

Avoiding identity and data theft

I thought long and hard about whether to write this article. Why would I? I am an enthusiast for anything new and electronic and that includes computers and IT in general. Or, as my wife puts it, 'Boy's toys'. However my enthusiasm is strongly controlled by a profound skepticism about where the sector is heading and the dangers it holds for us. Having worked with personal computers since their introduction I am qualified to describe both the huge benefits and the serious risks to us all. So here goes.

Some prescient warnings

In 1945 the English novelist George Orwell wrote the book 1984. As time goes by and new things and habits are invented, more and more of the ideas in his book are coming horribly true. He based his ideas on the Russia of the 1930's and 40's, but they can be applied to many regimes around the world now, including our own. At the extreme I am reminded of the thought-provoking joke that, 'The only unpredictable thing in an authoritarian country is the past.' The disquieting thing is that in the book Orwell thought that the state would use brutal force on people to allow their lives to be taken over. In fact we now do it voluntarily and enthusiastically. It is only right that I alert you to its dangers too. This is not political, alarmist or nutty but coldly rational.

So what do I think are the dangers now?

I live in the country and when I step out for a walk in the lanes I know that no-one knows where I am nor what I am doing. In a UK city I would be recorded by many cameras and my face would be stored and checked against growing databases. When I walk into a shop (store) it happens again and many people allow the shop to store data about everything they buy using a 'loyalty card'. In 1984 Orwell explained how the leading character in the book had to go into the country to escape surveillance, though that only worked for a while. Of course the anonymity is only partly true for me. If I get in my car (automobile), sooner or later it will be recognised by an Automatic Number Plate Recognition (ANPR) camera, though of course it will probably not know who is driving. I believe that even if you switch off your phone it will still be recognised by a base station, now that we can no longer remove the batteries. Some suggest wrapping it in aluminium foil as a screen but I wonder if it would overheat.

What did Orwell include in his book?

- Home two-way audio/video screens.
- Electronic storage of all data about the society and its people.
- Teams of workers constantly revising the data and getting rid of any that are no longer acceptable to the powerful. In other words abolishing facts and adjusting the past. This is a service in the Ministry of Truth.
- Hate sessions organised to howl at enemies or other unacceptable people.
- Systematic coercion, and even torture or death, for people who do not conform, in the Ministry of Love.
- Degradation of the language to remove meaning and hence independent thought, called newspeak. The ultimate aim is to encourage clattering

rapid speech using a very limited vocabulary, called duckspeak. Does that sound vaguely familiar?

- Clouding critical thought using 'double think'. This means to hold two contradictory ideas in your head at once. For example, 'We are spending a record amount on education.' Yes but it is only one pound more than last year and inflation requires it should be at least ten so it is a cut.
- Computer generation of mindless popular songs. Sorry - grammies.
- Continuous background war between the main socio-political groups dividing the world. He saw the role of war as using up the surplus wealth so stopping the ordinary proles becoming well off and difficult to control.

I leave you to spot where the rest of the above appear in the world now. If you haven't read 1984 it could be a good idea to do so. Or it might too upsetting if you have snowflake tendencies.

What can we all do about it?

I have made good and bad choices. One of my best was about social media (soshul meeja). For a good many years I worked with a great group of computer experts. However one day they were talking about a new idea called Facebook. They explained what it did and how to enlist. I could not believe that these clever people were willing to display their lives for all to see and for the money grubbers to take. I suggested that they provide the very least data that they could get away with and then keep changing the key data, such as date of birth, to muddy the waters. I failed with them, though I stayed clear and have done so ever since for all 'platforms'. After all who is interested in what I have to say anyway and why do I want to know what someone had for lunch, guess what faking app they use to make their skin look robotic, or be able to recognise the cliff they are about to fall off taking a selfie?

For once I prefer a US pronunciation. They will say 'pry - vassy' for privacy instead of the English 'privv - assy'. This is exactly what happens. Prying. I love the sites that say, 'We value your privacy.' They certainly do place a value on it when they sell it.

Below is a list of things you might want to do. Yes of course, some of these things to avoid can be very useful but they are also dangerous. We know not to step in front of a moving car don't we? We are not so canny about the data juggernauts about to run us over.

