Studying contemporary legal controversies: An Actor-Network Theory Approach of the European Union legal order

by Julien Bois*

Abstract

Legal orders are subject to controversies, i.e. to situations in which pre-existing interpretative schemes are challenged are even break down. *Actor-Network Theory (ANT)* can provide a fruitful complement to doctrine in cases where black-letter approaches are no longer sufficient to explain legal change. Coming from the field of Science and Technology Studies, ANT provides a moderate conceptual toolbox and an intuitive methodological apparatus for the legal scholar. It proposes to give agency to non-human objects and to simply follow the actors in their quest for legal stability or change. Its aim is to provide an empirical account of legal change, but one that will still take the law seriously. It will not impose broader social considerations behind the law, but study concretely how social controversies pass into the legal realm. This article uses examples from the European Union, where cases of legal controversies have proliferated in the 21st century.

Résumé

Les ordres juridiques sont sujets à des controverses, c'est-à-dire à des situations dans lesquelles les schémas interprétatifs préexistants sont contestés, voire se désagrègent. La *théorie de l'acteur-réseau (ANT)* peut constituer un complément fécond à la doctrine dans les cas où les approches strictement textuelles (*black-letter*) ne suffisent plus à expliquer les changements juridiques. Issue du champ des *Science and Technology Studies*, l'ANT offre une boîte à outils conceptuelle relativement modeste ainsi qu'un appareil méthodologique intuitif que le juriste peut mobiliser. Elle propose d'accorder une forme d'agentivité aux objets non humains et de simplement suivre les acteurs dans leur quête de stabilité ou de transformation du droit. Son objectif est de fournir une analyse empirique du changement juridique, tout en prenant le droit au sérieux. Elle ne cherche pas à imposer au droit des considérations sociales plus larges, mais à étudier

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concrètement la manière dont les controverses sociales pénètrent dans la sphère juridique. Cet article utilise des exemples tirés de l'Union européenne, où les cas de controverses juridiques se sont multipliés au XXIe siècle.

Samenvatting

Rechtsordes zijn onderhevig aan controverses, dat wil zeggen aan situaties waarin reeds bestaande interpretatieve schema's worden betwist of zelfs uiteenvallen. De *Actor-Network Theory (ANT)* kan een vruchtbare aanvulling vormen op de rechtsleer in gevallen waarin strikt tekstuele (black-letter) benaderingen niet langer volstaan om juridische veranderingen te verklaren. Afkomstig uit het domein van *Science and Technology Studies*, biedt ANT een relatief bescheiden conceptuele gereedschapskist en een intuïtief methodologisch apparaat dat de rechtsgeleerde kan gebruiken. Zij stelt voor om ook niet-menselijke objecten een vorm van handelingsvermogen (agency) toe te kennen en eenvoudigweg de actoren te volgen in hun zoektocht naar juridische stabiliteit of verandering. Het doel is een empirische beschrijving van juridische verandering te geven, maar wel één die het recht serieus neemt. Zij legt geen bredere sociale overwegingen achter het recht op, maar bestudeert concreet hoe sociale controverses hun weg vinden naar het juridische domein. Dit artikel maakt gebruik van voorbeelden uit de Europese Unie, waar gevallen van juridische controverses zich in de 21e eeuw hebben vermenigvuldigd.

Introduction

1. The interdisciplinary debate in European Union (EU) law is in full swing. Recent edited volumes display a willingness to understand the effects of EU law by using theories coming from different disciplines in the social sciences. [1] The idea behind this interdisciplinary turn is that a doctrinal approach no longer suffices to explain legislative and judicial developments in the EU. At the same time, several scholars advocate caution when mobilizing contextual factors in order to explain legal interpretation. [2] If a recourse to alternative paths is welcome, an exclusive focus on actors, ideas, interests and strategies may overlook the 'inner' logic of the law. Indeed, if interpreting EU law implies some discretion and can

[1] M. Madsen et al., *Researching the European Court of Justice. Methodological Shifts and Law's Embeddedness,* Cambridge University Press, 2022; M. Bartl and J. Lawrence, *The Politics of European Legal Research. Behind the Method*, Cheltenham, Edward Elgar, 2022; R. Deplano *et al.* (eds.), *Interdisciplinary Research Methods in EU Law: A Handbook*, Cheltenham, Edward Elgar, 2024.

