comments are from fawning alt-right acolytes with names like "The Sperminator", who attack Butler's character and physical appearance while waxing lyrically about the genius of Peterson. It is the definition of an echo chamber.

I hope her womb is barren. Unfortunately that vacant uterus in the suit was given a platform. That simian in the red dress needs to be slapped. How many of us wanted to slap that smug little face. The world would not be poorer without her. Et cetera.

Butler says similar insults were sent across various platforms, wishing on her a mixture of humiliation, infertility, violence and death simply for daring to debate the paragon of machismo.

Where's my ak47 when you need it.

"These are choices we make," Butler says. "I don't have to be on the platform ... For me, I think the benefits outweigh the costs. But the costs can be pretty revolting sometimes."

"That's what we saw when British MP Jo Cox was murdered a few years ago," she says. "It didn't happen in a vacuum."

Butler says what bothered her most about the vitriol was just how *un*bothered she was by it at first, given how "inured" to gendered insults female politicians have become. I ask whether she thinks technology is to blame for an increase in bigotry or if it is just providing more exposure to what is already there.

"The sentiments existed," she says, "but the difference is that social media amplifies them in a way that legitimises prejudice, because people see that other people share the same prejudices."

At an oval populated by chirping birds and hyperactive kids eating ice-cream while scrolling on screens, Butler ponders social developments fuelling acts of political violence across the West.

"That's what we saw when British MP Jo Cox was murdered a few years ago," she says. "It didn't happen in a vacuum. It's an incident that occurred in the context of the mounting racism in UK politics."

Butler made the decision to seek preselection in the wake of Gillard's leadership, when a progressive woman was abused not just by the anonymous alt-right on Twitter, but also by prominent male media personalities on their TV and radio shows.

Butler says Gillard's treatment didn't make her reconsider pursuing a political career, but she doesn't think personal abuse should be accepted as just part of the job.

"You have to acknowledge the risk exists," she says, "[but] just because I know that people might do this doesn't mean they *should* be able to do this. Part of having self-respect and having a sense of who you want to be in public life is drawing boundaries around what people can get to, and the way they can treat you." M

Pathological problems

by Drew Rooke



EARLY ONE MORNING IN APRIL 1984, a rower discovered the body of Stephen Docoza in Adelaide's River Torrens. It had been submerged in the water for several days. It was already beginning to putrefy.

The following year, Derek Bromley and John Karpany were convicted of Docoza's murder. Critical to the prosecution's case was the evidence of Dr Colin Manock, SA's chief forensic pathologist, who performed the autopsy on Docoza's body and concluded he had been severely bashed and then forcibly drowned.

This finding has since been disputed. In 2017, three independent forensic pathologists who each conducted an expert review of the forensic evidence agreed Manock's autopsy was inadequate: bruising on Docoza's body could have been caused by putrefaction or the post-mortem procedure, and all possible causes of natural or accidental death had not been sufficiently excluded. As one of the pathologists, Professor Anthony Thomas, said, "There is no substantive evidence for drowning in this case."

Karpany was paroled in 2004, and although Bromley has already served his non-parole period he remains in prison because he refuses to admit guilt. Having exhausted his legal options in South Australia, he will apply to appeal his conviction in the High Court later this year in the hope of finally clearing his name.

Questions loom over Manock's evidence, and not only in regard to the Docoza case. Dr Robert Moles, an internationally renowned legal academic at Flinders University specialising in miscarriages of justice, has been investigating Manock for more than 19 years. In his sunny home office in the Adelaide Hills, he tells me that what he has discovered is "manifestly absurd".

In 1968, Manock was appointed as the director of forensic pathology at South Australia's Institute of Medical and Veterinary Science (IMVS; now SA Pathology). It was a very senior, specialist position, but he had no formal qualifications or training in forensic pathology or histopathology. He had completed his undergraduate medical training in 1962, undertook short work placements in toxicology, cardiology, neurosurgery and obstetrics between 1962 and 1964, and had been employed since 1966 as a lecturer in forensic medicine at the University of Leeds in the United Kingdom.

