

Bernhard A. Koch*

Reinventing the Tort? Tort Law in the Digital Age**

A. The Emperor's New Bytes

This short paper is meant to be thought-provoking, or just outright provocative, as you may have guessed from the title of my presentation. We are all experiencing an increasing number of conference invitations and publication headlines on the challenges of tort law in the digital age or the like, which is the second wave after at least a decade of talking about so-called 'new risks'. The successor of nanotechnology in the current tort law debate deals with even smaller bits, namely bytes.

I am not questioning that there may be new real-life scenarios that we will have to cope with, and I admit upfront that some fine-tuning may be necessary in order to address such risks, but I am not entirely convinced yet that we need to reconsider tort law from scratch in order to master such novel cases.

While there have always been 'new risks' accompanying new technologies, starting with the danger of burns after the discovery of fire, digital technologies come along with certain features that are commonly held to at least bring new facets to future tort law cases.¹ This includes, inter alia, the fact that such technologies rely heavily on external data, which can obviously be flawed. Artificial intelligence increases the autonomy of products equipped with it, which in turn depends upon their self-learning abilities, allowing them to react to new scenarios by making their own decisions. Most of these devices depend upon access to some communication network, or at least to some nearby other gadget. This openness can be abused by criminals, of course, which is undoubtedly the inspiration for quite some nightmares.

At least in the European discussion, the term 'emerging digital technologies'² is often being used to describe such advances of science which will clearly impact upon our lives. While it is not so much the technologies we should worry about, but rather their implementations in real life through products and services, let us also continue to use this term for the sake of simplicity.

The EU is currently considering whether to respond to such new challenges by legislative action, and one step into this direction was setting up an expert group that was asked to analyze whether and, if so, to what extent tort law in Europe needs an update.³ This expert group was

* Professor of civil and comparative law at the University of Innsbruck (<<http://www.zivilrechts.info>>).

** This paper is based on a presentation given at the fall meeting of the Vereniging voor Aansprakelijkheids- en Schadevergoedingsrecht (<<http://www.vasr.nl/>>) in Amsterdam on 7 November 2019 honouring Helmut Koziol, Ulrich Magnus, and Pierre Widmer. A few footnotes were added to the manuscript without further changes.

¹ On these 'specific characteristics of emerging digital technologies', see, eg, the Commission Staff Working Document 'Liability for emerging digital technologies', SWD(2018) 137 final, 9 ff.

² See the Commission Staff Working Document (fn 1) 2.

³ <<https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3592>>.

divided into two formations: While the one⁴ was instructed to assess the Product Liability Directive (PLD)⁵ in light of the preceding evaluation of this instrument,⁶ the second formation was asked to assess more generally whether existing liability regimes within the EU can cope with the challenges of new technologies.⁷ This consequently so-called ‘New Technologies Formation’ of the expert group published its final report in November 2019.⁸ While I am a member of this second formation, everything in the following is my personal opinion and not necessarily reflected in this report.

In the short time that I have, I can only highlight a few aspects, so I can perhaps not give you food for thought, but at least an amuse-gueule.

B. Damage in the Digital Age

Let us start with the most basic requirement of a tort law claim – damage. Unless someone has suffered harm, there is no need for finding ways to compensate that person. One of today’s honourees, Ulrich Magnus, has contributed substantially to the understanding of the notion of damage and its compensability (with his habilitation thesis as just one of his opera magna on this topic),⁹ and he also edited the European Group on Tort Law’s volume on that subject¹⁰ in preparation of their Principles of European Tort Law (PETL).¹¹

If we try to imagine possible use cases where damage is caused by emerging digital technologies, we will not come across new types of harm. Autonomous vehicles can cause bodily (including fatal) injuries to pedestrians or property damage to another car, leading to the same questions of how to compensate the at least temporary inability to use that car that Ulrich Magnus already answered convincingly almost three decades ago. This is also true for immaterial harm, of course. If someone is discriminated against by some algorithm identifying proper candidates for a workplace, the type of harm is the same as if some human had done this instead.