[2] C. Joerges, 'Taking the Law Seriously: On Political Science and the Role of Law in the Process of European Integration', *E.L.J.*, 1996, pp. 105-135.

be seen as being a political exercise [3], the *acquis* itself bears a weight that cannot be overlooked when studying law in context. [4]

2. Actor-Network Theory (hereafter ANT) is a promising approach to studying law in its social context without underestimating its internal logic as a single social system [5] or as a mode of existence. [6] Also labelled "sociology of translation", [7] ANT contains both a general theory of society and a methodological toolbox to assess social action. [8] Originally forged in the field of Science and Technology Studies (STS), [9] it has since been applied to a variety of fields across the social sciences. [10] Law and its institutions were also analysed through ANT. Its founding scholar, Bruno Latour, relied on his previous work on scientific laboratories to study the decision-making of the French "Conseil d'État", the highest administrative court in France. [11] His work triggered a wider scholarly engagement with ANT in legal scholarship, allowing colleagues to provide interdisciplinary accounts on several legal objects, e.g. medical patents [12] or the conflict of laws. [13]

3. ANT proved fruitful for the study of law for several reasons. First, this approach aiming at studying science in action found an echo developed in earlier legal sociological accounts. It bears acquaintances with the theory of "law in action" found in Roscoe Pound's scholarship [14], which aims at unpacking the dynamics brought by law to changes in society. If for Latour the work of lawyers differs from those of scientists [15], their comparison can however be a fruitful exercise to reflect upon contemporary legal practice. [16] Second, its main theoretical

[3] M. Dawson et al, *Judicial Activism at the European Court of Justice*, Cheltenham, Edward Elgar, 2013

[4] J. Bois and M. Dawson, 'Towards a Plausible Theory of Judicialization in the European Union', *J.E.I.*, 2023, pp. 823-842.

[5] N. Luhmann, *Law as a Social System*, Oxford, Oxford University Press, 2008.

[6] B. Latour, *An Enquiry into Modes of Existence. An Anthropology of the Moderns*, Cambridge, Harvard University Press, 2013.

[7] M. Callon, 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay', *S.R.*, 1984, pp. 196-233.

[8] B. Latour, *Reassembling the Social — An Introduction to Actor-Network-Theory*, Oxford, Oxford University Press, 2005.

[9] B. Latour, *Science in Action: How to Follow Scientists and Engineers Through Society,* Cambridge, Harvard University Press, 1987.

[10] A. Blok *et al.* (eds.), *The Routledge Companion to Actor-Network Theory*, New York, Routledge, 2019.

[11] B. Latour, *The Making of Law. An Ethnography of the Conseil d'État*, Cambridge, Polity Press, 2010.

[12] E. Cloatre, 'Trips and Pharmaceutical Patents in Djibouti: an ANT Analysis of Socio-Legal Objects', *Social & Legal Studies*, 2005, pp. 263-281.

[13] A. Riles, "A New Agenda for the Cultural Study of Law: Taking on the Technicalities", *Buffalo Law Review*, Paper 782, 2005, pp. 973-1033

[14] R. Pound, 'Law in Books and Law in Action', 44 *AM. L. REv*., 1910, pp. 12-36.

[15] B. Latour, *The Making of Law,* Cambridge, Polity Press, 2010, pp. 198-243.

