

## Sebastian Lohsse, Reiner Schulze & Dirk Staudenmayer (eds), *Liability for Artificial Intelligence and the Internet of Things*\*

Review by Pietro ORTOLANI\*\*

According to a famous adage – ascribed to a variety of authors, from Tolstoy to John Gardner<sup>1</sup> – there are only two kinds of story: a man goes on a journey, and a stranger comes to town. If the book under review were a novel, it would surely fall within the latter *topos*: the town would be liability law, and the stranger – spoiler alert – a robot, or (at the very least) a disruptive Silicon Valley cowboy riding a self-driving horse. The book under review, needless to say, is not a novel, but an edited volume collecting the contributions of the fourth Münster Colloquium on ‘Liability for Robotics and in the Internet of Things’, which took place on 12–13 April 2018. Nevertheless, given the fascination exerted by themes such as artificial intelligence (AI) and robotics, a certain quasi-narrative suspense courses the pages of the volume: how will the ‘town’ of liability law cope with the mysterious stranger that is now pacing its relatively old streets? The many interesting contributions collected in the book provide some precious answers in this respect, and pose even more interesting and challenging questions with an eye to the future.

The growing academic attention for themes such as AI, robotics and the Internet of Things (IoT) correlates not only with the accelerating pace of technological innovation, but also with the ‘legislative momentum’ building within the European institutions. Already in 2015, the European Commission identified the attainment of legal certainty with respect to the allocation of liability in the IoT as a key priority for the Digital Single Market Strategy.<sup>2</sup> Against this background, in January 2017, the Commission then pointed out the specific issue of liability for autonomous systems.<sup>3</sup> Subsequently, on 16 February 2017, the European Parliament adopted a resolution containing recommendations on civil law rules

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\* *Münster Colloquia on EU Law and the Digital Economy IV* (Hart-Nomos 2019), p 235.

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1 Stephen METCALF, ‘Town without Pity’, *New York Times* 4 November 2007.

2 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, ‘A Digital Single Market Strategy for Europe’, COM(2015) 192 final, 14.

3 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, ‘Building a European Data Economy’, COM(2017) 9 final, p 13; Commission Staff Working Document on the free flow of data and emerging issues of the European data economy, SWD(2017) 2 final, pp 40–45.

on robotics<sup>4</sup>; in a nutshell, the Parliament asked the Commission to submit a proposal for a legislative instrument concerning the legal implications of AI and robotics and, in particular, the ‘crucial’ problem of civil liability triggered by robots.<sup>5</sup> Furthermore, the European Council invited the Commission to ‘put forward a European approach to AI by early 2018’.<sup>6</sup> The European strategy towards the establishment of a liability regime concerning new digital technologies has been further developed by the European Commission in 2018.<sup>7</sup> In light of these developments, the book is undoubtedly timely, as it addresses many legal questions still in need of a final answer.

The book, like the legislative debate ongoing within the European institutions, is rather broad in scope: it addresses not only robotics and the neighbouring cluster of issues brought about by the IoT, but also the liability aspects of AI. It is important to acknowledge that these problems, while often related, are not entirely overlapping: AI, in principle, has a broader range of possible applications than just physical devices, and it is possible for an algorithm to cause harm without being embedded into any tangible object.<sup>8</sup> In the same way, robotics and the IoT are in many ways related, but clearly distinguishable from other points of view. As Koch reminds us in one of the contributions (pp 99-116), given these significant structural divergences, ‘one size does not fit all’ and, ‘even [if] we limit ourselves to robots, there are so many varieties that a uniform liability solution applicable to all of them alike already at first sight may not offer an adequate distribution of the risks inherent in these products’ (p 114). For this reason, the book is best understood as bird’s eye investigation of a number of interrelated but not identical legal questions, paving the way for future and more focused research on specific topics.

Technological innovations have a fundamental effect on our societies and on the global economy. Interestingly, though, technology also seems to have a significant impact on legal scholarship, forcing us to re-think our discipline in a number of ways. Delving into the volume, it is fascinating to notice a distinctively twofold effect: on the one hand, developments such as AI and the IoT triggers an effort of interpretive adaptation of the existing law, testing the boundaries of its applicability. These efforts are undertaken in many of the book’s contributions, with frequent references to the Product Liability

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4 European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)).

5 *Ibid.*, paras 49-59.