There may be more frequent cases of infringements of personality rights in light of the multiplier effect of the Internet, but that does not change the notion of compensable harm either.

The only thing that may be different in the digital age is the increasing relevance of damage to digital content. Some jurisdictions still struggle with the compensability of such intangible goods, and it is even questionable, for example, whether such damage is covered by the PLD.¹²

⁴ The European Group on Tort Law (EGTL) is an institutional member of this first formation of the Expert Group.

⁵ 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 [1985] OJ L 210/29, as amended by Directive 1999/34/EC of the European Parliament and of the Council of 10 May 1999 [1999] OJ L 141/20.

⁶ See the Commission Staff Working Document on the evaluation of the PLD, SWD(2018) 157 final.

⁷ <https://ec.europa.eu/transparency/regexpert/index.cfm?do=news.open_doc&id=12065>.

⁸ <<https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=36608>> (in the following: NTF report).

⁹ *U. Magnus, Schaden und Ersatz* (1987).

¹⁰ U. Magnus (ed.), *Unification of Tort Law: Damages* (2001).

¹¹ *European Group on Tort Law, Principles of European Tort Law: Text and Commentary* (2005, in the following: PETL Commentary).

¹² See also the Commission Staff Working Document (fn 6) 54 f.

C. Causation in the Digital Age

While I may be sceptical with respect to other elements of a tort law claim, I openly admit that proving causation will indeed become increasingly challenging the more emerging digital technologies are involved as potential triggers of harm.

However, problems of uncertain causation are nothing new – there is a wide range of studies on this topic, including our own, which was edited by the host of today’s event.¹³ Jurisdictions have long struggled with how to distribute the risk of not being able to identify the true cause of harm. This is not the time to reopen that discussion, but I just wanted to say that the legal issue is such is not a novelty, just its significance will most likely increase in practice.

As you all know, there are multiple ways to improve the position of claimants on their path towards compensation, be it by lowering the standard of proof ad hoc, by acknowledging prima facie evidence, or by shifting the burden of proof altogether, if only by allowing certain presumptions.

All this, however, does not answer the core question – whether the all-or-nothing principle should still be honoured, or whether an alternative thereto might not be preferable. In his massive comparative project on the basic questions of tort law, Helmut Koziol raised that question inter alia in his volume on comparative stimulations for developing tort law.¹⁴

In the debate about problems of causation in the digital age, it is often overlooked, however, that the complexities of modern-day technology may not be at stake after all. Just think of strict liability – if someone is liable for harm caused by the ‘use’ or ‘operation’ of some machine or other technical item, this is what the victim needs to show, not what exactly was the detailed technical reason why she incurred harm. This does not render the question entirely moot altogether, however, as it may then reappear at the recourse level, if the person held strictly liable seeks to recover what she paid, for example, from the manufacturer of the harmful product. Still, the relevance of uncertain causation in the digital age has to be seen in light of the other reasons for holding someone liable, so let us turn to that.

D. Fault Liability in the Digital Age

If the reason for holding someone liable is that the latter misbehaved and thereby caused harm, the traditional notions of wrongfulness and fault are at stake. Both topics were addressed by studies of the European Group on Tort Law under the leadership of two honourees of today: Helmut Koziol was in charge of the project on wrongfulness,¹⁵ and Pierre Widmer edited the volume on fault.¹⁶

The biggest challenge of applying these classic tort law requirements to upcoming cases where digital technologies caused harm is that conduct will no longer play a decisive role, which is why concepts such as fault will lose relevance in the overall assessment of where to place the loss. Nevertheless, there will still be cases where human activities played a decisive role – just think of flaws in programming or installing products, failure to update software, not to mention hackers. However, such residual cases where fault liability may be at stake will not have to be approached from a different angle than before.

