

TRANSCRIPT

LEGISLATIVE ASSEMBLY ECONOMY AND INFRASTRUCTURE COMMITTEE

Inquiry into workplace surveillance

East Melbourne – Thursday 26 September 2024

(via videoconference)

MEMBERS

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The CHAIR: Welcome to the public hearings for the Legislative Assembly Economy and Infrastructure Committee's Inquiry into workplace surveillance. All mobile telephones should now be turned to silent.

All evidence given today is being recorded by Hansard and broadcast live on the Parliament's website.

While all evidence taken by the Committee is protected by parliamentary privilege, comments repeated outside of this hearing, including on social media, may not be protected by this privilege.

Witnesses will be provided with a proof version of the transcript to check. Verified transcripts and other documents provided to the Committee during the hearing will be published on the Committee's website.

I will just remind members and witnesses to mute their microphones when not speaking, just to minimise that interference.

Thank you so much to Dr Allan McCay for joining us today and speaking to the Committee. You have a very interesting background, and the Committee are really looking forward to asking you a lot of interesting questions that I think will give us a different perspective for the Committee to consider. I thought I might allow you a good 10 minutes or so to maybe give us a little bit of background and then we will come to some questions to dive a bit deeper into it.

Allan McCAY: Thanks very much, and thanks to the Committee for the invitation. The first thing I would say is whilst I am not an expert in employment law—I am a criminal law specialist—my roles at the University of Sydney Law School and my role as President of the Institute of Neurotechnology and Law, a London-based organisation, have led me to think about the challenges from neurotechnology over the past seven years. I have published extensively on these topics. I think that advances in neurotechnology will have implications for employment law and should prompt some thinking in relation to workplace surveillance, so I think it is a good thing that the Committee is interested in this. Use of the emerging technology has already started. It might lead to further new surveillance capacities for employers and workplaces, which I am going to call forms of neurosurveillance, and that should be considered by this committee.

First of all, I am going to say something about what neurotechnologies are. The most well-known neurotechnology company is Elon Musk's brain-computer interface company Neuralink, but broadly neurotech is technology that either directly monitors the brain or peripheral nervous system or directly stimulates it or does both. It has often been therapeutically orientated: for example, monitoring brains using hospital-grade neurotechnology to identify signs of pathology—maybe a brain tumour or dementia or something like that. But it is also used sometimes to stimulate the brain, for example, to address symptoms of Parkinson's. However, Musk's backing of neurotech through his company Neuralink has spurred venture capital interest and other commercial interests. Now there are a whole host of neurotech companies, including successful Australian ones.

One thing that might be interesting to the Committee is that Australia is punching well above its weight in relation to neurotech, and there has been some globally significant work come out of Victoria. Now some companies produce small portable devices known as EEG headsets that are available for consumers and employers to buy over the internet. These devices are sometimes marketed for non-therapeutic aims like attention or fatigue monitoring, and such devices have been reported to be used by employers around the world, including in an Australian context by mining companies in order to promote safety by alerting, say, a mine worker that they are becoming drowsy.

However, greater monitoring capacities are likely to emerge in time. It is now possible to use hospital-grade neurotech to decode mental images or songs that a person is listening to from a person's brainwaves and even to decode intended speech, and it seems reasonable, given the investment environment, that these monitoring and decoding capacities will start to become available in more portable devices. It also seems reasonable to assume that, in time, employers will have access to more capable brain-reading devices than are currently available and some may wish to employ them.

There are a number of ethical issues that relate to workplace neurosurveillance that I would like to draw the Committee's attention to. The first one is mental privacy. Whilst it has always been possible for astute observers, including employers, to make inferences about the mental world of people they observe, neurotech is

going to enhance this capacity as it rolls out into the community. It might be that employees have a poker face. You can imagine the idea of a poker face, being unable to read someone's mind from their face. But poker faces might be less effective in keeping mental worlds private from, say, an employer in a neurotechnologically enabled workplace. For a privacy-minded employee, effecting a poker brain or nervous system might be more difficult to achieve than a poker face. I guess the internal world might become more visible. It is going to be necessary to consider how far and in what circumstances it is reasonable for an employer to ask an employee to wear a neural device so they can get some access to their internal world. There are a number of reasons why an employer might want to engage in workplace neurosurveillance, and it is worth bearing them in mind and the differences between them when considering what any legal response might be.

The first one is safety. That has already been mentioned. An employer might reasonably want to ensure a safe workplace, and they might be obliged to ensure that, to stop operators of machinery harming themselves or others. That seems to be the most benign use of neurosurveillance technology. A second reason why they might want to engage in workplace neurosurveillance is related to productivity. They might want to know about an employee's attention levels in order to make them more productive. This is maybe a more troubling form of neurosurveillance, and some might think it is less justified. A third reason why they might want to engage in workplace neurosurveillance would be in relation to billing. I used to be a solicitor. I used to bill by the hour, in fact in 6-minute units. But in 2022 I published a report for the Law Society of England and Wales in which I raised the possibility of billable units of attention. The idea would be that a client only pays for their lawyer's time when they are fully attentive to the file, so that might be troubling for people who bill by the hour to have that intrusion. Another reason why an employer might want to engage in workplace neurosurveillance is hiring, firing, and promoting, so they might want to use neural information, presumably at least in conjunction with some other information, to decide who to hire, fire or promote. Finally, an unscrupulous employer might want to engage in illegal discrimination. Some employers might want to use neurotech in order to illegally discriminate against people, perhaps to avoid making a reasonable accommodation of someone's neurological disability, for example.