[16] T. Scheffer, 'Law-in-action versus Science-in-action. How they differ and how they can benefit from their differences', *Zeitschrift für Rechtssoziologie,* 2006), pp. 67-86.

innovation was to bring non-human objects — the non-human *actants* [17] — to the fore of the analysis. Indeed, the objects being regulated by legal rules express a form of agency that foster or on the contrary impede compliance with the rules. For example, speed bumps are the materialisation of the legislator's willingness to reduce the velocity of motorized vehicles in designated areas. [18] Actants, not least material objects, constitute the "pragmatic sanction of materials" [19] that transform law from abstract principles to concrete realities.

4. However, ANT never became a prominent social theory used in interdisciplinary legal scholarship. It is for instance absent from most handbooks dealing with interdisciplinarity in EU law. [20] The early success of the approach was followed by a severe criticism from several scholars, [21] including in legal scholashiip. [22] ANT showed several promises to provide a renewed vision of social phenomena, but it also entailed several theoretical and methodological weaknesses that led some of its most influential spokespersons to reconsider its most fundamental tenets. [23] Latour himself decided to abandon ANT in favour of the "modes of existence", which favours philosophical anthropology over his former background in STS. [24] More precisely, in An Enquiry into Modes of Existence (AIME), he stated about ANT that:

> "this method has retained some of the limitations of critical thought: the vocabulary it offers is liberating, but too limited to distinguish the values to which the informants cling so doggedly. It is thus not entirely without justification that this theory is accused of being Machiavellian: everything can be associated with everything, without any way to know how to define what may succeed and what may fail. A tool in the war against the distinction between force and reason, it risked succumbing in turn to the unification of all associations under the sole reign of the number of links established by those who have, as it were, "succeeded." [25]

[17] All the key concepts coming from ANT are in *italics*.

[18] S. Riis, 'The symmetry between Bruno Latour and Martin Heidegger: The technique of turning a police officer into a speed bump', *Social Studies of Science*, 2008, pp. 285-301.

[19] J. Lezaun, 'The Pragmatic Sanction of Materials: Notes for an Ethnography of Legal Substances', *Journal of Law and Society*, 2012, pp. 20-38.

[20] E.g. the handbooks cited supra, note 1. A rare exception of a contribution in a handbook dealing with interdisciplinary legal methods is F. Audren and C. Moreau de Bellaing, 'Bruno Latour's Legal Anthropology', in R. Banakar and M. Travers (eds.), *Law and Social Theory*, Oxford, Bloomsbury Hart Publishing, 2nd ed., 2013, pp. 181-194.

[21] A powerful critique of ANT remains H. Collins and S. Yearley, 'Epistemological Chicken', in A. Pickering (ed.), *Science as Practice and Culture*, Chicago, University of Chicago Press, pp. 301-326.

[22] A. Pottage, 'The Materiality of What?', *Journal of Law and Society*, 2012, pp. 167-183.

[23] J. Law and J. Hassard (eds.), *Actor Network Theory and After*, Wiley-Blackwell, 1999; J. Law, *After Method. Mess in Social Science Research*, London, Routledge, 2004.

[24] B. Latour, *An Enquiry into Modes of Existence. An Anthropology of the Moderns*, Cambridge, Harvard University Press, 2013.

[25] *Ibid*., p. 64.

5. Since then, the legal specialists of the work of Latour have relied extensively on law as a mode of existence (known as **[LAW]**) in addition to his previous contributions. [26] As a self-standing approach to study law, ANT has however generated little interest since then. Some scholars have not abandoned the approach altogether, but argue for a reconfiguration of the approach. Indeed, some advance that it is time to think "near ANT" [27] or to think about "ways forward" about it. [28]

