THE LAW OF THE EUROPEAN HORSE:
THE LAW AND TECHNOLOGY SCHOLARSHIP IN THE EUROPEAN UNION, BETWEEN NATIONAL LEGAL TRADITIONS AND SUPRANATIONAL GOVERNANCE

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Whether law and technology is its own branch of the law is a thirty-year old question. This debate, dubbed the 'law of the horse', begun in the 1990s and spread to Europe from the United States, surviving to this day. When it reached continental Europe, the debate was shaped at a methodological, semantic, and epistemological level by the American scholarship. This transplant gave life to new, context-specific challenges in the European Union (EU), where law and technology scholars are faced with a choice: adopt a horizontal approach, exploring questions of governance and regulation, or zoom-in vertically on the national framework. Doing both might solve this tension, but it is a herculean task. This article explores the existing tension within the EU law and technology scholarship, suggesting five ways in which universities and funding institutions can help overcoming this tension, moving from the author's first-hand experience as an Italian legal scholar working abroad.

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I. INTRODUCTION: LET'S TALK ABOUT LAW AND TECHNOLOGY

Every morning in the European Union, a law and technology scholar wakes up. They know they must run faster than the European Union, or they won't complete their research before a new *Act* is announced. The last few years have seen a rapid fire of new legislation and reform proposals: from the AI Act to the Digital Governance Act, via the Data Act, Cyber Resilience Act, Medical Devices Regulation, AI Liability Act,[1] and so on, up until the newly announced Digital Fairness Act.[2] Besides the new laws, there are also the ongoing debates on the interpretation and application of heritage secondary tools, such as consumer protection, data protection, product liability, and the Machinery Directive. Keeping up with these many laws, all dealing in one way or another with new (and old) technologies, is proving to be time consuming and a bit FOMO[3] inducing.

While this article does not focus on the appropriateness of the EU approach to regulating technology, it is important to highlight this circumstance, as one of two important premises. The background against which law and technology research currently takes place is one of incredible complexity: there are many EU secondary laws applicable to any given digital technology, and they often interact with each other in unclear ways. In other words, the current EU legislative landscape

[1] Respectively: European Parliament and Council Regulation (EU) 2024/1689 of 13 June 2024 laying down harmonized rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (2024) OJ L2024/1689; European Parliament and Council Regulation (EU) 2022/868 of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act) (2022) OJ L152; European Parliament and Council Regulation (EU) 2023/2854 of 13 December 2023 on harmonized rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act) (2023) OJ L2023/2854; European Parliament and Council Regulation (EU) 2024/2847 of 23 October 2024 on horizontal cybersecurity requirements for products with digital elements and amending Regulations (EU) No 168/2013 and (EU) 2019/1020 and Directive (EU) 2020/1828 (Cyber Resilience Act) (2024) OJ L2024/2847; European Parliament and Council Regulation (EU) 2017/745 of 5 April 2017 on medical devices, amending Directive 2001/83/ EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC (2017) OJ L117 and European Commission Proposal for a Directive of the European Parliament and of the Council of 28 September 2022 on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive), COM/2022/496 final.

[2] Mission Letter of Ursula von der Leyen, President of the European Commission, to Commissioner-designate for Democracy, Justice, and the Rule of Law Michael McGrath, of 17 September 2024, 7; the works for the Digital Fairness Act will likely build on the results of the Digital Fairness Check carried out by the Commission in 2023 and reported upon in the Commission Staff Working Document Fitness Check on EU consumer law on digital fairness of 3 October 2024, available at https://tinyurl.com/yek93bby (last visited 30 May 2025).

[3] Fear-Of-Missing-Out: consists of an intense status of apprehension about missing out on something, usually fun things; J.D. Elhai et al, 'Fear of missing out (FOMO): overview, theoretical underpinnings, and literature review on relations with severity of negative affectivity and problematic technology use' 43 (2) *Brazilian Journal of Psychiatry*, 203-209 (2021). And for legal scholars, after all, what is fun if not digging into new laws?

concerning technology is incredibly broad and articulated, and its complexity has increased in a relatively short time. This circumstance, as will become apparent in section III, contributes to widen the divide between law and technology research at European Union level, and the law and technology research focusing on national jurisdictions.

The second premise concerns the meaning of technology in *law and technology*. Illustrious philosophers and thinkers have long debated the meaning of the word technology, for which there is no universal definition.[4] Technology is an umbrella term indicating tools, procedures, solutions, techniques, crafts, but also entire industries, markets, and fields of studies. Often times, one simply knows a technology when they see one. For lawyers, many meanings of technology can be relevant, as one might focus on a specific tool or procedure (CRISPR-cas9, blockchain), an entire industry or market actors (e-commerce, online platforms), or the interaction of a specific application of a tool/procedure with a social system, such as a community or an organization (use of automated decision making in public administration). Some lawyers even focus on the broader meaning of technology, as a tool to regulate behaviors, and how that interacts with the regulatory role of law - a technology in and of itself.[5] In this article, technology is used expansively, indicating those industrial and economic sectors dealing with 'the broad range of tools and crafts that people use to change or adapt to their environment'.[6] Currently, the majority of legal research concerning technology focuses on digital and telecommunication technologies, because of their penetration and almost monopolization of many sectors of society. The internet and online products and services, in particular, have undoubtedly been the protagonists of legal research dealing with technology for many years now. In its early days, the field of law and technology was even called just cyberlaw or internet law (see the next section), showing how the focus was predominantly the online dimension. I believe, however, that this field of study has a broader scope today, as it can include technological and scientific sectors in which digital and telecommunication elements are strong but are not the protagonists. These would be, for example, the medical and pharmaceutical industries, the weapons and military sector, industrial or agricultural machinery, and so on. All technologies and technology-related sectors are welcome, and all have the potential to offer questions or challenges for the law.