¹³ J. Spier (ed.), *Unification of Tort Law: Causation* (2000). See also I. Gilead/M. Green/B.A. Koch (eds.), *Proportional Liability: Analytical and Comparative Perspectives* (2013).

¹⁴ H. Koziol (ed.), *Comparative Stimulations for Developing Tort Law* (2015), Topic II (57 ff).

¹⁵ H. Koziol (ed.), *Unification of Tort Law: Wrongfulness* (1998).

¹⁶ P. Widmer (ed.), *Unification of Tort Law: Fault* (2005).

If we look at the definition of the standard of care in the Principles of European Tort Law, for example, the factors listed there can still be used accordingly to such scenarios.¹⁷ The type of injury, for example, will obviously continue to be a key determinant in the future, particularly if such highly protected interests as life or bodily integrity were harmed. The dangerousness of the technology (which will also be influenced by the degree of unpredictability of its use in practice) as well as the likelihood that the inherent risks will materialise will equally be crucial, as will be the possibility to prevent harm, if only by deciding to resort to more conventional technology should the expected benefits of digital alternatives be outweighed by their likely risks. If the addressee of the claim failed to install a security update which would have prevented the loss at stake, the economic argument in favour of liability may also be strong.

E. Vicarious Liability in the Digital Age

You may wonder why I now turn to vicarious liability, having just claimed that conduct will play a lesser role in tort cases of the digital age. However, this is not the issue I wanted to raise here; you can read all about it in another volume edited by our host Jaap Spier, for example.¹⁸

Instead, I would like to focus on one specific follow-up question – if one acknowledges that someone can be held liable for harm caused by another if that other person acted on his behalf or at least to his benefit, can this concept be applied at least by analogy to cases where the principal outsourced his own duties to a machine rather than to a human auxiliary? Helmut Koziol has long argued in support of this.¹⁹

A direct application of the notion of vicarious liability would at least be difficult, though, as this would require to evaluate the impact of the equipment in a way at least comparable to assessing the human helper's conduct. At least from the perspective of the competing interests involved, which should be quintessential in the first place, this idea clearly contributes to adequately distributing the risks at stake, even if the solution should be found, for example, by introducing full-fledged strict liability of the principal for the operation and use of the technology.

This approach would also speak in favour of introducing something along the lines of what we called 'enterprise liability' in the European Group on Tort Law.²⁰ While – for reasons I shall not go into – it was introduced as a reason for shifting the burden of proving fault, the underlying justification for proposing it in the first place was that the victim should not be burdened with identifying what exactly within an enterprise caused her harm, as long as she can prove that its operation as such was flawed. Whether a human staff member by his conduct caused her harm, or whether it was one of the machines employed that failed instead, should not be the decisive question to be proven by the victim in her strive for compensation.²¹

¹⁷ Art 4:102 para 1 PETL reads: 'The required standard of conduct is that of the reasonable person in the circumstances, and depends, in particular, on the nature and value of the protected interest involved, the dangerousness of the activity, the expertise to be expected of a person carrying it on, the foreseeability of the damage, the relationship of proximity or special reliance between those involved, as well as the availability and the costs of precautionary or alternative methods.'

¹⁸ J. Spier (ed.), *Unification of Tort Law: Liability for Damage Caused by Others* (2003).

¹⁹ See, for example, *H. Koziol, Basic Questions of Tort Law from a Germanic Perspective* (2012) 228 ff.

²⁰ Art 4:202 para 1 PETL reads: 'A person pursuing a lasting enterprise for economic or professional purposes who uses auxiliaries or technical equipment is liable for any harm caused by a defect of such enterprise or of its output unless he proves that he has conformed to the required standard of conduct.' Defect is defined in para 2 as 'any deviation from standards that are reasonably to be expected from the enterprise or from its products or services'.

²¹ Cf *B.A. Koch* in PETL Commentary (fn 11) art 4:202 no 4.