6. This contribution will advocate a similar stance to those thinking near ANT, but will also attempt to stick to the classic tenets of the approach. It will argue that the strength of ANT precisely relies on a strong empirical commitment to studying law in context, rather than relying on normative theories that do not suit the sociology of translation originally crafted by Latour, Callon and their colleagues. It will also stress that ANT is rather an approach that comes fixing the shortcomings of other methodologies, rather than being a self-standing paradigm of social action. The shortcomings already alluded to in the previous paragraphs and detailed below revealed the weaknesses of an approach that is perhaps overburdened both by its weak theoretical leverage and its strong methodological requirements. It remains nonetheless suitable to unpack situations for which other paradigms failed to deliver suitable explanations. This article will sketch these potential benefits by focusing on the EU as a relevant case-study. The EU is a supranational organisation that mostly justifies its legitimate power by the "outputs" it produces. [29] These sound outputs are the result of a type of policy-making that relies on a high level of expertise. [30] The competences of the EU are vast nowadays, but its core remains focused on the Single Market. [31] It regulates a wide range of entities that all become "European objects". [32] These objects undergo not only a legal but also a scientific assessment of their suitability for European citizens. In other words, they are subject to a dual scientific and legal enterprise of "coproduction". [33]

7. If this piece focuses on the EU, the approach defended here is by no means limited to this specific supranational organisation. The inclusion of the classic tenets of ANT in interdisciplinary legal scholarship can be extended to any legal order that stresses the importance of technology. Such a feature captures the modern transformations of a wide range of contemporary societies, explaining

[26] K. MCGEE, *Bruno Latour. The Normativity of Networks*, London, Routledge, 2014; K. MCGEE (ed.), *Latour and the Passage of Law*, Edinburgh, Edinburgh University Press, 2015.

[27] A. BLOK, *The Routledge Companion to Actor-Network Theory*, New York, Routledge, 2019, pp. 30-32.

[28] E. CLOATRE, 'Law and ANT (and its Kin): Possibilities, Challenges, and Ways Forward', *J.L.S.*, 2018, pp. 646-663.

[29] F. SCHARPF, *Governing in Europe. Effective and Democratic?*, Oxford, OUP, 1999.

[30] C. ROBERT, 'Les groupes d'experts dans le gouvernement de l'Union européenne', *Politique européenne*, 2011/3, pp. 7-38; D. GEORGAKAKIS and J. ROWELL, *The Field of Eurocracy. Mapping EU Actors and Professionals*, Basingstoke, Palgrave Macmillan, 2013.

[31] E. MONNET and A. VAUCHEZ (eds.), *L'Europe : du marché à la puissance publique?*, PUF, 2024.

[32] B. LAURENT, *European Objects: The Troubled Dreams of Harmonization*, MIT Press, 2022.

[33] S. JASANOFF, 'Ordering Knowledge, Ordering Society', in S. JASANOFF, *States of Knowledge: The Co-Production of Science and the Social Order*, Routledge, 2004, pp. 13-45.

why ANT has fruitfully been applied across several territories in the world.[34] It is particularly relevant however for the study of the EU, since the importance of "techno-regulations"[35] not only is an essential feature of EU substantive law, but has also justified the appearance of several *macro-actors*[36] that shape the Union's institutional landscape, the best example of which are EU agencies.[37]

8. This contribution seeks to unpack the benefits of using ANT to ameliorate our understanding of EU law. First, it will highlight the core features of ANT and show how it can successfully be applied in the study of law. Second, it will try to articulate the benefits of adopting an ANT approach without replacing the classic doctrinal method. More specifically, it will argue that ANT is a welcome addition to the study of cases "where we are less certain of what it means to be 'legal'".[38] These occurrences usually happen in cases where there are *controversies* about the proper interpretation of EU law, which is where ANT can play a decisive role in our understanding of EU rules.

9. Section I will stress the features of ANT as a specific theory of social action, i.e. as a metatheory that aims at capturing behavioural dynamics within a specific societal and institutional setting. It will disentangle the classic tenets of ANT from the scholarship that captures the entirety of Latour's production on law, and will stress why it is particularly suited to study EU law. Section II will highlight the features of ANT as a method, and will apply it to a range of selected cases, while also acknowledging its limits. These sketches will allow for a general, although necessarily incomplete, depiction of what ANT can say about the EU legal order and EU scholarship, which I will expose in Section III.