Having made these important disclaimers, it is time to introduce the proper topic of this article: the law of the European horse. In the Anglo-American traditions, the question of whether law and technology is (or should be) its own branch of the law has been debated since the mid-1990s. The (completely arbitrary) issue of the status of law and technology has been debated in Europe as well,

[4] J.C. Pitt, *Thinking About Technology: Foundations of the Philosophy of technology* (New York: Seven Bridges Pr Llc., 1999).

[5] L. Bennett Moses, 'Agents of Change' 20 (4) *Griffith Law Review*, 763–94 (2011).

[6] I have adjusted and modified the definition used by B-J. Koops, 'Ten dimensions of technology regulation: Finding your bearings in the research space of an emerging discipline', in M.E.A. Goodwin et al eds, *Dimensions of technology regulation* (Nijmegen: Wolf Legal Publishers, 2010).

where, however, this question manifests differently, yet this difference is rarely addressed. For EU law scholars there is a double layer: on the one hand the Union that, under the banner of fostering the internal market, has been intervening significantly on technology regulation, leading an unprecedent series of reforms tackling personal and non-personal data, online platforms, and Artificial Intelligence, to mention but a few. On the other hand, at Member States level technology falls within the existing codes, laws, and Constitutions, and the application of the European reforms needs to deal with decades of national case-law and scholarly doctrines.

When the law of the horse debate took root on continental Europe, it was already shaped at a methodological, semantic, and epistemological level by the US common law tradition and institutions, especially the American universities. The core concepts (the value of law and technology research, the role of the scholarship) were taken at face value and absorbed by European law and technology scholars. However, they underwent a silent process of reshaping, to fit the layered and complicated European Union landscape. This process resulted in the synthetization of European law and technology scholarship, with its own, context-specific challenges. In the EU, the law and technology scholar is often faced with a choice: either focus on the supranational level, adopting a horizontal approach that interprets EU law looking into questions of governance, principles, values, and regulatory strategies, or zoom in on the national framework, exploring the legal implications of technology *vertically* and, in a sense, more traditionally for a legal scholar. Doing both might solve this tension, but it might also prove to be a herculean task for a single scholar, due to the aforementioned complexity of both national and EU legislations. As discussed below, it is also rarely possible for those legal scholars who, like the author, pursue their research in a country different from the one where they studied law, often thanks to the free movement of persons introduced by the EU itself.

This article explores the existing tension between the horizontal and vertical research approaches within the field of law and technology in the EU, having as a starting point the author's first-hand experience as an Italian legal scholar working outside of Italy, with all the privileges – and hurdles – that come with it. Section II offers an overview of the law of the horse debate, that is the debate, born and raised in the Anglo-American context, concerning whether law and technology amounts to an independent branch of the law. Section III re-formulates and re-positions the debate for the EU, explaining how law and technology research in the EU develops around the horizontal and vertical approaches. Finally, section IV offers some suggestions to move on from the law of the European horse and bridge the gap between the two European approaches to law and technology.

II. THE LAW OF THE HORSE

In 1996, Judge Frank H. Easterbrook, of the Seventh Circuit of the US Court

of Appeals, was invited to give a speech on the challenges brought by the internet to intellectual property, during a symposium on the Law of Cyberspace, at the University of Chicago Law School. He started his speech with the now famous *Law of the Horse* example:

> 'When he was dean of this law school, Gerhard Casper was proud that the University of Chicago did not offer a course in The Law of the Horse. He did not mean by this that Illinois specializes in grain rather than livestock. His point, rather, was that Law and ... courses should be limited to subjects that could illuminate the entire law. Instead of offering courses suited to dilettantes,[7] the University of Chicago Law School offered courses in Law and Economics, and Law and Literature, taught by people who could be appointed to the world's top economics and literature departments - even win the Nobel Prize in economics, as Ronald Coase has done.
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> I regret to report that no one at this Symposium is going to win a Nobel Prize any time soon for advances in computer science. We are at risk of multidisciplinary dilettantism, or, as one of my mentors called it, the cross sterilization of ideas. Put together two fields about which you know little and get the worst of both worlds. Well, let me be modest. *I* am at risk of dilettantism, and I suspect that I am not alone. Beliefs lawyers hold about computers, and predictions they make about new technology, are highly likely to be false. This should make us hesitate to prescribe legal adaptations for cyberspace. The blind are not good trailblazers.
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> Dean Casper's remark had a second meaning – that the best way to learn the law applicable to specialized endeavors is to study general rules. Lots of cases deal with sales of horses; others deal with people kicked by horses; still more deal with the licensing and racing of horses, or with the care veterinarians give to horses, or with prizes at horse shows. Any effort to collect these strands into a course on 'The Law of the Horse' is doomed to be shallow and to miss unifying principles'.[8]

Easterbrook's critique of the idea to approach law and (digital) technology as a branch of its own developed along a few main arguments: the risk of dilettantism or cross-sterilization, and the connected argument of the necessity to study in depth the general rules, before focusing on applying those to a specific industry or field; the necessity to maintain a systemic view, justifying the creation of a branch of the law only when unifying legal principles can be identified, not by isolating the

[7] '(O)ne finds more than a few courses in law schools entitled 'Law and _' in which the blank is indeed intellectually blank', M. Tonry et al, 'Tribute. Retirement of Sheldon Messinger' 80 (2) *California Law Review*, 310 (1992).