When the IMVS sought to appoint a senior director of forensic pathology in the early 1970s, Manock launched legal action to prevent what he argued was constructive dismissal. The court upheld his claim, thus cementing his position, but during the trial some concerning details emerged about his initial appointment in 1968. The then IMVS director, Dr James Bonnin, gave evidence that the institute was "desperate" to fill the position Manock was appointed to. He said that although Manock was "very young, relatively inexperienced" and "unable" to certify cause of death because he wasn't properly trained, he was "the best applicant we had". Bonnin acknowledged that having 'a man who had no specialist qualifications in a specialist's job" would be "a severe embarrassment", but said he hoped Manock "would further study and progress" after taking up the role.

Manock did not complete further study. According to his own public statements, he conducted more than 10,000 autopsies and gave evidence in more than 400 criminal trials before retiring in 1995.

The coroner said Manock's post-mortem examination in each case "achieved the opposite of what should have been its purpose".

It was the case of Henry Keogh that first piqued Moles's interest in Manock. Keogh was convicted in 1995 for the murder of his fiancée, Anna-Jane Cheney, who was found dead in the bath of their home. Based on apparent bruising on her left leg and haemolytic staining of her aorta, Manock concluded her legs had been held in the air and her head forced underwater until she had drowned.

When Moles reviewed the case five years later, it was "perfectly clear" to him that Keogh's conviction was flawed. Other expert witnesses had testified that there was insufficient evidence to support Manock's hypothesis, and that natural and accidental causes of death had not been properly ruled out. Moles became further convinced that Keogh was a victim of a serious miscarriage of justice when a re-examination of tissue samples of the bruises on Cheney's left leg – which the prosecution had deemed "the one positive indication of murder" – found that some bruises could have been several days old and produced from day-to-day activities, and the supposed thumb mark might not have even been a bruise.

In 2014, a year after South Australia passed legislation allowing for a new statutory right of appeal for convicted criminals if fresh and compelling evidence emerged, Keogh successfully appealed his conviction. The Supreme Court said Manock's murder hypothesis was "no more than mere speculation" and that he had "materially misled the prosecution, the defence, the trial judge and the jury".

Moles cites many other examples of Manock's alleged malfeasance.

Around 1978, Manock travelled to Mintabie, a remote South Australian town, where a man had been found dead. According to a senior constable who was present, Manock decided to perform the autopsy of the man's body in full public view in the main street instead of in an available cool room. During the autopsy, he allegedly raised a ladle full of bodily fluids to the gathered crowd and made inappropriate remarks.

Six years later, Manock examined the body of 15-year-old Gerald Warren, who was found dead on a dirt track outside Port Augusta. Manock determined that Warren had died after falling from a moving vehicle, and that the lined marks on his body were caused by the corduroy of his trousers. Only after two men confessed in 1991 to murdering Warren did the true story emerge: he had been beaten with a threaded pipe and repeatedly run over.

Between 1992 and 1993, three babies died suddenly in separate incidents. According to Manock, each died from bronchopneumonia. This was rubbished by a subsequent coronial inquest, which highlighted that all three babies appeared to have been severely abused: one, for example, had extensive bruising and a fractured skull. The coroner said Manock's post-mortem examination in each case "achieved the opposite of what should have been its purpose: it closed off lines of investigation rather than opening them up".

What shocks Moles even more than these and other cases is that successive state governments, the Office of the Director of Public Prosecutions and the wider legal establishment, despite knowing for decades of Manock's shocking record and of potential miscarriages of justice, consistently failed to intervene.

For example, in 2004 the then state solicitor-general (and current Supreme Court chief justice) Chris Kourakis commissioned an independent expert report into Henry Keogh's case. It found major flaws in Manock's evidence but was nevertheless the basis for the legal advice from Kourakis that kept Keogh behind bars until his successful appeal in 2014. The expert report was hidden from Keogh's legal team for nine years without explanation. Kourakis's advice remains confidential and the current state government is still fighting to prevent its public release. Mid last month, the Supreme Court stated that it supported the release of Kourakis's review, but the state Civil and Administrative Tribunal is yet to say when this will occur.

According to Moles, the scale of Manock's wrongdoing and the institutional complicity that allowed it to happen has "a strong parallel with the Lawyer X case in Melbourne" in which prominent criminal defence lawyer Nicola Gobbo was also working as a police informant.

The SA-Best party has recently joined Moles and other legal advocates in calling for a royal commission into Manock and the cases with which he was involved. Although this would be traumatic for many people affected, and could possibly see prisoners who

committed a crime being released from jail because they didn't receive a fair trial, Moles is adamant that it's necessary if the legal system is "to maintain credibility".

