

A SUBMISSION TO THE AUSTRALIAN LAW REFORM COMMISSION

**COPYRIGHT AND THE DIGITAL ECONOMY:
THE PROGRESS OF SCIENCE**



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BIOGRAPHY

I am an Australian Research Council Future Fellow, working on Intellectual Property and Climate Change. I am an associate professor at the ANU College of Law, and an associate director of the Australian Centre for Intellectual Property in Agriculture (ACIPA). I hold a BA (Hons) and a University Medal in literature, and a LLB (Hons) from the Australian National University. I received a PhD in law from the University of New South Wales for my dissertation on *The Pirate Bazaar: The Social Life of Copyright Law*. I am a member of the ANU Climate Change Institute. I have published widely on copyright law and information technology, patent law and biotechnology, access to medicines, clean technologies, and traditional knowledge. My work is archived at *SSRN Abstracts* and *Bepress Selected Works*.

I am the author of *Digital Copyright and the Consumer Revolution: Hands off my iPod* (Edward Elgar, 2007). With a focus on recent US copyright law, the book charts the consumer rebellion against the *Sonny Bono Copyright Term Extension Act* 1998 (US) and the *Digital Millennium Copyright Act* 1998 (US). I explore the significance of key judicial rulings and consider legal controversies over new technologies, such as the iPod, TiVo, Sony Playstation II, Google Book Search, and peer-to-peer networks. The book also highlights cultural developments, such as the emergence of digital sampling and mash-ups, the construction of the BBC Creative Archive, and the evolution of the Creative Commons. I have also participated in a number of policy debates over Film Directors' copyright, the *Australia-United States Free Trade Agreement* 2004, the *Copyright Amendment Act* 2006 (Cth), the *Anti-Counterfeiting Trade Agreement* 2010, and the *Trans-Pacific Partnership*.

I am also the author of *Intellectual Property and Biotechnology: Biological Inventions* (Edward Elgar, 2008). This book documents and evaluates the dramatic expansion of intellectual property law to accommodate various forms of biotechnology from micro-organisms, plants, and animals to human genes and stem cells. It makes a unique theoretical contribution to the controversial public debate over the commercialisation of biological inventions. I edited the thematic issue of *Law in Context*, entitled *Patent Law and Biological Inventions* (Federation Press, 2006). I was also a chief investigator in an Australian Research Council Discovery Project, 'Gene Patents In Australia: Options For Reform' (2003-2005), and an Australian Research Council Linkage Grant, 'The Protection of Botanical Inventions (2003). I

am currently a chief investigator in an Australian Research Council Discovery Project, 'Promoting Plant Innovation in Australia' (2009-2011). I have participated in inquiries into plant breeders' rights, gene patents, and access to genetic resources.

I am a co-editor of a collection on access to medicines entitled *Incentives for Global Public Health: Patent Law and Access to Essential Medicines* (Cambridge University Press, 2010) with Professor Kim Rubenstein and Professor Thomas Pogge. The work considers the intersection between international law, public law, and intellectual property law, and highlights a number of new policy alternatives – such as medical innovation prizes, the Health Impact Fund, patent pools, open source drug discovery, and the philanthropic work of the (RED) Campaign, the Gates Foundation, and the Clinton Foundation. I am also a co-editor of *Intellectual Property and Emerging Technologies: The New Biology* (Edward Elgar, 2012), with Alison McLennan.

I am a researcher and commentator on the topic of intellectual property, public health, and tobacco control. I have undertaken research on trade mark law and the plain packaging of tobacco products, and given evidence to an Australian parliamentary inquiry on the topic.