[8] F.H. Easterbrook, 'Cyberspace and the Law of the Horse' *University of Chicago Legal Forum*, 207 (1996).

mere subject of regulation; and finally the fast-changing nature of cyberspace.[9]

Easterbrook correctly realized that the core of law and technology is inherently multidisciplinary: this means that legal scholars must have a minimum understanding of the technology they want to address to understand the relating legal challenges and thus know which legal solutions are even feasible. He assumes that lawyers will not understand computer science in depth, improvising their analysis of the technology with the blind spots of unaware dilettantes. This would be worsened by the fast pace of technological change and, as a result, neither the legal nor the technological part of the research will reach an adequate level, resulting in a mutual impoverishment of the disciplines involved.

Easterbrook's counter proposal is that we should teach subjects that 'could illuminate the entire law'.[10] We should focus on teaching and learning very well the basics of law, the traditional and well-established branches and institutes of the law. Once we have an in-depth knowledge of those, we can move on to see how they apply to emerging technologies. Giving perhaps a generous interpretation of Easterbrook's speech, his idea is that a deep understanding of the law and its mechanisms is necessary to understand the underlying principles and maintain a systemic view. This way the challenges posed by computers and the internet can be put into context and the solutions developed within the existing rules, mechanisms and principles, in a more harmonious way. A way that does not disrupt the law or isolate one specific subject, treating it as exceptional. In his words, law scholars need to 'keep doing what you have been doing'.[11]

Easterbrook follows his explanation with the example of how the internet challenges copyrights and Intellectual Property rights in general. Since he rejects the idea of approaching this issue from the perspective of a Law of Cyberspace, his proposal is to try doing three things: make clearer rules, to promote bargains that, thanks to the markets, could create an ideal distribution of costs and benefits, following the theories of Coase (of whom he clearly must have been a great fan); if necessary create new IP rights, still in the view of facilitating bargaining; and create *ad hoc* institutions to help, once again, the bargaining between authors, users, and other parties involved. These institutions, he suggests, could even apply some software and other technological tools to enforce IP rights, collect payments, and so on. He acknowledges the difficulties that these strategies entail, since IP rights and copyright fees are already the protagonists of many debates but, ironically enough, Easterbrook fails to realize that his counterproposal suffers from the very same shortcomings pointed out at the beginning of his speech. Reading it today, almost 30 years later, the technological solutions he so confidently suggests appears to be outdated and, at best, naive. His counterproposal is also punctuated by hypotheticals and disclaimers about how the internet is affecting existing legal rules and, therefore,

[9] Today called simply – and more boringly – the internet, or digital and information technologies.
[10] F.H. Easterbrook, n 8 above, 207.
[11] ibid 210.

these should be clarified or reformed, and how big the margins of error are in reforming the law. But he seems to ignore the next logical passage inevitably deriving from his own reasoning: to do so, the lawyer, policy makers, and standard-setting organizations must first understand the challenges posed by emerging technologies to the law in general. And so, inevitably, lawyers and regulators must gain a clear and systemic understanding of how technology affects the law in general, its mechanisms, besides the sector-specific rules: this is what the field of law and technology does.

1. Lessig's Reply to Easterbrook

Easterbrook's speech did not sit well with some experts that, already back then, believed in approaching law and technology as a field of study. This is why, a few years later, one of the forefathers of cyberlaw, Lawrence Lessig, wrote a 46-page essay criticizing Easterbrook's speech. Lessig definitely took the matter at heart, judging from the length of the manuscript, and from the academically sharp sarcasm with which he describes the reactions in the room

> ('As is often the case when my then-colleague speaks, the intervention, though brilliant, produced an awkward silence, some polite applause, and then quick passage to the next speaker').[12]

Lessig's response to Easterbrook is important, because it left a deep mark in the law and technology field at global level. It set into motion a certain view of law and tech that deeply affects the divide between the horizontal and vertical approaches currently affecting the subject in Europe.

Lessig aims to prove that focusing on the intersection of law and internet technologies (again, cyberspace) unveils some specific peculiarities that other areas of the law simply don't show. These peculiarities illustrate the relationship between the law and the other regulatory forces (markets, social norms and the design or architecture of places and objects)[13] and can illuminate issues that concern other branches of the law, or even the law in general. This whole process of discovery and exploration of the regulatory implications of the law would not be possible by simply focusing in depth on cyberspace and private law, public law, criminal law, etc.

He moves from the assumption that the architecture of the internet challenges the law in its fundamental mechanism: because the actions on the internet are completely mediated by the ways in which websites and services are designed and programmed, the internet can interfere with some private or collective interests, rights, and freedoms. To achieve some of its goals, the law must affect the internet architecture, and cannot rely predominantly on sanctions, as commonly occurs in real life, offline. Lessig, therefore, proposes to look at the intersection of internet

[12] L. Lessig, 'The Law of the Horse: What Cyberlaw Might Teach' 113 *Harvard Law Review*, 501 (1999).

[13] L. Lessig, *Code and Other Laws of Cyberspace, Version 2.0* (New York: Basic Books, 2006).

and law from the broader regulatory perspective. He posits that we must consider four regulatory forces operating both online and offline - law, markets, norms, architecture -[14] as interacting and mutually reactive: modern regulation must be a mix of some or all of the four, depending on the specific necessities and contextual factors. To regulate cyberspace, however, it is necessary to consider the dominant role of architecture, due to the inherent nature of the internet. Consequently, the role of the law, and more specifically of democratic and constitutional safeguards, is challenged: these and other important questions must be answered looking at law and technology, not at contract law and technology, criminal law and technology, business law and technology, and so on. Law and technology is necessary as a field of study, to understand not whether we can regulate the internet, but how we want to determine whose values and rules will prevail.