Mental privacy has already been mentioned, but there are some other issues for consideration. One is consent. Given the arguably coercive nature of an employer-employee relationship, what should be the role of an employee's consent if they consent to wear a neural device? That is one issue to think about. Another issue is data protection, so what safeguards should be in place for the protection of neural data if it is obtained through workplace neurosurveillance? Should it just be discarded, or if it is retained, how should it be protected from hackers? One thing to note on this point is in the future it may be possible to get more inferences from neural data. The capacities of the data to reveal stuff today might increase in the future, the same bit of data.

Issues like these and others from other contexts have given rise to a vibrant international human rights debate, which I have contributed to. This includes work from academics, the OECD, the Council of Europe, UNICEF and UNESCO, and the United Nations Human Rights Council is currently working on a report about the human rights implications of neurotech. In this context and in an Australian context it is worth noting that the Australian Human Rights Commission has just produced a background report on the human rights issues that relate to neurotech, and I expect more from them. Some countries have taken legislative action or are taking legislative action in response to neurotech. This has been started in Latin America, but it is spreading out to other countries now. In Colorado and California there have been amendments to the privacy law in light of neurotech.

I would like to make a few final points before concluding. At present workplace neurosurveillance only monitors brains, but in time it may be possible to both monitor and intervene on brains, say, to detect inattention and then to stimulate the brain to increase attention. That is something to flag. It is not a current possibility, but in the future it might be. A second thing to bear in mind is if you think about competitive workplaces, for example, the workplace of law, people may voluntarily elect to have neuromonitoring devices, to become aware of their cognitive states to increase their productivity to compete with other staff. In time neurotechnology might be used to cognitively enhance, to make people pay attention for longer or remember better, and this might lead to a situation where, irrespective of whether your boss is promoting neurotech, you voluntarily employ it at work to keep up with your peers or to keep up with the more capable AI systems of the future.

Finally, I would say that workplace neurosurveillance and employment sit within a broader neurotechnological challenge to law. In light of that, I am of the view that law reform commissions should commence work on

neurotechnology in anticipation of a wider uptake in society. A challenge is to consider the timeframe. It seems unwise just to focus on existing technologies. It requires some anticipation, but it is not entirely clear what the challenges will be in the future. I think we have to consider the future challenges and not just focus on the way things are now. Thank you.

The CHAIR: Thank you, Allan. It is really an interesting topic. I am just mindful of time. We have a few questions that we want to throw at you, and if we can try and get through three or four, that would be great. Anthony, I might start with you.

Anthony CIANFLONE: Thanks, Dr McCay. That was really fascinating; it is a really interesting area. I remember seeing an episode of *Shark Tank* quite a few years ago—you may have seen it as well—where there was a proposal for a neuro-implant for bluetooth permanently in people's brains, which no-one wanted to invest in. It is very much a topic that has now moved from the field of science fiction to science fact, like you pointed out. Your presentation has basically taken us through I think a lot of the questions around what the devices are, what types of technologies are out there, what the risks are, the benefits and the issues around consent. For me it very much goes to the essence, in many ways, of being a human being—having this type of technology potentially implanted or introduced into the way we work, the way we live and the way we think is just something phenomenal and unprecedented. You sort of touched on this at the very end of your presentation, but I guess my question really is very fundamental. Do you think governments should actually even permit the use of neurotechnology in workplaces? Literally as a principle, do you think we should potentially even consider outright bans, prohibitions, from early on? Do you think, as you touched on, we should make some form of provision and get ahead of it through the law reform work that has been undertaken, or would you go as far as to say we should even consider outright proactively looking to facilitate and welcome this technology given all its uncertainties and ethical concerns?

Allan McCAY: One thing I would say in response to that is there are tremendous upsides to neurotech for people with therapeutic needs. At the moment neurotech is used in treating Parkinson's, epilepsy, hearing loss, and the list of therapeutic applications is going to increase—it might turn out to be the case for dementia, schizophrenia, depression, anxiety. There might be a lot of people that have neurotech for a therapeutic reason anyhow, and that is a great thing and should be celebrated. Another thing to bear in mind is that people might just kind of voluntarily start doing it. People might start using neurotech for gaming, using it to enhance their attention, so it would be a matter of prohibiting it, which is difficult.