I. ANT as an (A)theoretical project, and its relevance for the EU legal order

10. ANT is as much a theory of social action as it is a methodology for studying social-scientific cases. This section will focus on the first aspect, i.e. the part of the approach that provides the substantive and heuristic principles that guide

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[34] M. Akrich *et al.* (eds.), *Sociologie de la traduction. Textes fondateurs*, Paris, Mines Paris — Les Presses, 2006.

[35] A. Molitorisová *et al.*, 'Techno-regulation: technological collaboration between EU administrations', *Law, Innovation and Technology*, 2022, pp. 421-446.

[36] M. Callon and B. Latour, 'Unscrewing the Big Leviathan; or How Actors Macrostructure Reality, and How Sociologists Help Them To Do So?', in K. Knorr and A. Cicourel (eds.), *Advances in Social Theory and Methodology. Toward an Integration of Micro and Macro Sociologies*, London, Routledge, 1981, pp. 277-303.

[37] M. Chamon, *EU Agencies. Legal and Political Limits to the Transformation of the EU Administration*, Oxford University Press, 2016.

[38] E. Cloatre, 'Law and ANT (and its Kin): Possibilities, Challenges, and Ways Forward', *J.L.S.*, 2018, p. 659.

actors in their interactions. A few contributions summarize the theoretical aspects of ANT, [39] although some of its pioneers have refrained from defending that ANT bears in itself strong theoretical claims. [40] The strength of ANT is found at the methodological level: it helps us think what other theories and methods have not thus far been able to elucidate. This section will explain the key concepts of ANT (A), and also to stress the limits of its theoretical ambition (B).

A. The conceptual apparatus of Actor-Network Theory

11. ANT does not bear strong theoretical claims about behaviour or the structure of social action. Its main spokesperson once rejected that it had a theoretical ambition [41] before arguing otherwise. [42] Indeed, ANT does not possess a clear-cut theory that can be leveraged or tested by empirical experience. The social, i.e. the *assemblages* that bond actors to one another, must be reconstructed rather than assumed by the scientist. This reconstruction is a matter of empirical investigation. However, ANT is traditionally associated to a series of key concepts that shape its content. [43] More precisely, these concepts point to the situations where ANT can fruitfully unveil the mystery that surrounds the unfolding of events that could not be explained by other approaches. The latter — labelled by Latour the "sociology of the social" [44] — would tend to exaggeratedly rely on pre-existing social constructs about institutions, politics or science. The social would in that sense be the explanation of the phenomena under study. For Latour and the other ANT pioneers, the social would on the contrary be what needs explanation. The social cannot be presumed but must rather be *reassembled* [45].

12. ANT would help the scientist in tracing new ties made in the world. There would be no point in studying actors, institutions or policies that were already stabilized in our society. This process of stabilization of policies into continuous

[39] M. CALLON *et al.* (eds.), *Mapping the Dynamics of Science and Technology. Sociology of Science in the Real World*, London, Palgrave Macmillan, 1986; J. LAW (ed.), *A Sociology of Monsters. Essays on Power, Technology and Domination*, London, Routledge, 1991; B. LATOUR, *Science in Action: How to Follow Scientists and Engineers Through Society,* Cambridge, Harvard University Press, 1987; B. LATOUR, *Reassembling the Social — An Introduction to Actor-Network-Theory*, Oxford University Press, 2005; M. AKRICH *et al.* (eds.), *Sociologie de la traduction. Textes fondateurs*, Paris, Mines Paris-Les Presses, 2006.

[40] A. MOL, 'Actor-Network Theory: Sensitive terms and enduring tensions', *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 2010, pp. 253-269.

[41] B. LATOUR, 'On Recalling ANT', in J. LAW and J. HASSARD, *Actor Network Theory and After*, Wiley-Blackwell, 1999, pp. 15-25.

[42] B. LATOUR, *Reassembling the Social – An Introduction to Actor-Network-Theory*, Oxford University Press, 2005, p. 9.