I am the author of a monograph, *Intellectual Property and Climate Change: Inventing Clean Technologies* (Edward Elgar, September 2011). This book charts the patent landscapes and legal conflicts emerging in a range of fields of innovation – including renewable forms of energy, such as solar power, wind power, and geothermal energy; as well as biofuels, green chemistry, green vehicles, energy efficiency, and smart grids. As well as reviewing key international treaties, this book provides a detailed analysis of current trends in patent policy and administration in key nation states, and offers clear recommendations for law reform. It considers such options as technology transfer, compulsory licensing, public sector licensing, and patent pools; and analyses the development of Climate Innovation Centres, the Eco-Patent Commons, and environmental prizes, such as the L-Prize, the H-Prize, and the X-Prizes. I am currently working on a manuscript, looking at green branding, trade mark law, and environmental activism.

I also have a research interest in intellectual property and traditional knowledge. I have written about the misappropriation of Indigenous art, the right of resale, Indigenous performers' rights, authenticity marks, biopiracy, and population genetics.

EXECUTIVE SUMMARY

This submission draws upon a number of pieces of research on copyright law and scientific publishing - including:

1. Matthew Rimmer, 'Who Owns the Weather? Copyright Law, Big Data, and the Climate Wars', 2012 (work in progress, forthcoming).
2. Matthew Rimmer, 'Wikipedia, Collective Authorship, and the Politics of Knowledge', in Christopher Arup, and William Van Caenegem (ed.), *Intellectual Property Policy Reform: Fostering Innovation and Development*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, 2009, p. 172-198.
3. Matthew Rimmer, 'The Freedom To Tinker: Patent Law and Experimental Use' (2005) 15 (2) *Expert Opinion on Therapeutic Patents* 167-200, SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=648325
4. Matthew Rimmer, 'Japonica Rice: Intellectual Property, Scientific Publishing, and Data-Sharing' (2005) 23 (3) *Prometheus* 325-347, SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=654863
5. Matthew Rimmer, 'Beyond Blue Gene: Intellectual Property And Bioinformatics' (2003) 34 (1) *International Review of Industrial Property And Copyright Law* 31-49, SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=603223

In addition to such specific work on copyright law and science, I have also undertaken a number of large-scale research projects more generally in respect of intellectual property and agriculture; intellectual property and biotechnology; intellectual property and access to essential medicines; and intellectual property and climate change.

RECOMMENDATIONS

The Australian Law Reform Commission poses a number of questions about copyright law and databases in its issues paper on *Copyright and the Digital Economy*:

Data and text mining

Question 25. Are uses of data and text mining tools being impeded by the *Copyright Act 1968* (Cth)? What evidence, if any, is there of the value of data mining to the digital economy?

Question 26. Should the *Copyright Act 1968* (Cth) be amended to provide for an exception for the use of copyright material for text, data mining and other analytical software? If so, how should this exception be framed?

Question 27. Are there any alternative solutions that could support the growth of text and data mining technologies and access to them?

In my response to the issues paper, I would argue that there is a need for the Australian Law Reform Commission to think about the issue more broadly, in the context of larger issues about copyright law, database protection, and scientific research.

Recommendation 1

The Australian Law Reform Commission should consider the role of copyright law in respect of science in its inquiry. Historically, there has been a close connection between copyright law and scientific research and publishing. Reviewing developments in copyright law over the last 40 years, Professor Brad Sherman has emphasized that a notable point about ‘the immediate post-war period was the utmost importance of science’. He emphasized: ‘One of the recurring themes in the commentary of the time was the relationship between copyright, publishing and science.’ Sherman observes: ‘In the post-war period, science and technology were seen as offering solutions to many of the problems that had arisen in the aftermath of the war.’ Sherman comments: ‘Nearly all of the copyright

discussions through the 1960s and the early seventies focused on scientific publications – cultural institutions didn't get a say at all'.

Recommendation 2

In its guiding principles, the Australian Law Reform Commission emphasizes the goals of promoting the digital economy; encouraging innovation and competition; recognising rights holders and international obligations; promoting fair access to and wide dissemination of content; responding to technological change; acknowledging new ways of using copyright material; reducing the complexity of copyright law; and promoting an adaptive, flexible and efficient framework.