Arguably the safety concern is a good one. If there is a device that just beeps to alert a worker that they are starting to get drowsy—maybe it does not store data and is very neurally secure—to me that seems okay. So I think some kind of neurotech, if it is done right, could be an advantage in a workplace, but it might be a moot point anyhow if lots of people start to—some people have even gone so far as to say it could become like an iPhone. It might spread quite widely in society at some point. So I do not think it should be entirely banned necessarily, but the human rights considerations should be thought of and addressed. It could be misused in the workplace.

The CHAIR: Thank you, Anthony. Great question. Dylan.

Dylan WIGHT: Thanks, Chair. Thank you, Allan. Just to pick up on that point and expand a little bit on it, do you think in Australia more broadly that law is keeping up with the advances in neurotechnology? What from a Victorian perspective specifically do we need to be able to do in that space to protect workers from the problematic aspects of it?

Allan McCAY: At the moment it is not like ChatGPT, where many people have already got a device that can download the new program. Most people do not have a neural device, so the progression is kind of slow. Okay, there has not been much of a legal response. There has been no legal response to it, and there is some existing law that will work in relation to neurotech. But in terms of what Victoria should do, I think one thing that is quite important in thinking about this is a point that I made at the end, and it is the point that neurotech in the context of workplace neurosurveillance comes in this broader context or a broader challenge to law.

In the UK there is an organisation called the Regulatory Horizons Council. They recently did a report on neurotech, and they said the different parts of government will have to have some kind of coordination in how they respond to neurotech. When you think about what to do with workplace neurosurveillance, it would be

good to think about how it will fit into our broader responses to human rights and broader legal challenges to law. The broader response in Australia is coming from the Australian Human Rights Commission, so they are the first body in Australia to sort of look broadly at what it might mean for human rights. So there are difficult challenges to try and get a sort of coherent response to this emerging technology. That is the thing I would like to emphasise.

The CHAIR: Thanks, Dylan. John, I reckon we have got time for just one quick one.

John MULLAHY: Okay. We had evidence from an organisation earlier that are rolling out cameras in their cars to monitor the alertness of the drivers in their fleet. Would that be considered a neural device when they do a response? If an alarm goes off at the head office and they decide to call the driver, is that seen as a neural device?

Allan McCAY: That is a great question. The boundary of neurotechnology is very hard to nail down. There are some kinds of devices that are paradigm cases—of course, with a brain implant that allows you to control a cursor, everyone agrees that is neurotech, but you can get things like facial monitoring devices that monitor pupil dilation and blood flow. They are from the outside, but they are making inferences of a kind of neural type. So if they are not paradigm cases of neurotech, they are at least in the ballpark.

I had a book called *Neurointerventions and the Law*. We had to decide what a neurointervention was—very, very hard. We ended up saying there are some cases that are clearly neurointerventions and there are others that are not, and there is a grey area between. So the kind of technology you raise seems to raise some of those issues. If the device is storing data about what the driver pays attention to and can make inferences about whether they are stressed or relaxed, it starts to raise some of the issues of more obviously paradigm cases of neurotechnology.

John MULLAHY: But something specific like a mobile phone that pings 20 times a night and tries to get us to interact with apps like Facebook or X or those sorts of things, that would not be seen because it is not monitoring you directly; it is just actually doing a push sort of thing. But would that be seen as affecting our neural impulses?

Allan McCAY: I mean, I am speaking to you now. You can hear me. We are mediated by technology. There is a kind of sense in which, in a ridiculously broad sense of neurotechnology, this is, but then it becomes absurd because clearly this is not neurotechnology. So I think these points just illustrate that any law that tries to nail down what neurotechnology is will have to have a big explanatory part, because it is really quite hard to nail it down. Many things—like, say, from typing on a keyboard it is possible to make some inferences about possible dementia forming. So if you use Twitter or X, is that a neural device? There are a lot of things that are kind of in the ballpark of it. There is a spectrum going from paradigm cases to sort of penumbral cases to things that are not sensibly thought of as neurotech. And the questions you rightly are pressing on illustrate that.

John MULLAHY: Our previous witness said that we need to be proactive, not reactive, so anything legislative has to be seeing that technology is going to change over time.

Allan McCAY: Yes, I think that is right. I think it would be a mistake to look at existing neurotech and think, ‘That’s the end of it. This is the best we’ll ever get.’

John MULLAHY: It is the beginning of it.

Allan McCAY: The difficult thing too is the timeframe. How far do you go? Amazing things will happen in the future in the medium term. That is the tricky thing for regulators. But I think they do have to go into the future. They have to be a bit anticipatory. They have to think about some ways that technology might develop or might be used, informed by some engineers, scientists and interdisciplinary thinking, I think.

John MULLAHY: Thank you.

The CHAIR: Thank you so much, Allan. I reckon we could ask you a whole lot more questions. I am sorry we are going to have to wrap it up there, but that was a really interesting conversation. Thank you for giving us a really different perspective for our committee to consider. Thank you very much for your time today.

Allan McCAY: Thanks. Any more help, I am happy to. Thanks for the invitation.

Witness withdrew.