[43] A useful and synthetic glossary of the key concepts of ANT can be found in M. CALLON *et al.* (eds), *Mapping the Dynamics of Science and Technology. Sociology of Science in the Real World*, London, Palgrave Macmillan, 1986, pp. xvi-xvii.

[44] B. LATOUR, *Reassembling the Social – An Introduction to Actor-Network-Theory*, Oxford University Press, 2005, p. 9.

[45] *Ibid.*, pp. 16-17.

governing modes or of institutions into durable and unquestioned leaders is called *black-boxing*. *Black boxes* are a somehow stable set of *actors* that are tied together in a defined set of interrelationships or a *network*, hence the concept of *actor-network* which captures that an actor is at the same time an individual entity essential to the life of a network but whose actions can only be understood if grasp though ties with other actors. The law is in this sense a *black box*: it stabilises s et of inter-relationships between several actors into a stable *assemblage* whose features mostly remain unchanged for a given period of time. The actors therein — be they citizens, civil servants or even the regulated objects — have been *enrolled* in this network since the law assigns them to different roles, e.g. recipients of rights or obligations.

13. However, *black boxes* are never immutably sealed. Indeed, *assemblages* sometimes break down over time because interests change, or *artefacts* — the objects created by human technology — break unexpectedly. Indeed, the human-made artefacts express in ANT a form of agency that shape the assemblage. [46] Non-human artefacts, be they biological beings appraised by humans or non-living entities forges by human technology, may enhance or impede the stability of a network. The agency credited to non-humans was famously developed by Callon in his seminal piece on scallops. [47] The author studied the precarious deal struck between scientific specialists and fishermen about the need to restrict the massive fishing of scallops in the bay of St Brieuc. Scientists would receive the support of fishermen if the scientists promote a sustainable farming allowing for the reproduction of scallops according to a new technology (e.g. protection from predators). But this assemblage broke down because the scallops themselves did not follow the plan crafted by scientists: they died unexpectedly despite opposite predictions, leading fishermen in turn to disregard scientific advice and to fish massively and unsustainably. [48] That is why Latour rather speak of *actants* instead of actors, the former category capturing both humans and non-humans. [49] A rather powerful example of actant that drastically reshaped the agency of other actants was the virus SARS COVID-19: its high contagion and death tolls propelled millions of citizens to lock themselves down not only out of fear for the virus, but because other actants — political and administrative bodies — forced them to do so, redefining the intensity of social ties and the means by which they could be expressed (e.g. the rise of videocalls).

14. When previous assemblages break down or are subject to a redefinition by actants, they are subject to *controversies*. The latter are perhaps the most

[46] E. Sayes, 'Actor-Network Theory and methodology: Just what does it mean to say that nonhumans have agency?', *Social Studies of Science*, 2013, pp. 134-149.

[47] M. Callon, 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay', *S.R.*, 1984, pp. 203-221.

[48] *Ibid.*, p. 220.

[49] B. Latour, *Reassembling the Social — An Introduction to Actor-Network-Theory*, Oxford University Press, 2005, pp. 54-55.

important component of ANT, because they are do not only form an essential part of the conceptual apparatus of the approach, but also determine the conduct of the enquiry. [50] Conceptually, controversies are essential since they untie previous assemblages and are conducive to new ones. Simply put, they make the social move, which is a necessary condition for ANT scholars to say something meaningful about the *collective*.

B. Sticking to or thinking near Actor-Network Theory, not post Actor-Network Theory

15. Historically, ANT scholars carried out their work in the field of STS, with a focus on scientific discoveries made in laboratories. [51] They tracked how scientific progress was made available to the wider public or if on the contrary the process of black-boxing meant shielding the sciences from external interventions. ANT not only had a scientific aim but also carried a political ambition: that of bringing "the sciences into democracy". [52] Its normative appeal, along with the possibilities of applying the approach beyond labs, made ANT an attractive option beyond STS. Its expansion allowed for a rethinking of its core priciples, but also blurred its distinctiveness with nearing approaches. The latter had an heritage from ANT, but also pursued a different agenda that is hard to disentangle from the original approach.

