



## Four tales of sci-fi and information law

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**Abstract:** Feel like living in a dystopia? Take a deep breath, get a strong coffee, and let us challenge your ideas of where reality ends, and sci-fi begins...

**Keywords:** Sci-fi, Information law, Artificial intelligence, Robotics, Algorithmic governance

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## FOUR TALES OF SCI-FI AND INFORMATION LAW

## INTRODUCTION

To Boldly Go Where No Man Has Gone Before...

Science fiction and information law have more in common than meets the eye. Information law “normatively integrates the law relating to the production, marketing, distribution and use of information” (IViR Research Program 2018-2023). As such, the [University of Amsterdam-based] Institute of Information Law’s mission is to “further the development of information law within a legal framework that accommodates the needs and interests of the information society, its citizens and its industries in a just and balanced way, while respecting fundamental rights and democratic freedoms.” Sci-fi is a literary art form that explores settings different from our world and where the difference is explained “in scientific or rational, as opposed to supernatural, terms” (Prucher, 2009). Similar to information law, sci-fi “concerns itself with scientific or technological change, and it usually involves matters whose importance is greater than the individual or the community” (Gunn, 2002).

Both information law and sci-fi are fascinated by new and emerging technologies, and both feel a strong urge to write about them. Authors in both ‘genres’ dedicate a considerable share of their time speculating how these technologies may evolve. Most importantly, sci-fi authors as well as information law scholars ponder what the implications will be of technology for society, markets and the values that we cherish and seek to protect.

Sci-fi is a source of inspiration for many legal scholars writing about law and AI, algorithms and robots. The fascination of information law scholars with sci-fi already manifests itself in the

fantastic titles that some scholars give their papers, including titles such as “Do Androids Dream of Electric Free Speech? Visions of the Future of Copyright, Privacy, and the First Amendment in Science Fiction” (Stewart, 2014), “European Perspectives on an Emergent Law of Robotics” (Caytas, 2017), “Clones and the Coase Theorem” (Guerra-Pujol & Martínez-García, 2012), “The Omega Man or The Isolation of U.S. Antitrust Law” (Waller, 2018), or “‘To Boldly Go Where No One Has (Arbitrated) Before’: The Star Trek Mythos as an Heuristic Paradigm for Jurisdictional and Arbitration Issues” (Pribetic, 2007). Some authors use science fiction literature and the ideas developed there to question established legal principles or fundamental rights, such as Miller’s essay on the “The Law of Time Travel” (Miller, 2017) or Corcos’ “Visits to a Small Planet: Rights Talk in Some Science Fiction Film and Television Series from the 1950s to the 1990s” (Corcos, 2010). Other pieces of legal work seem to resemble works of science fiction themselves, by diving into the legal challenges of solving property conflicts once humans will have successfully settled on Mars (Simmons, 2015), or whether we need a new UN treaty to regulate our contacts with extra-terrestrial intelligence, once we succeed in finding it (Bilder, 2020).

Vice versa, law plays a prominent role in more than one science fiction story. Law, and the invention of rules and legal frameworks does figure prominently in more than one science fiction novel (Perry, 2018; Winters, 2019), most famously probably in Isaac Asimov’s *Three Laws of Robotics*,<sup>1</sup> which he formulated as early as 1940 (Asimov, 2018), and the Prime Directive (also known as “non-interference directive”) from the Star Trek universe. Other examples vary from the trickeries of applying the patent law in the age of time travel (Heinlein, 1986)<sup>2</sup> and interactions between alien and human laws in relation to cultural heritage (Reid, 2013), the financial regulations in the flooded New York City (Robinson, 2017), to relationships between privacy and surveillance (Harkaway, 2017).