F. Strict Liability in the Digital Age

If human conduct plays a lesser role and thereby reduces the relevance of traditional fault liability, the obvious alternative of choice seems to be strict liability instead. Indeed, in the current debate, the call for introducing either liability independent from fault in general or at least with respect to certain digital technologies is particularly loud. You may suspect that I also join in that choir; after all, I am very much in favour of a general clause of strict liability, which I share *inter alia* with Helmut Koziol, with whom I had the honour to edit a volume on strict liability.²²

However, I do not think that strict liability is the answer to all tort cases of the future. Instead, it should only be available in scenarios where the justifications for introducing no-fault liability in the past are present accordingly in the cases of the future.

One of the prime achievements of Pierre Widmer was the draft revision of the Swiss tort law provisions that he co-authored with Pierre Wessner, even though it was unfortunately withdrawn for political reasons.²³ Art 50 of this draft would have introduced a general clause of strict liability, but limited to cases of some ‘particularly dangerous activity’, which was defined in paragraph 2 with an eye to the nature of the activity, the extent or the likelihood of harm, and the irrelevance of human conduct in preventing such harm.²⁴

This could easily be applied accordingly to the risks brought about by emerging digital technologies. In particular, instead of introducing strict liability irrespective of the actual implementation of artificial intelligence, for example, we should consider the concrete circumstances of the case and then decide. The likelihood of third-party harm as well as the magnitude of the expected damage should continue to be decisive criteria, as should be the nature of the source of harm.

Specific instances of strict liability in the past were often introduced

- the greater and/or the more likely the possible harm resulting from the source or activity concerned,
- the more people that are exposed to such risk,
- the more such exposure to risk is tolerated in light of the benefits of its source,
- the better its keeper is suitable to provide for cover against future losses (for example by taking out insurance),
- the less it can be prevented that the risk materialises (other than not deploying the technology altogether).²⁵

All these factors continue to support the conclusion that strict liability seems the preferable model to provide victims with an adequate path towards compensation. This is even more so

²² B.A. Koch/H. Koziol (eds.), *Unification of Tort Law: Strict Liability* (2002, in the following: *PETL Strict Liability*).

²³ P. Widmer/P. Wessner, *Revision und Vereinheitlichung des Haftpflichtrechts* (1999), available for download at <<https://www.bj.admin.ch/dam/data/bj/wirtschaft/gesetzgebung/archiv/haftpflicht/vn-ber-d.pdf>>.

²⁴ As translated by P. Widmer in *PETL Strict Liability* (fn 22) at 347, Art 50 para 1 of this draft would have read: ‘The operator who runs a particularly dangerous activity is liable for compensation of any damage resulting from the realisation of the characteristic risk inherent to this activity, even if such activity is tolerated by the legal order.’ According to Art 50 para 2, an activity would have been deemed ‘particularly dangerous if, by its nature or by the nature of substances, instruments or energies used thereto, it is prone to cause frequent or serious damage, notwithstanding all care which can be expected from a person specialised in this field; such assumption is justified, in particular, where another statute already provides a special liability for a comparable risk’.

²⁵ See also B.A. Koch/H. Koziol, *Comparative Conclusions*, in *PETL Strict Liability* (fn 22) 395 (407 ff).

true if victims are ‘structurally faced with extreme difficulties in proving fault’,²⁶ for example if the source of harm is predominantly within the defendant’s control, and/or it is the latter who for other reasons is in the best position to identify whether it was the actual cause of the victims’ harm, due to superior technical knowhow and/or because decisive evidence is (or should be) in his hands.

However, these arguments work both ways: While an advanced lawn mower robot may ‘escape’ the boundaries programmed into its system (if only due to a temporary loss of GPS signals) and thereby cause third-party harm, its likely extent in light of its probability will not speak in favour of introducing strict liability for this machine, with only a rather limited range of potential victims, considering in addition that its keeper is charged with programming the robot, keeping it up-to-date, as well as maintaining non-digital boundaries such as fences around the lawn, thereby leaving ample room for human conduct controlling the concrete risk.

