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THE WILD WEST OF ROBOT LAW

AUSTRALASIAN SCIENCE

MATTHEW RIMMER



Robotronica, QUT, 2015, photo QUT Media

The new hit HBO television show *Westworld* is an American science fiction show, which taps into our hopes and fears about robots. The show imagines a technologically advanced Wild West theme park, which is populated by androids and robots who are called ‘hosts.’ Wealthy human ‘visitors’ come to the entertainment precinct to indulge their dreams and fantasies. *Westworld* is a mediation upon the law, ethics, and social norms in respect of robots.

As a disruptive technology, robotics is transforming our society and our economy. Robots have been increasingly deployed in innovation as part of Australia’s “Ideas Boom”. There has been

a mixture of hope and anxiety as to how robotics and artificial intelligence will affect jobs, education and employment. This is certainly apparent in the legal profession. In terms of transportation, there are autonomous vehicles, drones, and aquabots. Robots have been deployed in agriculture, hospitals, and the environment. Robots increasingly feature in civilian law enforcement, and the military battlefield.

There has been a growing debate about the regulation of robots, across a range of contexts. Policy-makers, lawyers, philosophers, and experts have been grappling with the legal, ethical, and public policy challenges posed by robotics. There has been a concerted effort by academics and scholars to develop the discipline of Robot Law as an organised and systematic field of jurisprudence. There have been regular ‘We Robot’ conferences in North America. The book *Robot Law* – edited by Ryan Calo, A. Michael Froomkin and Ian Kerr – represents a collective effort to survey the emerging field. In his introduction, Froomkin comments: ‘Like the Internet before it, robotics is a socially and economically transformative technology.’ He observes that ‘the increasing sophistication of robots and their widespread deployment everywhere from the home to hospitals, public spaces, and the battlefield requires rethinking a wide variety of philosophical and public policy issues, interacts uneasily with existing legal regimes, and thus may counsel changes in policy and in law.’ In many respects, robotics remains like the Wild West – a frontier realm, which is as much regulated by social norms and the marketplace, as by legal rules.

In January 2017, the European Parliament’s Legal Affairs Committee recommended that there should be law reform to address the fast-evolving field of robotics. Rapporteur Mady Delvaux (S&D, LU) said:

A growing number of areas of our daily lives are increasingly affected by robotics. In order to address this reality and to ensure that robots are and will remain in the service of humans, we urgently need to create a robust European legal framework

The report was approved by 17 votes to 2, with 2 abstentions, looks at robotics-related issues such as liability, safety and changes in the labour market.

The European Parliament's Legal Affairs Committee drafted a motion for a European Parliament Resolution. The motion noted that 'from Mary Shelley's Frankenstein's Monster to the classical myth of Pygmalion, through the story of Prague's Golem to the robot of Karel Čapek, who coined the word, people have fantasised about the possibility of building intelligent machines, more often than not androids with human features.' The Committee observed that 'humankind stands on the threshold of an era when ever more sophisticated robots, bots, androids and other manifestations of artificial intelligence ("AI") seem to be poised to unleash a new industrial revolution, which is likely to leave no stratum of society untouched, it is vitally important for the legislature to consider its legal and ethical implications and effects, without stifling innovation.'

The European Parliament's Legal Affairs Committee called for the establishment of a definition and classification of 'smart robots', and a registration of smart robots. The Committee asked for an in-depth evaluation of liability regimes for robots and insurance schemes. The Committee asked for a Charter of Robotics, which would include a code of ethical conduct for robotics engineers. In particular, the Committee highlighted the importance of fundamental rights, the precautionary principle, inclusiveness, accountability, safety,

reversibility, privacy, and cost-benefit analysis. The Committee also called for a licensing scheme for designers of robots, and a licensing scheme for users of robots.

There has been significant debate about impact of robots, automation, and artificial intelligence upon employment. Optimists hope that the robotics revolution will result in the creation of new jobs. Pessimists fear that automation will lead to redundancies, under-employment, and underemployment across a range of industries. One policy recommendation has been that there should be a robot tax to generate funds for training of workers, in areas such as manufacturing, who are displaced by automation. [Bill Gates](#) has been enthusiastic about the idea of taxing robotics:

Certainly there will be taxes that relate to automation. Right now, the human worker who does, say, \$50,000 worth of work in a factory, that income is taxed and you get income tax, social security tax, all those things. If a robot comes in to do the same thing, you'd think that we'd tax the robot at a similar level.

However, critics have complained that special forms of taxation in respect of robotics would discourage research, development, and innovation.

In the field of intellectual property law, there has been much consternation as to how to address robotics, artificial intelligence, and automation. In copyright law, robotics poses complicated questions about authorship, ownership, and creativity. At the QUT Robotronica conference, there were a number of demonstrations of how robotics has been transforming the creative arts. The Shimon Robot at Robotronica was able to improvise in respect of musical performances. Jason Barnes was able to drum at incredible speeds, with a prosthetic arm. In the finale of

Robotronica, a robot engaged in mimicry of a trapeze artist. Nonetheless, the High Court of Australia has insisted upon the need for human authorship of copyright works. In the United States, a number of jurists and legal theorists have considered ways and means by which robotics and artificial intelligence could be accommodated within copyright law. By contrast, the European Parliament Legal Affairs Committee has demanded the elaboration of criteria for "own intellectual creation" for copyrightable works produced by computers or robots is demanded.

In addition to copyright law, there have also been battles over industrial property. The makers of the film RoboCop have asserted their trademark against providers of security services. Lucasfilm – the makers of the wildly successful Star Wars franchise – have a trademark on ‘Droid.’ In the field of patent law, there has been significant patent activity in respect of robotics. The 2015 World Intellectual Property Organization report on breakthrough innovation charts the geography of patent activity in the area of robotics. Japanese, Korean, and German companies dominate the top rankings for filing patents in the area of robotics.

In response to such intellectual property claims in the technological field, some have instead looked to open licensing in respect of robotics.

There has also been a great discussion about liability rules in respect of robotics. There has been significant debate over legal rules regarding transportation. Both automobile manufacturers and information technology companies have been engaged in research and development over autonomous vehicles. There has been significant debate over the road rules for autonomous vehicles – such as Google’s self-driving car. Likewise, drones have raised challenging policy questions in respect of aviation rules. The appearance of aquabots has also

posed intriguing matters about the law of sea. The adoption of robotics in agriculture has also raised questions about automation. In the field of health care, the use of robotics holds out the promise of improving health outcomes for patients. Yet, given the past conflicts over medical liability, there is a need to lay down appropriate rules, standards, and codes about the use of robotics in the areas of surgery, patient care, and prosthetics.

As well as the discussion about civilian uses of robots, there has also been much interest in the increasing use of robots by law enforcement agencies. At an international level, there has been deep disquiet about the use of drone warfare by major superpowers. There has been a movement to ban ‘killer robots’.

Such political, legal, and ethical developments to develop new regulatory rules for robots represent an effort to civilize the wild west of robotics – lest *Westworld* becomes a reality, rather than a dystopian fantasy.



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