6 European Council meeting (19 October 2017) – Conclusions, EUCO 14/17, para. 11.

7 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, ‘Artificial Intelligence for Europe’, COM(2018) 237 final; Commission Staff Working Document, ‘Liability for emerging digital technologies’, SWD(2018) 137 final.

8 See e.g. the case of algorithmic discrimination: F. BORGESIU, *Discrimination, Artificial Intelligence, and Algorithmic Decision-Making* (Strasbourg: Council of Europe 2018), p 26.

Directive (PLD).<sup>9</sup> On the other hand, however, the emergence of new technologies (and, more generally, of new frameworks for human interaction) invites us to look forward, not only putting forth arguments *de jure condendo*, but also considering the legal implications of hypothetical future scenarios, despite the fact that technology has not reached a particular stage of development yet. As remarked by Comandè in another of the book's contributions (pp 165-183), '[p]aradoxically as it might be, we do not have fully autonomous car traffic yet, but there is already extensive literature addressing the issue of liability in case of accidents caused by autonomous vehicles' (p 171). Or, as Wagner (pp 27-62) notes, legal scholarship need not concern itself with the question whether a certain technological development is factually attainable, but rather deals with the legal consequences of that development, 'on the assumption that and at the point in time when' such type of technology will indeed come into being (p 53).

Is it premature, then, to speak about the legal implications of technologies that are not fully formed and operational just yet? The interesting analyses collected in the book seem to suggest that the question should be answered in the negative, for at least two reasons. First, given the accelerating pace of machine learning and automation, legal research in this field can be beneficial both in the preparation of new legislative instruments that might become necessary in the near future, and in providing guidance to courts that may be faced with technology-related legal questions even before such a new legislative framework comes into being. Second, and conversely, even if some of the technological advancements discussed in the book were not to materialize entirely in our world, they would still be relevant at an epistemic level, acting as a stimulating counterfactual, and encouraging us to 'look forward' – engaging with areas of private law that would otherwise remain unexplored. It would not be the first time – it must be stressed – that legal scholarship experienced such a 'rush to the future': think, for instance, of the notion of 'metalaw', theorized in 1956 by Andrew Haley on the pages of the *Harvard Law Record*, addressing problems such as 'Dealing with Aliens' and 'Life on Other Worlds'.<sup>10</sup> The future envisioned at the dawn of the 'space age', of course, is far apart from the reality we currently inhabit. And yet, Haley's reflections sparked the intellectual debate that gave rise to a new (and now burgeoning) field of legal studies, namely space law. Why could the same not happen to European private law?

There is a final, general lesson that the book teaches us. Technological developments, such as AI and the IoT, have the potential to act as catalysts for a

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9 Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products, OJ L 210, 7 August 1985, pp 29-33.

10 A.G. HALEY, 'Space Law and Metalaw – A Synoptic View', 1. *Harvard Law Record*, November 1956, pp 3-4.

(at least partial) European harmonization in the field of private law. As remarked by many of the contributing authors, the challenges raised by these technologies are intrinsically transnational and, therefore, they cannot be adequately dealt with at a purely national level. Apart from the likely hikes in compliance and transaction costs that a merely national regulatory approach would entail, there is an additional risk in leaving the EU Member States free to answer the numerous existing questions autonomously: as our economies become increasingly unified and digital, the absence of a common private law framework could jeopardize the architecture of the Single Market itself. The exogenous shock of new technologies, hence, could be pivotal in overcoming many of the scepticisms traditionally expressed against the European harmonization of the laws governing civil liability. Many problems, of course, remain to be solved, and the book hosts a wide range of interesting debates: which subjects, for instance, should be held responsible for harm caused by AI-driven robots? The chapters authored by Wagner (pp 27-62), Karner (pp 117-124) and Spindler (pp 125-144) comment, among other things, on the controversial idea of the 'ePerson', i.e. the proposal to confer some sort of legal personality (and, most importantly, liability) upon the robots themselves. Along similar lines, the challenges of establishing a causal link in the famously opaque AI field are discussed at length, *inter alios* by Spindler (pp 125-144) and Martín-Casals (pp 201-228). Given the unprecedented nature of many of the technological developments described in the book, we are still far from reaching a consensus on the most appropriate private law approach. Nevertheless, the debate has started, and books like *Liability for Artificial Intelligence and the Internet of Things* will no doubt contribute to its liveliness.