A surgical robot by its nature is incapable of leaving its position, which reduces the number of potential victims to a limited number of predictable individuals who have more obvious routes towards compensation than strict liability of the robot’s keeper: the latter will typically be liable contractually already, both vis-à-vis his patients as well as his employees (the only ones most likely harmed by a malfunctioning of the robot), not to mention that these potential victims will often also benefit from another compensation mechanism (such as a patient or workmen’s compensation scheme).

G. The Tortfeasor in the Digital Age

The last aspect of the current debate on tort law in the digital age is a very peculiar one, and it concerns the fundamental question who should be liable. This is not about the problems of channelling liability, for example, to the manufacturer of some defective digital device, or about identifying the keeper of an autonomous vehicle in a car sharing system.

Instead, I would like to raise a point brought up inter alia by the European Parliament in its 2017 resolution on ‘Civil Law Rules on Robotics’,²⁷ but prominently endorsed already before and thereafter by others as well. According to this resolution, robots should be granted legal personality of their own and become some sort of ‘e-person’, which could be held liable itself for any harm caused.²⁸ Instead of looking for some human payor, victims would simply turn against the robot. I think this is plainly wrong.

This approach would be of no help whatsoever as long as these e-persons do not have funds of their own – victims of an autonomous vehicle, for example, will not be satisfied by a mere piece of paper blaming the car without any moneys attached. Even if one should allocate funds to autonomous vehicles, it is to be feared that the sole purpose thereof would be to effectively cap liability, since once these monies have all been paid out, there would simply be nothing left for further victims or higher losses. Rather sooner than later, victims would start to go after the owners or keepers of these vehicles after all, based on arguments already used in corporate law, sort of like ‘piercing the electronic veil’ of the car.

²⁶ U. Magnus/J. Fedtke, Germany, in PETL Strict Liability (fn 22) 147 (156).

²⁷ European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics, P8_TA(2017)0051.

²⁸ In para 59 lit f of said Resolution (fn 27), Parliament called on the Commission to consider ‘creating a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons responsible for making good any damage they may cause’.

Furthermore, if robots or cars should be liable themselves, we would have to come up with some standard of care that these e-persons have to adhere to – their liability would be based on their involvement in the accident, which would have to be assessed and evaluated.

Therefore, to make it short, I think introducing a ‘specific legal status for robots’, autonomous cars or other technology with artificial intelligence would be merely artificial and not intelligent.²⁹

H. Much Ado About Nothing?

To sum up, is there really nothing new at all in tort law if damage is caused by such emerging digital technologies?

While there may be a digital revolution in technology, I see no justification for panic in tort law.

Needless to say, I am not denying that there may indeed be new fact-settings which will pose challenges in applying existing concepts of delictual liability to such new scenarios, but that is not a novelty of law, but rather of life.

The mere fact that we may eventually see a growing number of applications of digital technologies on our markets should not per se justify to deviate from well-established principles of how to adequately distribute risks. Instead, these traditional concepts have already in the past offered alternatives if necessary, and such alternatives should at least continue to be considered in the future.

For practical reasons, it may be desirable in certain specific fields to indeed intervene with legislative adjustments, such as by introducing new varieties of strict liability. However, all such peculiar solutions require particular justification of the kind already used in the past for allowing such deviations.

Since the current debate can therefore benefit substantially from existing solutions, renowned tort law experts such as today’s honourees are the ones you should turn to in case you have any questions.

²⁹ See also, eg, the Open Letter to the European Commission: Artificial Intelligence And Robotics (2018), <<http://www.robotics-openletter.eu/>>, and B.A. Koch, Product Liability 2.0 – Mere Update or New Version? in S. Lohsse/R. Schulze/D. Staudenmayr (eds.), *Liability for Artificial Intelligence and the Internet of Things* (2019) 99 (115).