Simple actions that we might take

- Never click any link in any message however worrying or urgent the text. If you think you really need to respond, leave the app, check the nature of the link separately, then sign on.
- If you get an unwanted advertising phone call, either respond with the foulest language you can think of (imagining a politician helps), or put the phone to one side to waste the caller's time. It's fun to listen to the strangled voice asking you to reply.
- NEVER do ANY financial stuff on a mobile phone, including banking apps. If it is stolen, lost or hacked your contact data might be at risk. Do your

banking only on your home computer and keep the operating system up to date against security faults. That should include paying for parking.

- Install a good virus checker on your phone and PC.
- Do not use contactless payment cards. I picked a dropped one up off the floor in a supermarket. The shop would then have cancelled it but I could have used it. The UK allows up to five £100 transactions without questioning.
- Use cash wherever possible. It is quicker and cannot be tracked. If you come across a cashless joint use a PIN on your card and let the place know in firm language why. Don't tell anyone your PIN, even an offended partner. In case of fraud you must be able to say truthfully that you have NEVER shared it. Cover the keypad as you type. Few people do. Most pads have a raised dot on the 5 key so you don't need to see it.
- Avoid ALL social media like the plague.
- Harden your heart to emotional appeals for money that pop up out of the blue, even if they appear to come from a relative in trouble. Remember that the supposed other person has probably told the world where he or she is going to be and even what shoe size they have. It's easy to fake such identities. And of course the mobile phone is supposedly stolen so you can't talk.
- Use a search engine like duckduckgo (DDG) that does not store your searches. DDG's ads are general and the search results are unbiased by fees.
- Do not store your data in The Cloud (a 'free' Internet storage site). Even if the owner of the service doesn't steal your stuff, sooner or later the site will be hacked and your precious pictures and personal data will be held to ransom, deleted or just sold to an 'analytics' company. Huge hard disks are now cheap, about £100 for 4 Terabytes. USB3 plug-in ones are excellent for home backup and very quick.
- Be VERY careful if you decide to use a dating website. By their nature they demand lots of personal data and you have no idea how secure or reputable they are. One question that is rarely asked of them is, 'Where will my data go when you go out of business?' And would we expect the truth anyway? Quit as soon as your contact mentions money or naked pictures. A broken heart is better than a bank account emptied by fraud, theft or blackmail.
- Get rid of, or disable, all 'smart' devices in your house, especially ones that record voice or video. That is smart in the US sense of clever rather than the English one of well-dressed. Use a fake camera outside, with a blue flashing light, and a bright proximity light, if your area is troubled by burglaries.
- Keep location switched off in your phone, except when really needed. It is far better to use a separate satellite navigation device rather than a phone app.
- Do not use your laptop on an 'open' network such as a café. Use your mobile phone's data hotspot instead and check carefully that you really are connecting through it.
- If running a business ban all use of your network for private social matters. Make it an instant dismissal offence.
- Unless actually using them, switch off or unplug microphones and cameras attached to your PC.
- Secure your home network as described above.

- Cookies. They are mostly benign but not always and are mostly not there for your benefit. Set your browser and mobile phone to delete all cookies automatically when you quit. It will be under settings somewhere. I have no idea how it is done on Apple devices.

But I hear you cry, 'If we can't use soshul meejah, how do we keep in touch with people?' The answer is to use private communications. For example:

- SMS texts.
- Email to one person or a mailing list. Yes people do still use email.
- Zoom for up to 45 minutes free.
- Skype, though that is now Microsoft's so I'm not so sure.
- WhatsApp or Signal, which are still encrypted if the providers are telling the whole story.

Remember the rest of the world is not remotely interested in you or your opinions, except to be critical or worse. And if you use soshul meejah to flog rubbish to the unwary you deserve all you get.

In 2023 a sinister change emerged in the UK. A bank was caught having closed the account of a person because of his views, after initially lying that it was because he wasn't rich enough. Because of the fuss it caused, more people have come forward saying the same thing. Companies should behave properly but they have no right to impose their views on their customers and what they say on the web or elsewhere. We have to remember Voltaire's famous support for free speech. "I disapprove of what you say, but I will defend to the death your right to say it."

China has a system called the 'social credit system'. Originally introduced to rate company behaviour this is now extended to people. It is similar to credit rating in the UK except it records someone's actions or inactions, for example dog control, minor traffic violations, not visiting elderly relatives and not sorting refuse correctly. Punishments for serious offenders include limiting access to some jobs and discounts on various services, travel tickets, lower interest rates and preferential hospital treatment. Unless company actions like those described in the last paragraph are stamped on, the UK will have an even more repressive system, as it captures and stores opinions where the Chinese system only records actions. Another good reason for avoiding soshul meejah.

