

Book review

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Autonomous Vehicles and the Law: Technology, Algorithms and Ethics

By Hannah Yee Fen Lim

Hannah Yee Fen Lim is an Associate Professor of Business Law at the Nanyang Technological University of Singapore and her scientific interdisciplinary is present throughout her new book, 'Autonomous Vehicles and the Law: Technology, Algorithms and Ethics'.

What Yee Fen Lim does very effectively is introducing the reader from the very beginning of the book to the 'esoterica' of an autonomous vehicle, the scientific background and the underlying technology. Thus, before you read about the adequate standard of care in chapter 3 or the difficulties in applying the 'design defect' tests of the US jurisdictions in chapter 5, you have already familiarized yourself with the cameras, the lidars, the radars and the digital maps described in detail in chapter 2. Equally, Yee Fen Lim delineates the 'inner world' of an autonomous vehicle, the software, by usefully describing the hard-coded tasks and the algorithmic decision-making processes separately. This division is critical for the detailed description of the 'standard of care' notion in chapters 3 and 4, where the author distinguishes between the verifiable standard of care on the one hand, and the less verifiable, software-related standard on the other. The analysis of the former standard is further solidified by building on already existent case studies. The author endeavors to apply the verifiable standard of care to the series of accidents that happened by the defective Tesla Models S and X as well as the fatal Uber accident in 2018. This detailed case-study analysis is illuminating for it offers a pragmatic basis for contemplation and application of the author's interdisciplinary approach.

Moreover, Yee Fen Lim accurately shapes the landscape of the required regulation. It does not suffice to argue for the *ex post* application of a liability regime and the author is aware of it. Indeed, apart from the proposal on the *ex post* application of strict liability rules, the author devotes part of her analysis on two relevant regulatory paradigms. The first refers to the minimum standards that an autonomous vehicle should meet and it is related to the description of the underlying technology carried out in chapter 3. The second paradigm that seems even sounder is the need for rigorous regulatory oversight in testing and deployment of the autonomous vehicles. In this context, the author critically compares two distinct legislative approaches adopted in Arizona and Germany respectively.

The final chapter of the book is around ethics. The author attempts to go beyond the oft-cited and sometimes needlessly analyzed 'trolley problem'. Taking into account the current stage of technological development, Yee Fen Lim accepts that the current state-of-the-art in computational technology cannot engulf intuitive discretion. For this reason, she draws the reader's attention to the programming tasks at issue by scrutinizing the first guidelines in the world for autonomous vehicles, adopted in Germany.

Overall, what Yee Fen Lim achieves with this book is to constructively portray every corner of the autonomous vehicles challenges by bringing together law, mechanical engineering and computational technology. As such, the book is ideal for scholars of the above fields that are looking for an interdisciplinary approach as well as for those who are making the first steps in the field of autonomous driving.