> 'At the center of any lesson about cyberspace is an understanding of the role of law. We must make a choice about life in cyberspace - about whether the values embedded there will be the values we want. The code of cyberspace constitutes those values; it can be made to constitute values that resonate with our tradition, just as it can be made to reflect values inconsistent with our tradition.
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> As the Net grows, as its regulatory power increases, as its power as a source of values becomes established, the values of real-space sovereigns will at first lose out. In many cases, no doubt, that is a very good thing. But there is no reason to believe that it will be a good thing generally or indefinitely. There is nothing to guarantee that the regime of values constituted by code will be a liberal regime; and little reason to expect that an invisible hand of code writers will push it in that direction. Indeed, to the extent that code writers respond to the wishes of commerce, a power to control may well be the tilt that this code begins to take. Understanding this tilt will be a continuing project of the *law of cyberspace*'.[15]

2. Murray and the Genera of Cyberlawyers

In the years that followed, the law of the horse debate kept evolving, along with the internet. The research on law and the internet expanded and consolidated, and more and more courses of law of cyberspace or internet law sprouted at

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[14] According to Lessig's Pathetic Dot theory, norms is to be intended as social norms, that is, the unspoken, implicit customs existing in a certain online community. A breach of social norms is met with backlash, isolation, bans, gossip, and other forms of community-based reactions. Architecture indicates the way the online space is designed and coded (ie programmed). This is why at the core of Lessig's theory lies the axiom that 'code is law' or, in other words, that the way the internet is programmed exercises a regulatory function influencing the behaviours of its users. See L. Lessig, *Code and Other Laws* n 13 above.

[15] L. Lessig, 'The Law of the Horse' n 12 above, 546.

universities on both sides of the pond, much to Easterbrook's disappointment. Roughly 16 years after that speech at the University of Chicago Law School, the evolution of cyberlaw and the long-term effects of the law of the horse debate were the protagonists of the keynote speech given by a prominent cyberlaw scholar, Andrew Murray, at the opening of the yearly conference of the British & Irish Law, Education & Technology Association.[16] Looking back to how the field had evolved, how he and his colleagues worked, and what type of research was being carried out Murray noticed that the critique moved by Easterbrook had left a mark. Knowingly or unwarily, it was still present, well alive in the way many lawyers specialized in more traditional branches of the law saw those working exclusively with law and technology. The field of law and technology itself, argued Murray, at that point was split in two categories: the regulatory cyberlawyer and the applied cyberlawyer.

> 'One genus is the regulatory cyberlawyer (it is to this genus that I myself belong); the other is the (for want of a better word) applied cyberlawyer. There are no doubt many of you in the room. You research in defined areas of intersection between law and cyberspace – cyber-defamation, cyber-privacy, cyberindecency or perhaps eCommerce. Both genera operate within the long Easterbrookian shadow'.[17]

The first group, the regulatory cyberlawyers, follow Lessig's view and approache the intersection of law and technology as a regulatory and governance problem. What Easterbrook probably didn't imagine is that these scholars didn't stop at technology, and started dipping their toes in regulatory theory, philosophy, sociology, and more (it is safe to assume he would like this development even less). The regulatory cyberlawyers have adopted theories and terminologies from an array of different disciplines, positioning their work within a wider debate that is based not on the law or jurisprudence, but on philosophical, political, and societal ideas. In the words of Murray: 'We become social scientists not lawyers.'[18] Murray points out how the regulatory cyberlawyers, by pleading that the exceptionalism of cyberspace is the reason why it should be investigated on its own, also fall into the trap of simply countering Easterbrook's critique with the argument that the internet is special. What Murray doesn't specify, but which is inferred from this hybridization, is that the multidisciplinary approach chosen by regulatory cyberlawyers only confirms Easterbrook's idea that focusing on the law of cyberspace leads to risk of multidisciplinary dilettantism. The other genus, the applied cyberlawyers, instead 'see the application of their discipline within the *cyber* realm as a case-study for their subject not a separate or viable freestanding topic of study'.[19] They don't have

[16] A. Murray, 'Looking Back at the Law of the Horse: Why Cyberlaw and the Rule of Law Are Important' 10 (3) *ScriptED*, 311-319 (2013).

[17] ibid 314.

[18] ibid

[19] A. Murray, n 16 above, 314.

an in-depth knowledge of computer sciences, so they also fall victim of Easterbrook's dilettantism curse: 'You are either a multidisciplinary dilettante or an apologist in the Lessig vein: a political or social scientist masquerading as a lawyer'.[20]

Murray highlights three more circumstances, very relevant for us today. One is that, regardless of the debate on cyberlaw, the internet has become more and more central to everyday life. This was still 2013, and we know now how much more the internet was destined to blur the division between online and offline, and how much of our daily and institutional lives would migrate online over time, with digital technologies mediating every aspect of society. The second is that the attention of the general public on technological and internet-related issues was very high in the early 2010s, and this too has been confirmed over time. From televisions to social media, the public discourse today gives a lot of attention to the challenges and potentials of (old and) new technologies. Finally, Murray notices that the regulators at both national and supranational levels have turned their attention to the internet, and that activities online have been the object of several regulatory interventions. Little did he know that, only ten years later, in a European Union to which the UK no longer belongs, this regulatory activity would become almost a frenzy. In the final part of his speech, Murray goes on to note that cyberlaw scholars are not engaged by their colleagues in law and are not consulted by the legislators and policy makers either, making them at risk of irrelevance. He proposes a solution: 'To justify the subject of Cyberlaw as a standalone legal subject we must stop apologizing and start engaging jurisprudentially'.[21] What cyberlaw can, therefore, teach is how to improve the regulatory interventions and, most significantly, how to preserve the rule of law and the legitimacy of the legislators, in the face of a dynamic and fragmented phenomenon such as the internet.