16. A main confusion is made between ANT and its main spokesperson, Latour himself. To employ a key concept from ANT, Latour has become an obligatory passage point in the network. In other words, the name ANT may no longer be dissociated from its main spokesperson, whose scientific production is so vast that it is cited in a substantial part of the footnotes of the present article. It is usual for the major social theories to be represented by a leading protagonist. For example, Pierre Bourdieu is the leading intellectual of critical sociology, [53] or Niklas Luhmann is the leader of the theory of social systems [54], just to name a few. That is not in itself an issue, unless the leader changes course and the change is not explicitly acknowledged.

17. As already hinted in the introduction, Latour gave up ANT in favour of the modes of existence. If he clearly stated the matter in AIME, the change was already noticeable in some of his earlier work, not least in his work on law. In *The*

[50] *Infra* II., A.

[51] B. LATOUR and S. WOOLGAR, *Laboratory Life: The Social Construction of Scientific Facts*, Beverly Hills, Sage Publications, 1979; B. LATOUR, *Science in Action: How to Follow Scientists and Engineers Through Society,* Cambridge, Harvard University Press, 1987; B. LATOUR, *The Pasteurization of France*, Cambridge, Harvard University Press, 1988.

[52] B. LATOUR, *Politics of Nature. How to Bring the Sciences into Democracy*, Cambridge, Harvard University Press, 2004.

[53] P. BOURDIEU, *La Distinction*. *Critique sociale du jugement*, Éditions de Minuit, 1979.

[54] N. LUHMANN, *Social Systems*, Stanford University Press, 1995.

Making of Law, [55] his major work on the subject, Latour — despite his claim that his enquiry was based on ANT [56] — already marks a shift from ANT to the study of one of the several modes of enunciation of modernity that he eventually labelled modes of existence, a fact acutely noted by Pottage, who translated the *Making of Law* into English. [57] Indeed, Audren and Moreau de Bellaing also acknowledge that this book was not an attempt at providing a sociological account of law. [58]

19. The modes of existence are an intellectually rich approach relying on philosophical anthropology rather than sociology. That is why it is clearly at odds with ANT, which is a sociological approach with a strong empirical commitment. [59] The modes of existence are a jump to metaphysics and a way to rethink modernity. [60] Its normative appeal has unsurprisingly sparked the interest of the legal specialists willing to draw insights from Latour scholarship, [61] and their work associates within a single theoretical framework the sociological and the philosophical dimensions of *The Making of Law* and AIME. If this combination leads to a fascinating discussion leading to the creation of key concepts such as the "jurimorph" which captures the passage of a socio-technical object into the legal realm, [62] it creates however an epistemological incompatibility. The classic method of ANT, described in the next section, aims at retracing sociological connections by *following the actants*, wherever they go. The modes of existence are unveiled through an anthropological enquiry allowing for a wider philosophical rethinking of modernity through pre-established modes such as [LAW] or [POL].

20. Latour explored several sciences and had several identities. His work on law already started to make the shift from a sociology of scientists to a more philosophical approach. This means that his different contributions can hardly be read into a coherent whole. This article thus chooses to stick to the classic tenets of ANT, to stay 'near ANT' rather than to move to a 'post-ANT' approach that wanders in other scientific territories. The reason for this perhaps conservative position mostly results from considerations related to methodology, to which this contribution presently turns.

[55] B. LATOUR, *The Making of Law. An Ethnography of the Conseil d'État*, Cambridge, Polity Press, 2010.

[56] Ibid., p. x.

[57] A. POTTAGE, 'The Materiality of What?', *Journal of Law and Society*, 2012, p. 167.

[58] F. AUDREN and C. MOREAU DE BELLAING, 'Bruno Latour's Legal Anthropology', in R. BANAKAR and M. TRAVERS (eds.), *Law and Social Theory*, Oxford, Bloomsbury Hart Publishing, 2nd ed., 2013, p. 182.