## SCI-FI IN POLICY-MAKING

With artificial intelligence (AI), robots and algorithms being more and more an element of our daily life, science fiction is also increasingly influential in policy debates. Some policy documents sound in themselves positively sci-fi, such as the Council of Europe’s Recommendation n°2102(2017) about technological convergence, artificial intelligence and human rights, or the “Report of Comest on Robotic Ethics” (World Commission on the Ethics of Scientific Knowledge and Technology, 2017). The latter report dedicates an entire section to tracing back robots, and the role of robots in society, with lavish references to Mary Shelley, Karel Capek and, of course, Asimov. In Brussels, the European Parliament mused “We cannot say with certainty that humans will survive to enjoy it. Indeed, even without more advanced AI, humans have had (at least since the development of nuclear weapons) the capacity to destroy ourselves, and there are compelling arguments that AI could be another such dangerous technology (Bostrom, 2014). But it is not clear that we won’t survive to enjoy it, either. ... We also cannot yet say that, if we survive to see such a world, it will be positive for humans” (Bentley, Brundage, Häggström, & Metzinger, 2018).

An earlier text for the European Commission’s “Europe fit for a digital age” opened with sentences that could have very well figured in a sci-fi novel (albeit not a very good one): “We live in times where dreams can be fulfilled and nightmares can come true very quickly. Because of digital technologies, dreams of equal access to top level education and health care, ease of transport and a sustainable planet can become reality. But so can chaos caused by cyber attacks or surveillance systems used by autocratic regimes. Bad things will have to be fought and good things to be worked for” (European Commission, 2020). Or as Audrey Azoulay, Director-

General of the United Nations Educational, Scientific and Cultural Organization (UNESCO), tells us: “AI is humanity’s new frontier. Once this boundary is crossed, AI will lead to a new form of human civilization. The guiding principle of AI is not to become autonomous or replace human intelligence. But we must ensure that it is developed through a humanist approach, based on values and human rights. We are faced with a crucial question: what kind of society do we want for tomorrow?” (Azoulay, n.d.).

Sometimes, those policy suggestions are so utopian that the reader is left puzzling where exactly the making of law ends, and writing sci-fi begins. An example is the European Parliament’s resolution to give legal personhood rights to robots.<sup>3</sup> Any self-respecting expert in AI technology will confirm that we are still far away from singularity and a situation in which machines will act fully autonomous, and with a degree of agency, dignity and intelligence that would justify treating them as people. And yet, the European Parliament is clearly already anticipating a situation in which this may be reality.

Sometimes, information law and sci-fi merge in unlikely alliances, as for example in paragraph U of the Motion for a European Parliament Resolution with recommendations to the Commission on Civil Law Rules on Robotics: “whereas Asimov’s Laws must be regarded as being directed at the designers, producers and operators of robots, including robots assigned with built-in autonomy and self-learning, since those laws cannot be converted into machine code” (Allgrove, 2004). One may wonder whether Asimov would be pleased or horrified to see his writings being taken that literally by a regulatory institution.

## THE SCI-FI AUTHOR IN MANY OF US

Possibly part of that enthusiast embracing of sci-fi authorship in legal and policy discourse also hints to a deeper secret about information law scholars and policymakers: namely that deep down within many of us there is a sci-fi writer. Academic writing and the making of rules is a creative process in many respects. This is a process that requires a fair amount of imagination and the ability to anticipate the future society for which we are writing and developing rules. When writing legal texts, or laws, legal writers are subjected to strict formal rules, conventions and formats without which our articles would be unpublishable: footnotes and references, recitals and paragraphs. Sometimes, however, our creative energy and imagination balks at those strict formalistic constraints and many of us more or less secretly entertain the romantic idea that someday, in a not too distant future, we will break loose. We will forget about footnotes, word counts, the right keywords and journal rankings. Instead, we will write a story. A science fiction story. And it will be about law, or the role of law and how it shapes the future, or lawyers and machines. In other words: it will be sci-fi.

Maybe you, dear reader, recognise that sentiment. Maybe you are already one of those who have a literary manuscript hidden in some remote file on your computer. Or maybe you already even published it? Be it as it is, in this special series you will meet four writers who did exactly that: dare to break out, go off the trodden path, assemble their creative energy and become a science fiction writer.