It has now been 12 years since Murray's speech, and the internet - and the field of cyberlaw - has undergone massive changes. For starters, no one uses cyberspace or cyberlaw anymore, preferring a more neutral law and technology or, at best, internet law. There is a new generation of law and tech experts making their way through academia, that wasn't there when Easterbrook moved his critique and Lessig wrote his reply. The internet is also now run and shaped by a few major actors: multinational companies that have displaced traditional intermediaries and gained a significant amount of political and regulatory power. And, most importantly, the European Union is consolidating its global regulatory status with an unprecedented series of laws addressing digital technologies. It is, therefore, time to analyze how the Anglo-American debate of the law of the horse and the division between regulatory cyberlawyers and applied cyberlawyers has been processed in the context of the European Union, with its interaction of EU and Member States laws, and what came out of it.

[20] ibid 314.
[21] ibid 317.

III. JANUS-FACED: LAW AND TECH AT EU VERSUS NATIONAL LEVEL

This piece began making an important premise: for the past five years, the European Union has been so prolific in regulating technology, that legal scholars are having a hard time keeping up and investigating the new laws, proposals, and case law. Then, it traced the evolution of the law of the horse debate, concerning the status of law and technology, from the US to the UK. This section will attempt at re-formulating and re-positioning the debate for the EU, emancipating it from the US and UK debate, which is infused with common law and cultural elements that don't necessarily translate well in the EU, or at least are less relevant here.

1. Who Was Right? Everyone and No One

Attempting at squaring the circle of the law of the horse, if we look at law and technology research today, we can say that Easterbrook is not the only one who has cast a shadow. So has Lessig. The risk of multidisciplinary dilettantism has materialized, but not because lawyers don't understand computer sciences (or at least not only). Law and technology scholars who choose to focus on the regulatory and governance aspects borrow and apply theories, terminology, and notions from a variety of disciplines. Some do it very well, with rigor and respecting as much as possible the methodologies and specificities of the fields they are borrowing from. Others do it a bit more nonchalantly: it's not that they don't read enough about those theories, it's just that they are not sociologists, philosophers, or STS experts, and so interpret and apply the knowledge from these other fields just as they would do with legal theories.[22] This is because the law, historically, did not develop the methodological rigor and strict rules of other disciplines. It has its own canons and dogmas, for example those concerning interpretation of a legal provision, but it lacks a coherent and well-established set of methodological safeguards aiming at ensuring reproducibility, validation and, in a sense, objectivity. For a while, now, this has started to change, especially thanks to the diffusion of empirical legal research, but the road ahead is long.[23]

Notwithstanding the risk of dilettantism, it must be said that Lessig was right, and there is a need for a systemic – and systematic – approach to law and technology. It is not because the internet is special that we need to look at law and technology as a field. It is because there is a plethora of old and new technologies, products and services deriving from the convergence of digitalization and telecommunication,[24] that present similar challenges for the law, develop along

[22] (S)He who is without sin… etc etc. The author is aware of also being guilty of that, and working hard to improve methodologically and deontologically.

[23] P. Pałka, 'How to Write a Law and Technology Paper?' *PrzemysLAW.technology*, avalaible at https://tinyurl.com/yyv76y58 (last visited 30 May 2025).

[24] P.E. Ceruzzi, *Computing – A concise history* (Cambridge: MIT Press, 2012).

similar lines, and periodically bring to the surface clashes and tensions in today's society. We can keep looking at every new buzzword or digital tool from the narrow point of view of private law, or criminal law, or public law, but we will just end up reinventing the wheel every time. Having a clear idea of how technologies interact with the law helps avoid falling for hypes, and identifies what is worth exploring, the meaningful challenges that a specific innovation might pose. In this sense, the field of law and technology is not different from Intellectual Property law, Business law, or any other branch born from the ribs of well-established legal subjects. It becomes the laboratory where the law enters into a conversation with the concrete societal needs that emerge in connection with the diffusion of digital technologies.[25] Law and technology is where the systemic view of the law meets its practical implementation with regard to industries that challenge the very building blocks of private or public law.

There is another advantage to pursuing research in law and technology as a subject of its own. Having a deep knowledge of the doubts, risks, and harms emerged in connection with technologies so far can help us anticipate the risks and challenges the next one will bring. This is vital to avoid fueling the false assumption, which it already too rooted in the general public, that the law *lags behind* technology.[26]

At the same time, we cannot only look at law and technology from a regulatory perspective. We must also isolate one specific institute of the law - contracts, liability, abuses of dominant position, disclosure and burden of proof, you name it - and dig deeper to see if their structure, objectives, or implementation are disturbed by a technological development. And if they are, we must find solutions that are compatible with the general rules of the sector, to avoid the risk of the organ rejecting the tissue transplant. This is the type of traditional legal research that is simply and inevitably done best by specialists. And becoming a specialist takes years, one cannot improvise. So, Murray was also right when he identified the two types of law and technology experts (we don't call each other cyberlawyers and it's a pity, it would make the job seem much cooler). Today, the research into issues of law and technology is carried out by those specialized in law and technology itself, and by those specialized in a certain branch of the law.

Here is where the European Union arrives to mud the waters. The difference between the two genera outlined by Murray and the two approaches that developed in the EU lies in the prominence of EU law itself. In the UK or the US, a regulatory

[25] A. Mantelero, 'L'AI Act: la risposta del legislatore europeo alle sfide dell'intelligenza artificiale' *Accademia,* 191-206 (2024).