In early 2023 the Big Seven ransomware writers collectively called Clickbot were identified by UK and US security services in, guess where, Russia. They used the Ryuk and Conti ransomware software. Worryingly some are turning their attention to linux servers. **It is vital to remember that the people who are trying to steal your data are very, very clever and determined, and have endless resources.**

Payments and paypal

I use paypal regularly for eBay purchases, but I do not allow it to dip into my bank accounts. I send money to it electronically and pay with 'Balance'. Now that eBay doesn't allow buyers to pay into your paypal account, and insists on direct access to your bank account, I no longer sell through eBay.

The financial demilitarised zone (DM Zed)

As I said above I will never do anything on my phone involving connection with my bank. A phone that is mislaid, hacked or stolen might allow access to my money. However a dark cloud is on the horizon, namely car parking. The councils and private providers in my area are thinking about changing to allowing only phone apps like PayByPhone to pay to park.

The objections to phone-only payment mostly centre on the usual patronising nonsense about old people not having phones or not being able to use them. My objection is, of course, security. I only use my online bank from my ubuntu desktop computer. The bank has security that I am very happy with. There have been no problems for me, nor for anyone else it seems, in what must be over two decades of me using it.

The parking set me thinking. The only solution seemed to be a new bank account totally unconnected from my proper one and used only from one phone, ideally not my usual one. I noticed that there are now phone-only banks, the two leading ones in the UK being Monzo and Starling. They do pretty much the same and both have a basic service that is free to use.

In the end I opted for Starling though it took many days to set up rather than the six hours suggested. I think the joke was that because I had no credit ratings due to good money management and nothing on soshul meejah to go on, they had no way of knowing if they wanted me. A witty, but tart, letter from me was what I think put that right. So far Starling is proving very efficient. I put money into it by electronic transfer, though if I wanted to be obsessive I could pay money in by cash at a post office.

Needless to say there is a 'however'. It turns out that PayByPhone only accepts credit cards. At the moment Starling only issues debit cards, so I can't use it for parking. Hopefully they will issue credit cards soon.

I realised there were other benefits:

- Allow eBay to connect with it so I could once again sell items, now they do not allow payment into my Paypal account.
- Allow my Paypal account to take money from it for eBay and other purchases.
- Use a contactless debit card knowing that a lost or stolen one would at worst only clean out one modest bank balance.
- Do the bleepy business at the supermarket checkout using the phone rather than a card.

The only downside is not being able to cause a fuss in irritating places that don't accept cash.

I played with the idea of a separate phone with new SIM. However, even on Pay As You Go, the minutes and data don't carry over, so you have to pay to top the SIM up every month. The Starling account and the PayByPhone app will have to be on my main phone.

Then I put on a white hacker's hat and tried to think out the problems. My bank has excellent security when phoning them, including voice recognition instead of passwords, so I can leave its phone number in my contacts. I receive a weekly, very brief statement by text but there is no vital data there. It all seems OK if not ideal, but I decided to pause before installing just in case I think of something else.

And then there's DNA

As a scientist I am staggered at the effect this double helix of five elements (H, O, N, C and P) has had on our knowledge of our wonderful human race. Its unravelling is one of our greatest achievements. It has extended our knowledge of our origins, variation and timescale.

Such power brings dangers and once again the need for caution. Three aspects are of particular note:

- Parentage
- Origins over thousands of years
- Potential for disease

Any journalist knows the phrase, 'Follow the money'. Any private company offering a cheap, or especially free, test must be tested or avoided. Who do you give your DNA to?

- By law the police, if charged with a crime, but they must delete it if the charges are dropped. I wonder?
- Public bodies like the UK's National Health Service.
- University research labs but check who pays them to do the research.

For all of the above there is always the danger, or maybe likelihood, of inadequate security and anonymity.

I have excluded private companies from that list. They exist to survive and pay dividends. I am sure many, or even most, do their best to be just and secure but how do you know? Who will they sell your DNA to if under threat? In marketing this is known as the 'infamous massage parlour syndrome'. In other words if a company become desperate they might do anything to survive, even flogging off your whole life to some unknown scumbag.

And now....

What's next? The two immediate buzzwords are virtual reality and artificial intelligence.

Virtual reality (VR)

This is a ridiculous oxymoron invented by the semi-literate. Something is either real or not. Virtual means unreal. What VR really means is viewing artificial worlds through 3D devices. The viewed worlds might be real ones turned into data or totally invented.