This special issue features the winners of the first Institute of Information Law (IVIR) Science Fiction & Information Law Writing Competition. We welcomed fiction stories that reflect on the role of law in our possible data-driven future, where data has been firmly established as an economic asset and new, data-driven smart technologies can change the way we live, work, love,

think and vote. We asked how AI would change politics, democracy or the future of the media; what life would be like with robot judges and digital professors. The responses to the competition exceeded our expectations by far. We received contributions from all over the world, with a wealth of ideas about how the future – and information law – will look like and authors from the most diverging backgrounds: writers, scholars, government officials, engineers and lawyers. For many of them, this was the first time they considered writing a sci-fi story, inspired by our call for papers.

Selecting the award-winning contributions was difficult, and we are immensely grateful to the service of our amazing selection committee that consisted of Prof Wolfgang Schulz, Prof Paul Goldstein, Prof Bernt Hugenholtz and Prof Ryan Calo, as well as the undersigned organisers of the competition. We would also like to thank Bernt Hugenholtz, Paul Goldstein and Ryan Calo for their thoughtful reflections and holding a laudatio at the award ceremony. Our assessment criteria were simple, but effective: originality, relevance to information law and quality of writing.

In this special series we proudly present the four finalist science fiction stories, three of which were presented at the celebratory award ceremony in Amsterdam last year. None of the authors are professional sci-fi writers, all took the call as an inspiration to embark on a new adventure. And we are very happy that we can give them a place in this special issue of *Internet Policy Review*, with thanks to Frédéric Dubois, managing editor who was bold enough to go where not many policy journal editors would follow him: to agree on hosting our four winning sci-fi and giving them a forum. We also would like to thank Annika Huskamp for the artful graphics.

In The emergent property market by Jonathan Crowcroft, a regular patent clerk in the 22<sup>nd</sup> century notices a strange pattern in the incoming filing system. A number of very strange patent applications were coming in, obviously made by AI. But the human race doesn't really care anymore, as it was just another domain on a long list of human intellectual activity being taken over by AI. Has AI taken over the patent law system?

A (until now) truly human quality stands central in Christine Würth's story Generation NeoTouch: how digital touch is impacting the way we are intimate. After haptic technology has gained an increasingly large role in everyday life in the year 2039, it would seem that the ability to feel touch and physical contact has been successfully replaced by digital technology as well. Christine Würth dives deeper into the social and ethical implications of this technology, and explores consequences for the right to privacy, as well as the potential for unlawful abuse.

The storyteller by James Danielsen, is the tale of The Better Storytelling Company (TBSC) - a blockchain-based creative writing system. Allegedly, TBSC has been able to predict some crimes even before they have happened. How did they do so? And was the murderer ever proven guilty?

AI technology is also the central theme of A new beginning, by Arnoud Engelfriet. Engelfriet's central character is ADA, an AI-assistant that can help individuals with their everyday tasks. However, in the post-2020 society the GDPR is being enforced very strictly by boards representing large groups of individuals whose data rights have been breached. *A new beginning* tells the story of the fight of Joanna, the inventor of ADA, against the seemingly unavoidable consequences of strict GDPR enforcement for her innovation.

## CONCLUDING REMARKS

The core objective of information law is to create the conditions for a just digital society that respects fundamental rights, public values and the rule of law. Digital technologies change the way we live, create, learn, communicate, feel, engage with each other and yes, even commit and detect crimes. One prediction that all the four stories do make is that information law will continue to play a critical role in the digital society, albeit in different, and not always positive ways. Thinking ahead and anticipating what rules are needed in a digital reality that changes at break-neck speed is a key challenge for information law. And sometimes the realms of reality, and of sci-fi lie closer together than we may realise.

We hope you will find these stories fun to read. We hope they make you think and make your scholarly heart beat a little faster. Meanwhile, we can only speculate to what extent our authors have been visionaries who write about issues that one day, maybe in the not too far away future, might be on the agenda of parliamentary debates, and leave their footprints in information law

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## FOOTNOTES

1. 1. A robot may not injure a human being or, through inaction, allow a human being to come to harm. 2. A robot must obey orders given it by human beings except where such orders would conflict with the First Law. 3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

2. Originally published in 1957.

3.