[26] Explaining why that statement is nothing more than an empty *common-sense* axiom is outside of the scope of this contribution, so this piece won't delve into it. It has also been already discussed by many colleagues before me, L. Bennet-Moses, 'Recurring Dilemmas: The Law's Race to Keep up with Technological Change' 7 *University of Illinois Journal of Law, Technology, and Policy*, 239 (2006); R. Brownsword, *Rights, Regulation and the Technological Revolution* (Oxford: Oxford University Press, 2008), M. Paun, *Law and Technology through the Lens of Autopoiesis* (Doctoral Thesis, Tilburg University, 2023).

cyberlawyer still focuses on one national system. In the EU, legal scholars always deal with a double layer: there is national law, and then there is EU law. National jurisdictions have been accommodating EU laws that, often times, are drafted disregarding the specificities of each system. Member State courts have been struggling to reconcile decades of case law and jurisprudence on a matter with EU provisions drafted using a patchwork of legal concepts and regulatory strategies. Here, law and technology scholars focusing on regulation inevitably focus on the EU interventions. Here, regulatory law and technology and EU law specialists are converging.[27]

2. Horizontal and Vertical Approaches in Law and Technology Research in the European Union

The law of the European horse, therefore, looks more like this: on one hand, there is the *horizontal* approach to EU law and technology. This is a systemic approach to the field of law and technology, that looks at EU laws and explores its regulatory strategies, governance, general principles (similarly to Murray's regulatory cyberlawyer). It dissects single provisions and articles of EU Regulations and Directives (or Acts?) isolating them, and applying to them new, non-legal frameworks. It proposes how to interpret, apply, or amend a provision based on behavioral studies, and how to translate a law into code using mathematical logic. This (meta)legal analysis, however, at some point reaches its natural limit, remaining mostly in the supranational realm. It might, however, not enlighten on questions concerning how the EU provisions will be implemented by a court in a specific national system, or whether the solutions developed based on the horizontal approach would be applicable at Member State level. Or how the issues raised by technology interact with the other outstanding debates in a specific field.

Another phenomenon is also spreading among those working with a horizontal approach: the EU landscape has become so vast and complicated, that people are specializing *within* the regulatory approach. Horizontal scholars are focusing *either* on privacy and data protection, *or* freedom of expression and the media; *either* on e-commerce and consumer protection *or* on autonomous weapons, and so on and so forth. Like it often happens in the legal domain, we are hyperspecializing within the specialization.

On the other hand, the vertical approach to law and technology goes in-depth in one national jurisdiction or adopts a comparative lens, exploring the legal implications of technology for the national systems. This approach is more specialized and rooted in one branch of the law and, in a sense, it is more traditional. Vertical experts will know how concretely a certain question could be answered based on

[27] This author believes that in the EU, all law and technology scholars working with regulation inevitably become expert in (some, even if small, part of) EU law, but not vice versa: not all EU law scholars are also experts in law and technology, of course.

national rules and case law. They will dissect the possible impact of a new technology on a well-established theory or judicial interpretation. Technology, however, might also remain just one factor, one case study, one problem, among the other debates ongoing in their respective fields. And the vertical approach might miss three decades of scholarship on law and technology, ignoring that many ideas have already been discussed. This lack of awareness of the existing law and tech scholarship results in repeating what has already been said by others, maintaining a local, partial vision of a legal issue that is developing at EU or even international level,[28] or missing the mark altogether in interpreting the EU provisions.[29]

This tension between horizontal and vertical approaches should not be underestimated, as it is not just a matter of personal preferences for researchers. It reflects the tension existing between EU law and the national legal traditions of Member States. The consequences of this tension materialize outside of academia, when policy makers at EU level incorporate academic research in their works: the horizontal or vertical approach of the researchers can affect the new Directives or Regulations, potentially fueling even more conflicts due to their unspoken, implicit underlying assumptions.

Contrary to what Murray said in 2013, the European Commission does not disregard law and technology experts. The EU itself must abstract from 27 different national traditions, while creating laws that can apply to all of them. If there is one thing that can be noted in the new Regulations and Directives, is that the EU is leaning more and more towards a governance/regulatory approach even in the laws it produces. The Data Governance Act, for example, has coded into European law the concept of data spaces, that is, infrastructural and governance structures where stakeholders can develop adequate tools and policies for sharing data[30] (don't worry if it sounds unclear and nebulous, you are not alone). These are all experiments, based on notions of governance and regulatory theories. Other times, a drop of a national system finds its way into EU law. When this happens, the horizontal approach does not offer many answers, while the more vertical approach can help making sense of the situation. This is the case, for example, of the proposal for an AI Liability Act.[31] This draft Directive proposes to introduce specific rules on the disclosure of potential evidence and a presumption of fault of the defendant, to ease the burden of proof in extra-contractual claims concerning damages caused by an Artificial Intelligence software. Art 4, in particular, clarifies that national

[28] A. Mantelero, n. 25 above.

[29] The frustration this causes in scholars specialized in law and technology has been well explained by Karen Yeung in her keynote speech on 'Law, Regulation & Technology: Prospects and pitfalls for a fledgling field', TILTing Perspectives, 20 May 2019, Tilburg.

[30] European Parliament and Council Regulation (EU) 2022/868 of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act) [2022] OJ L152.