These are admirable principles. The Australian Law Reform Commission, though, does not quite capture the scientific dimension of copyright law in its principles or issues paper. As part of its objectives, the Australian copyright regime should promote research and development, science and innovation, and access to knowledge. This would echo the constitutional objective of the United States intellectual property regime to promote 'the Progress of Science and the Useful Arts'.

The copyright regime should not only promote the digital economy, but also encourage scientific research in the fields of agriculture, medicine, biotechnology; the physical sciences; the fields of the environment, biodiversity, and climate change.

Recommendation 3

Australian copyright law should promote the primary public interest in the free flow and exchange of scientific information amongst researchers and sciences. In *American Geophysical Union v. Texaco, Inc.* (1994) 60 F.3d 913,¹ Justice Jacobs concluded that there is a need to reinterpret copyright law and the defence of fair use in light of its impact upon scientific practice:

Since the copyright laws seek to stimulate *creativity* we should consider the incentives chiefly from the perspective of the authors and scientists. It has been recognized by this Court that in the scientific community, "what is valuable [to the authors] is recognition because it so often influences professional advancement and academic tenure."² From their point of view, then, what is truly important is the wide dissemination of their works to their colleagues.

The incentives for scientific publication have been in place since the project of science began to be perceived as a cooperative venture more than three centuries ago.³ Scientists communicate through journals, and use them to stake claims to new ideas, disseminate their ideas, and advance their careers and reputations. These "authors have a far greater interest in the wide dissemination of their work than in royalties. . . ." That, evidently, is why they do not seek or expect royalties, and that is why licensing fees cannot be expected to increase or diminish their creativity or their drive to publish. The majority's ruling on fair use will add to the cost, time and effort that scientists spend to scan, keep and use journal articles, and will therefore tend to diminish the only reward that the authors seek from publication.

Nowhere in the case law is there support for the proposition that the monopoly granted by copyright is designed to ensure the holder a maximum economic return;

¹ *American Geophysical Union v. Texaco, Inc.* (1994) 60 F.3d 913.

² *Weissmann v. Freeman*, 868 F.2d 1313, 1324 (2d Cir.), *cert. denied*, 493 U.S. 883, 110 S.Ct. 219, 107 L.Ed.2d 172 (1989).

³ See Zilsel, E. "The Sociological Roots of Science," in Hugh F. Kearney, ed., *Origins of the Scientific Revolution*, at 97 (1968) ("In his *Nova Atlantis* Bacon depicted an ideal state in which technological and scientific progress is reached by planned co-operation of scientists, each of whom uses and continues the investigations of his predecessors and fellow workers.").

rather, the law's purpose is to balance competing interests - assuring the author a *fair* return, while permitting creative uses that build upon the author's work.⁴

Copyright law needs to be much more sensitive and responsive to the need to facilitate the dissemination of scientific information amongst scientists. It should ensure that scientists are not burdened by additional imposts levied by scientific publishers. There is a need to reform the defence of dealing to recognise that the use of academic journals and scientific databases are productive and transformative uses.

The Commonwealth should amend the *Copyright Act 1968* (Cth) to recognise a defence of fair use which includes transformative and productive uses - such as the use of scientific databases and scientific information.

Recommendation 4

In the field of information technology, copyright law has been used to protect computer programs, databases, and scientific publications. The ruling in *IceTV Pty Limited v Nine Network Australia Pty Limited*⁵ and the subsequent *Telstra Corporation Limited v. Phone Directories Company Pty Ltd*⁶ lifted the standard of originality to 'independent intellectual effort'. That is an independent development. Nonetheless, there remain issues in terms of access to copyright works in the field of information technology.

