are now considered more accurate than most humans - and already the Home Office and the Association of Chief Police Officers have held discussions about the possibility of linking such systems with automatic car-numberplate recognition and public-transport databases. Join everything together via the internet, and voilà - the nation's population, down to the individual Times reader, can be conveniently and automatically monitored in real time.

Just listen to senior law-enforcement executives to understand their brave new intentions. Three months ago, Mark Branchflower, Interpol's database chief, declared facial recognition a desirable means of alerting local forces about the movements of internationally wanted suspects, "a step we could go to quite quickly". And in evidence to MPs last March, Peter Neyroud, head of the National Policing Improvement Agency, raised the prospect of "automated face recognition" to identify suspects, as well as "behavioural matching" software that uses CCTV images to predict potential troublemakers.

So let's understand this: governments and police are planning to implement increasingly accurate surveillance technologies that are unnoticeable, cheap, pervasive, ubiquitous, and searchable in real time. And private businesses, from bars to workplaces, will also operate such systems, whose data trail may well be sold on or leaked to third parties - let's say, insurance companies that have an interest in knowing about your unhealthy lifestyle, or your ex-spouse who wants evidence that you can afford higher maintenance payments.

Rather than jump up and down with rage - you never know who is watching through the window - you have a duty now, as a citizen, to question this stealthy rush towards permanent individual surveillance. A Government already obsessed with pursuing an unworkable and unnecessary identity-card database must be held to account.

As for me, I've been re-watching for inspiration the 1997 film *Face/Off*, in which John Travolta wears Nicolas Cage's face as a way of infiltrating Cage's criminal gang. And if that fails to inspire a means of fighting back, face-transplant surgery is always an option.

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