[31] European Commission Proposal for a Directive of the European Parliament and of the Council of 28 September 2022 on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive), COM/2022/496 final.

courts can presume the fault of the defendant 'consisting in the non-compliance with a duty of care laid down in Union or national law directly intended to protect against the damage that occurred' (emphasis added). The reference to a duty of care directly intended to protect against a specific damage makes a lot of sense in those jurisdictions where extra-contractual liability depends on the breach of a specific duty of care, such as in Germany. Conversely, the application of such provision from the AI Liability Act might give life to many doubts and questions in those systems in which extra-contractual liability is based on an open clause, such as in France.[32]

The gap between the horizontal and vertical approaches in the EU seems destined to grow. The two types of approaches are difficult, almost impossible, to pursue at the same time because the horizontal approach requires keeping up with the regulatory hyperactivity of the EU, as explained at the beginning. And not only: in addition to the deluge of new laws and reforms, doing research both horizontally and vertically requires keeping up with the abundance of publications driven by the publish-or-perish mentality that has invaded academia. This issue was beautifully put by Bert Jaap Koops, in an article aptly titled 'Goodbye to Publications, or Confessions of a Privacy Law Scholar':

> 'Publishing, like murder in Miss Marple's maxim, is easy. Unlike murder, it is also a necessity. Most scholars have internalized the commandment to publish or perish. (...) The result of the external and internal pressure to publish is – surprise - plenty of publications. More than plenty, really. Sometimes carefully written after extensive research, but often rather loosely written after some basic research, typically only of literature that appeared in the past two or three years'.[33]

And because doing proper research takes time and a lot of reading, but most scholars have many other tasks (teaching, administration, committees, theses supervision, ...), the result is that

> 'what scholars read when writing is often the top surface layer of the ocean of scholarship: abstracts (...), snippets showing up in searches, and obliquely read arguments of newly published literature. It is an understandable strategy to survive when drowning in the publication deluge (after all, one can only keep breathing when treading water in the surface layer), but most of what has been published remains unseen and unread'.[34]

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[32] S. De Conca et al, 'May Cause Liability - Use Care When Using the Internet of Things' *ALTI Forum*, available at https://tinyurl.com/5szhd8e9 (last visited 30 May 2025).

[33] B-J. Koops, 'Goodbye to Publications, or Confessions of a Privacy Law Scholar' 20 (3) *Surveillance & Society*, 312-316 (2022).

[34] ibid 314.

3. The Children of the Freedom of Movement

In sum, it would be a herculean task for a single scholar to research law and technology both horizontally and vertically, because of how complicated the regulatory landscape has become, and because of the toxic side effects of the publish-or-perish mentality in academia. We are drowning in laws, case law, guidelines, papers, books, words. It is also rarely possible for those legal scholars who pursue their research in a country different from the one where they studied law.

Keeping up with the publications in the countries of origin can be difficult, for one because academic institutions most likely do not have access to many foreign journals and databases, aside from a few, popular Anglo-American ones. And often times it is difficult to show colleagues from other countries the brilliant research taking place in motherlands, because of the language barrier, and because it can be hard to give enough context, to summarize the entire legal culture and tradition of one country. Additionally, while a few (European) jurisdictions benefit from a lot of authority in the legal field, many other Member States are often overlooked, and their scholars have an ever-harder time making their contributions known. Too many national legal traditions are still overlooked due mostly to historical asymmetries within the Union (or between the Global South and the Global North in general).[35]

At the same time, legal scholars working in a country different from the jurisdiction of origin also represent the link connecting all these different legal traditions. The personal experience of the author offers an example of how these connections can happen, without having any pretense of exhaustively or objectively representing the experience of the many other *giuristi* whose path led them abroad. The author was in middle school when Easterbrook gave his speech, in high school by the time Lessig published his reply, and attending Murray's lectures when he published his speech in 2013. That was also the year in which this author discovered the wonderful field of cyberlaw (it was still called that, at the time). This piece is written from the perspective of a legal scholar who learned Italian law and then moved on to apply it to internet and other technologies, but along the way discovered a whole new world, a world where not civil codes or case law, but governance and regulation were the protagonists.

Despite all of the above, the choice between horizontal and vertical approaches to law and technology still manifests very prominently for law and technology scholars working outside of their jurisdictions of origin, as the knowledge of the legal systems of origin can rarely be put to use while working in a different country. This is why many found refuge in EU law, international law, human rights law, legal theory, philosophy of technology: these fields give room to explore horizontally,

[35] For example, research shows that academics from the Global South are much less cited by their peers from the Global North: F.M. Collyer, 'Global patterns in the publishing of academic knowledge: Global North, global South' 66 (1) *Current Sociology*, 56-73 (2018).

without feeling like dilettantes (the imposter syndrome is always lurking) and with the possibility to still put to good use the knowledge from the respective national legal traditions.

IV. CONCLUSIONS: WHERE WILL EUROPEAN UNION LAW AND TECHNOLOGY GO FROM HERE?

These past decades have abundantly proven that Law and Technology (yes, with capital letters now) is here to stay. At least for a little longer. It is, by now, a fact, whether Easterbrook and co agree or not. It will also keep evolving outside of our control with a mix of imperceptible micro-changes and randomness, as it has done so far. *How we* will proceed, however, is important and what *is* in our control is how we will carry out Law and Technology research, as legal scholars in the European Union.

In the law of the European horse, with the widening gap between horizontal and vertical approaches, there are some things that can be improved, or at least paid attention to, to make sure we are maintaining the quality and systematic coherence necessary for good legal scholarship to flourish. Below are five suggestions:

1. *Bridging the gap with collaborations*. The remedy to cross-sterilization is working together. Scholars researching Law and Technology with a horizontal approach already do it quite a bit, mostly with computer scientists, sociologists, designers, philosophers. What is important is that the legal scholars doing horizontal and vertical research work together. As simple and obvious as that might sound, it is not actually happening enough and these collaborations are not common. There are structural obstacles, such as the various rules for promotion within universities, that incentivize scholars to publish only within their expertise, in journals specialized in one branch of the law. Consistency is important in academia, but these rules end up rewarding working alone and penalize collaborations, especially transversal ones. Horizontal and vertical collaborations are the key to improving the quality of legal research in general: these specialists must work together to complement each other's blind spots. This in turn could indirectly improve the regulatory effort of the European Union.