Recommendation 5

In the field of agriculture, biotechnology, and medicine, companies have relied upon copyright law to protect genetic databases. This is evident in Celera Genomics' use of copyright protection in respect of genetic information relating to the human genome, and Syngenta's use of

⁴ *American Geophysical Union v. Texaco, Inc.* (1994) 60 F.3d 913 [133]-[135].

⁵ *IceTV Pty Limited v Nine Network Australia Pty Limited* [2009] HCA 14.

⁶ *IceTV Pty Limited v Nine Network Australia Pty Limited* [2009] HCA 14.

copyright protection in respect of the rice genome. In its report on *Genes and Ingenuity: Gene Patenting and Human Health*, the Australian Law Reform Commission recommended: ‘28–1 The Commonwealth should amend the *Copyright Act 1968* (Cth) (*Copyright Act*) to provide that research with a commercial purpose or objective is ‘research’ in the context of fair dealing for the purpose of research or study’. Arguably, there is a need to ensure that Australia has a defence of fair use – which enables access to databases of genetic information.

Recommendation 6

The Australian Parliament recently introduced a defence of experimental use under patent law under the *Intellectual Property Law Amendment (Raising the Bar) Act 2012* (Cth) – adopting the recommendations of the Australian Law Reform Commission in its gene patenting inquiry. The defence is an open-ended, flexible, and multi-factorial defence. The introduction of a defence of experimental use under patent law strengthens the case for a defence of fair use under copyright law – especially as both doctrines were developed by Justice Story.

Recommendation 7

As part of my research into intellectual property and climate change, I have discovered the extensive use of copyright law to protect environmental works. Such subject matter includes scientific publications, literature and research; meteorological databases used for forecasting, analysis of weather, climate, temperature, biodiversity changes, and extreme conditions, such as drought, flood, fire, and sea-rising; and maps, charts, diagrams, and plans. There is a need to facilitate access to scientific information under copyright law relating to the environment, biodiversity, and climate change. Australia’s copyright exceptions should help facilitate scientific efforts to address climate change and global warming.

Recommendation 8

There is a need to ensure that copyright exceptions cannot be contracted out of. This is particularly important in the field of scientific research. In its report on *Genes and Ingenuity: Gene Patenting and Human Health*, the Australian Law Reform Commission recommended: ‘The Commonwealth should amend the *Copyright Act* to provide that, in relation to databases protected by copyright, the operation of the provisions relating to fair dealing for the purpose of research or study cannot be excluded or modified by contract.’ Such a proposed recommendation, for mind, is framed too narrowly.

Recommendation 9

There is a need to ensure that copyright exceptions cannot be undermined by technological protection measures and digital rights management. This is particularly important in the field of scientific research. In its report on *Genes and Ingenuity: Gene Patenting and Human Health*, the Australian Law Reform Commission recommended: ‘Prior to the implementation of art 17.4.7 of the Australia–United States Free Trade Agreement—which includes a prohibition on the circumvention of access control measures—the Australian Government should assess the need for an exception for researchers engaging in fair dealing for the purpose of research or study in relation to databases protected by copyright. Once the prohibition has been implemented, the Australian Government should periodically review the impact of the anti-circumvention provisions on the practical exercise of fair dealing for the purpose of research or study in copyright works.’ A preferable approach would be that of the High Court of Australia in *Stevens v. Sony*, which emphasized that general copyright exceptions should prevail over para-copyright measures such as technological protection measures.

Recommendation 10.

The Commonwealth and its relevant funding agencies – such as the Australian Research Council and the National Health and Medical Research Council - should require academics receiving federal funding to engage in open access publishing.

Recommendation 11.

The Commonwealth and its agencies should provide support for open source projects to help promote access to scientific databases and scientific information – including in respect of information technology, agriculture, medicine, biotechnology, the environment, biodiversity, and climate change. The Encyclopedia of Life is a good example of an open source scientific project. The GovHack project should be expanded.

Recommendation 12.

Australia should not adopt a sui generis regime for database protection – like discredited European Union Database Directive.