The state government disagrees. In a recent letter to one of Moles's associates, South Australia's deputy premier and attorney-general, Vickie Chapman, wrote, "I do not consider that investigation [into] Dr Manock's work is necessary or justified at this stage."

What Manock thinks of his own work became clear in 2004 at a Medical Board of South Australia inquiry into Keogh's case. Manock accepted that parts of his forensic evidence during the trial had no scientific support. But, in his view, this wasn't because the rest of the world thought differently from him; it was because "the rest of the world hadn't caught up". M

Ticked off by Marina Kamenev



IN JULY 2015, IN PYMBLE, ON SYDNEY'S upper North Shore, Nicole Lenoir-Jourdan was bitten by a tick. Her head "swelled up like the Elephant Man", she tells me. Her naturopath, a "miracle worker" she had been seeing for 20 years, was unavailable so Lenoir-Jourdan, a writer and journalist who runs a PR company, went to a variety of GPs to get a diagnosis. None of them appeared concerned, she says.

Within two weeks, one night after eating some yoghurt, Lenoir-Jourdan was struggling to breathe. She woke up the next morning feeling fine but consulted the internet about her symptoms. Here she learnt about "alpha-gal", otherwise known as galactose-alpha-1,3-galactose, a carbohydrate that is found in all mammalian blood, aside from that of certain primates, including baboons, gorillas and chimpanzees – and humans. Visiting a sixth doctor, she was told that she wouldn't be experiencing such a severe allergic reaction to alphagal because it's very rare. "But I asked to be tested [for antibodies directed against alpha-gal] and I had it." The doctor's response was some surprising dietary advice.

"She just said, 'Don't eat meat," Lenoir-Jourdan says, taking a sip of tea laced with soy milk.

When those who are sensitised to alpha-gal digest mammalian meat and related products, such as dairy, they can experience allergic reactions ranging from abdominal pain to anaphylaxis. Remarkably, humans seem to acquire the allergy after being bitten by a tick. This phenomenon has been reported in 17 countries where humans and ticks coexist (on all continents except Antarctica). A significant cluster of mammalian-meat-allergy sufferers is found around Sydney's northern beaches, with a prevalence so high that at one point anyone who presented to Mona Vale Hospital with a middle-of-the-night case of anaphylaxis was diagnosed with this allergy until proven otherwise.

The link between the allergy and tick bite was uncovered by Shervl van Nunen, an expert in allergies who headed the department of allergy at Royal North Shore Hospital from 1985 to 2012. Van Nunen was perplexed at a marked increase in patients presenting with anaphylactic reactions in the wee hours. Those coming to the hospital seemed to have reacted to eating red meat, an occurrence that was previously rare in van Nunen's decades of practice. Unlike in the case of a standard food allergy reaction, which occurs one or two hours after digesting the substance, van Nunen's patients were arriving eight to 10 hours after eating. And what united an otherwise disparate spate of new cases was that all had been bitten by a tick. The link was bizarre but noteworthy. It was a connection made serendipitously by van Nunen, as her hospital was in an area where tick bites had become increasingly prevalent.

What united an otherwise disparate spate of new cases was that all had been bitten by a tick.

Contrary to popular belief, people aren't born with allergies. Instead allergies are a condition that our immune system somehow acquires, misrecognising mundane molecules as hostile invaders and triggering an arsenal of responses, usually reserved for defence against parasites. In many cases – peanut allergy, for example – we don't know why people develop the reaction. But in the case of mammalian meat allergy, we know – for the first time – exactly how it has occurred.

"It's an allergy in a box," says van Nunen, the founder of TiARA (Tick-induced Allergies Research and Awareness) and now a clinical associate professor at the University of Sydney's Northern Clinical School.

"It's a paradigm [for an allergy] because when the tick injects you it bypasses the usual tolerising mechanisms of the immune system."

Ticks produce alpha-gal in their own gut, possibly due to an evolutionary response to infectious agents they may have been exposed to. When a tick bites a small mammal, such as a bandicoot, attaching itself to their body and feeding on their blood until it is engorged, the alpha-gal from either the tick or its victim binds to a tick protein, forming a fusion that the tick later injects into a human victim.

Allergies in humans are usually triggered by a protein, whereas alpha-gal is a carbohydrate. But because it