Book Review

Advanced Introduction to Law and Artificial Intelligence

By **Stephanie Falconer**, Associate Lecturer of Law at La Trobe University, **Orcid:** <https://orcid.org/0000-0002-5773-7375>
La Trobe University, Melbourne, Australia

ABSTRACT

Book Review: Woodrow Barfield and Ugo Pagallo. 2020. *Advanced Introduction to Law and Artificial Intelligence*. Cheltenham, UK: Edward Elgar Publishing, ISBN-10: 1839100311, ISBN-13: 978-1839100314, 208 pp.

Keywords – *Book review, artificial intelligence, law, advanced introduction.*

Acknowledgements: *The Book was provided free of charge by Edward Elgar.*

Disclosure statement – *No potential conflict of interest was reported by the author.*

License – *This work is under Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) <https://creativecommons.org/licenses/by-nc-sa/4.0/>*

Suggested citation: Falconer, S. 2020. "Book Review: *Advanced Introduction to Law and Artificial Intelligence*, by W. Barfield and U. Pagallo", *Law in Context*, 37(1): 187- 189, DOI: <https://doi.org/10.26826/law-in-context.v37i1.132>

The increasing sophistication and rapid development of artificially intelligent technology (AI) has given rise to complex legal challenges. In *Advanced Introduction to Law and Artificial Intelligence (Advanced Introduction)*, Dr Woodrow Barfield and Professor Ugo Pagallo, drawing primarily on examples from Europe and the US, give a broad and accessible overview of AI and the law.

The *Advanced Introduction* is not the first collaborative resource produced by Barfield and Pagallo, who coedited the *Research Handbook on the Law of Artificial Intelligence* (also published by Edward Elgar in 2018). Both authors are clearly experts in their field. Dr Barfield holds a PhD in Engineering, a JD, and an LLM in intellectual property law, and has written extensively on AI, robotics, and human enhancement. Professor Pagallo, a legal academic, has made a significant contribution to scholarship with a stream of monographs and other publications dealing with AI and the law, governance, and information technology law.

Unlike the *Research Handbook*, this book serves as a grounding resource for a wider audience including legislators and government agencies who seek to regulate AI, law students and students from other academic disciplines seeking an introduction to the role of law in regulating smart technology, and practicing lawyers who deal with AI issues in litigation. Though the authors deal with the content in a clear and careful manner, without a grounding in general legal principles and a degree of understanding about AI and its uses, readers may become overwhelmed with the extremely nuanced and complex concepts discussed.

The book begins by establishing the definitions, actors, theories, and the essential concepts, such as algorithms, expert systems, and machine learning, that ground subsequent discussion. The authors refer to accessible examples such as the Turing Test and CAPTCHA, enabling the reader to grasp the thresholds of AI's actual utility, as well as its present limitations. Chapter two explores the human rights considerations raised by AI technology including a brief reference to Amnesty International's pilot program using AI's machine learning capabilities to assist with investigations into alleged human rights violations. Chapter three then considers the issues arising from AI's potential to interfere with constitutional rights, with a particular focus on the US and European Union.

The middle section of the book deals thematically with AI's disruptive impact on legal doctrine. Arguably the most important substantive legal question for AI is the attribution of liability for damage caused by smart technology, and chapter four covers this issue. A potential point of frustration for readers seeking definitive answers is that the authors do not commit to specific conclusions about personhood, but this is likely because the technology, and thus the discussion, is still developing. Nonetheless, the text guides the reader through the various positions and provides sufficient information for those interested in further exploration of this challenging and fundamental concept.

Chapter five examines data protection, another significant concern raised by the proliferation of AI, and identifies the European *General Data Protection Regulation* (GDPR) as 'an (almost) all-encompassing regulation' informing the standpoint of many legal systems around the world. Here the authors focus more on how AI may impact existing laws, identifying gaps and ambiguities to provide insight into likely future legal development.

Chapter six explores the intersection of AI with tort law, with an interesting examination of challenges that AI poses to the duty of care. When a system can think and act for itself, who owes the duty of care? The authors explore potential solutions proffered by legal and computer science experts, such as the conferral of personhood on AI systems, establishing a 'common enterprise' theory of liability, or the modification of duties and the standard of care owed.

Criminal law is the focus of chapter seven. Here the authors investigate the right to a fair trial for accused persons, the emergence of potential new AI-based crimes, and whether AI can be considered a 'new sort of accountable criminal agent'. The primary takeaway from this chapter is that the limitations of working with AI, whether as a legal support system, as a new subset of criminal offence, or as a legal subject capable of committing crimes independent of human involvement (and with the necessary *actus reus* and *mens rea*), are still too much in their infancy to be able to clearly address. As the technology develops, so too will the response and the authors have outlined clear arguments to help guide the discussion when the time comes.

Chapters eight, nine and ten examine the impacts of AI on the law of copyright, patent and business. Chapter eight analyses the challenge of determining authorship and ownership where works are generated by AI with little-to-no human involvement. Patent law and, in particular, when AI, or AI-created work, is eligible for patenting, is the focus of chapter nine, with the authors taking the position that AI should not be awarded inventor status, and arguing that identifying a human author or owner may become increasingly difficult. Chapter ten focuses on the inadequacy of existing trade secrecy law, and the potentially harmful effects of the lack of transparency in AI-powered business transactions.

The book finishes with a call for further consideration and development of law in the areas of administrative law, financial regulations, health and “precision medicine”, law of war, workplace law, and human enhancement. As the authors make clear, articulating a coherent legal framework is challenging because of the developing nature of AI technology. As such, the conclusions are appropriately tempered. Nonetheless, the book is full of helpful examples, and the exploration of relevant treaties and legislation carefully situates the reader within the appropriate context. Ultimately, this book provides an authoritative introduction into the specific legal topics covered, and a springboard into further research, and will prove a useful resource for its intended audience.