Artificial intelligence (AI)

This is so broad as to defy close definition. At present it means to use the great speed of computers to store, search and use human generated data, like knowledge and pictures, to inform us and help make decisions. Soon it might

generate its own data. At present it is at best very good in certain limited areas and at worst utterly unreliable. Unlike wikipedia there will not be independent experts correcting rubbish.

And then...?

On the horizon are fakers. Some like ChatGBT and Bard will write text on a chosen topic that appears to be human generated. One wonderful joke was a headline along the lines of, 'Will AI put the writers of romantic novels out of business?' I assumed that's how the rubbish was produced already. Phone apps allow us to change our faces and bodies in pictures into 'ideal' forms that actually look robotic, and can lead to insecure people killing themselves when they don't match the ideals. Art AI will produce pictures and even objects using a 3D printer. One excellent consequence is that academic assessments must return to invigilated examinations instead of essays.

VR

Remember Google Glass? I never came across anyone using one but I had decided that if I did and they looked at me I would tell them in offensive terms to 'butt out'.

Sanity?

Becoming deeply immersed in a virtual world means losing touch with the real one. Losing touch with the real world used to be called a mental illness, now of course called 'mental health'. Newspeak?

Living for ever

Strangely, some people still believe that we live on after we die. In a way this might soon become true. People who record their lives in data form can be recreated after they are dead, at present in speech and soon as holograms. I suppose with stored DNA a complete, truly living recreation might one day be possible. Such people often don't look at the world. We see them lined up at events like a concert or sport looking at their phone screens rather than than the event itself.

Using AI and VR will FORCE us to give our life data away. Will we be able to tell what is genuinely human and what is faked? We see how governments currently manipulate answers and data to suit their power needs. AI/VR adds vastly more power. I have coined a new word for a powerful company or government - Terraco. This combines the vastness of the word tera and the word for the world 'terra'. There is also an implication of fear.

So why not avoid it altogether? Well of course you can, but it could be that anyone dropping off the radar would be seen as dubious and probably a threat to those overused words 'national security'. Beware the men in dark suits and glasses with a bulge under one armpit!

I can foresee a limit to all of this. There are eight thousand million of us. If only a modest fraction records their lives the amount of data will soon exceed our capacity to store it, or even to provide enough energy to power up the stores.

What are benefits of AI/VR?

I already use a kind of AI. So do you probably. If a question pops into my head what do I do first? Yes, I type some keywords into duckduckgo and there is nearly always a wikipedia article or lots. Then the amazing genius of Tim Berners-Lee come into play and I start clicking his hotspots. My brain then really starts firing and I'm off. And yes, I send a regular donation to wiki as we all should.

There are of course many benefits. Here is a list though it could be much longer.

- Surgeons can explore a 3D model of a patient's body before an operation and even use the model whilst actually cutting.
- Farming can be made more efficient and less polluting using 'per-plant' management, for example by using drone data. Watering and spraying can be limited to plants that need it and a field can have a mix of crops rather than vulnerable mono-cultures.
- We could visit places or attend events that otherwise are too far away, expensive or wasteful of energy.
- We can play mind stretching and skilful games with others around the world.
- Musicians can play in an online band or orchestra. Fibre connections mean data delays of only a few milliseconds so the players don't get out of sync.
- Robots can look after us and do tedious chores.
- Our brains can be expanded further by access to vast information resources.
- Doctors can be helped to make the best possible diagnoses and treatments.
- We could make love at a distance.
- We can use an autonomous car, find vacant parking spaces and plan the optimum route for the current road conditions.
- Our health can be improved by regular monitoring and by advice on diet and exercise.
- We could live on after death in data form.

On the BBC World Service at 3 am on the 13 February 2023 there was a programme called Tech Tent that explored these things. To me, whilst there is still an on-off switch on an AI system we are safe. When we push the switch to off and the system generates its own uninterruptible power, then we worry.

So what am I moaning about? Whether something is good or bad depends on who owns and controls it and why.

What data used to be known about us before the growth of computers?

This took some thinking and I came up with:

On the electoral roll after a census:

Name

Address

Sex

Age

Whether married

If you had a passport:

The above plus:

A unique number

Occupation

Photograph

If you had a car:

The above plus:

Driving licence booklet

Car registration number

Car tax disk

Police and prison record if you had one

These were all on paper and so not easily searchable. Did we suffer any problems as a result?

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