2. *Producing and disseminating research on national systems in English*. Because national doctrines have a lot to give and can offer suggestions and solutions to courts and scholars in other countries too. German and Italian legal scholars, for instance, have a long history of building on each other's doctrines, creating solutions that go beyond the specificities of their national traditions. In the past this was possible because the scholars learned German, Italian, Spanish, French, etc. While that is still often the case, it precludes access to valuable national production to those who didn't have the resources to learn a third (or even fourth) language. The solution is simple and it's already here: fostering more English publications

that offer insights into national laws (indeed not only for Law and Technology). Italian scholars, such as the late Stefano Rodotà, who has made the history of European privacy law, have always disseminated their works in other languages, sometimes having their books translated, sometimes producing directly in another language.[36] Instead of waiting until they become important enough for editors to translate their books, today's scholars can - and must - work on disseminating their research in English themselves, to participate in the European and International debate, and show what the national legal tradition has to offer to the development of Law and Technology in the EU.

3. Don't get stuck in a vicious circle of hyper specialization. Yes, specializing is good, but hyperspecializing within one sector rarely is. From time to time, it is also good to be exposed to new ideas and new challenges. Approaching a different topic within one's field, but beyond one's hyper-specialistic previous research is valuable, especially because many technologies and sectors are related, and so many subjects can be seen as adjacent. Finding a new line of research requires humility and putting in a lot of time and effort, to avoid falling into the risk of dilettantism. Nobody takes seriously someone becoming an expert in a new matter every two months. But it is worth it to put in the proper effort in expanding one's expertise, if anything because it helps revitalizing curiosity and motivation, finding new ideas and solutions, and growing.

4. Methodology. To fight the risk of dilettantism, one has to learn to apply a rigorous and well-designed methodology. The theories and approaches used to appraise and interpret the law need to be identified, acknowledged, and justified. Gone are the days when Western white men with beards (and probably smoking a pipe) would sit down and debate a topic based on their own intuitions and feelings. Lawyers and legal scholars are taught the rules for interpreting a legal provision (ie text-based, teleological, systemic). The same type of rigor must underlie also the normative assumptions at the basis of a research paper, or the preference of a certain theory or school of thought over another in answering a legal question. This is even more important when borrowing theories or concepts from other domains. Learning from other disciplines is very valuable, but it must be done with discern and making sure we are not just reinterpreting things in the most convenient way. Methodology is there to ensure that the research is verifiable, can be reproduced, and is not based on flawed assumptions or information. These goals should belong to legal research too.[37] They will make Law and Technology

[36] For example, his book *Tecnopolitica* (Bari: Laterza Editore, 2004) has been translated in Castellan and French. Other translations of his works include *La Vida y las Reglas: Entre el Derecho y el No Derecho* (Madrid: Trotta, 2010), *El Derecho a Tener Derechos* (Madrid: Trotta, 2014), and *El Terrible Derecho* (Santiago: Olejnik Ediciones, 2019).

[37] B. Brożek and P. Pałka, 'How not to get bored, or some thoughts on the methodology of law and technology', in B. Brozek et al eds, *Research Handbook on Law and Technology* (Cheltenham: Edward Elgar Publishing, 2023).

research - whether horizontal or vertical - better and, hopefully, less repetitive and more original. Additionally, there is more beyond the legal text. Law schools rarely offer a solid training in empirical methods or adequate education in methodologies and critical approaches. These methodologies must enter the curricula of law schools in the EU. The Netherlands, for example, has provided funding to foster the uptake of empirical legal studies in law schools. Hopefully, more countries will follow, instead of leaving the development of a proper methodological knowledge to the (limited) means of a few well-intended scholars.

5. *Institutions must change the incentives*. This is the most important action point and, unsurprisingly, the hardest to implement. All the previous points will remain just theory, or marginal phenomena, if academic and funding institutions won't change the incentives that force scholars into collaborating less, working alone, stay within their lanes, and produce frequent but superficial outputs. There are a number of policies that contribute to widening the gap between horizontal and vertical research in Law and Technology, and between good and bad research. The fact that promotion might depend on publishing only in one branch of the law, or only in well-established (but rarely interdisciplinary) outlets. Or the push to publish-or-perish, which makes scholars publish more and faster, penalizing transdisciplinary collaborations because they require time. And when those collaborations happen, when horizontal and vertical scholars work together, or when legal scholars work with experts from other disciplines, the fruit of that research can end up rejected by journals because it does not fit into one box. Some scholars are resisting these pressures but institutions must take responsibility for their own policies and change them to incentivize collaborations, long-term research, and well-thought out, thorough legal research.

To conclude, this piece is a personal account of the evolution and characteristics of the Law and Technology scholarship in the European Union. The starting point is the author's experience as an Italian scholar that now works outside of Italy. It does not offer a definitive answer to the law of the horse but puts forward a new perspective on this imported debate: it's time to leave it behind and focus on what the field of Law and Technology in Europe looks like now, and how it can be improved, to foster better legal research, and better European and national laws. It is safe to say that many will disagree with this piece, because that's what us lawyers do best. Objections, alternative reconstructions, and critiques are always welcome: the only hope is that this piece won't trigger a 46-page response.