[59] The title of the French translation of reassembling the Social is unequivocal in that regard: B. LATOUR, *Changer de société. Refaire de la sociologie*, Paris, La Découverte, 2006.

[60] P. MANIGLIER, 'A metaphysical turn? Bruno Latour's *An Inquiry into Modes of Existence*', *Radical Philosophy*, 2014, pp. 37-44.

[61] K. MCGEE, *Bruno Latour. The Normativity of Networks*, London, Routledge, 2014; K. MCGEE (ed.), *Latour and the Passage of Law*, Edinburgh, Edinburgh University Press, 2015.

[62] K. MCGEE, 'On Devices and Logics of Legal Science: Toward Socio-Technical Legal Analysis', in K. MCGEE (ed.), *Latour and the Passage of Law,* Edinburgh, Edinburgh University Press, 2015, pp. 61-93.

II. Actor-Network Theory as method: unveiling the unknown

21. ANT is not really a theory, and more accurately put, it is a theory about "how to study things". [63] Its main strength is methodological. Since very little can be assumed about society (which must be *reassembled*), the researcher must, in the most naïve of fashions, simply *follow the actants* wherever they go. Moreover, it aims at unpacking new social ties through the study of *controversies*. In other words, ANT can come into play when things do not work according to plan, and when the social suddenly moves again without recourse to pre-existing patterns. This occurs when instruments break, when viruses suddenly emerge, or when catastrophes challenge the interpretation of rules as we know them. ANT thus necessarily brings something new: it acts as a complement or a fix in our knowledge, not as a substitute. That is why this approach can be a nice complement to black-letter scholarship. It also traditionally relies on qualitative sources that are easily made available to the scientist, meaning that the lawyer would not need to follow a new training in empirical social sciences.

A. The key methodological aspects of Actor-Network Theory

22. The task of tracing associations was nicely summarised and detailed by Michel Callon. Among all the references present in this contribution, Callon's piece on scallops is one of the most important depictions of ANT and a must-read for lawyers willing to understand what ANT — or the sociology of translation" — is about. [64]. It summarises the key behavioural elements [65] of the approach, but also the key methodological steps to follow the unfolding of controversies. Callon's arguments came as a fix for the social sciences. It means that ANT is particularly suited to situations where other approaches — be they sociological, legal or otherwise — failed to provide a convincing explanation about events that did not follow according to plan. If such a situation arises, the researcher should follow three main methodological principles, which I expose below.

23. The first is *agnosticism*. [66] It means that the researcher, when confronted with a situation in which classic legal or sociological categories of interpretation do not work, must refrain from imposing her [67] own conceptual apparatus to analyse

[63] B. Latour, *Reassembling the Social — An Introduction to Actor-Network-Theory*, Oxford University Press, 2005, p. 142.

[64] M. Callon, 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay', *S.R.*, 1984.

[65] *Supra* I., A.

[66] M. Callon, 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay', *S.R.*, 1984, pp. 200-201.

[67] I deliberately use the feminine as the neutral in this piece, in line with a rising trend in contemporary English-speaking academia.

again the situation. Pre-existing concepts — e.g. the "state" or "legitimacy" in the work of Max Weber [68] — often carry a set of assumptions about the social that are shaken or even collapse during controversies. More precisely, these categories tend to give a privileged voice to some actors while silencing others, be they non-human actants or actors that seems peripheral to the normal unfolding of events. Agnosticism requires that the researcher analyses the situation again and let the actors speak for themselves.

24. Once the actors "speak" according to their own repertoire, the researcher must apply the principle of *generalized symmetry*. It means that all *actor-networks* form an insuperable part of the *assemblage* that is being depicted, and must not be methodologically treated differently. In situations where legal controversies arise, the social moves outside of the classic loci in which it is passed — e.g. the courtroom — and finds an expression elsewhere made by actors that did not a priori seem central — e.g. an academic article providing an alternative interpretation of statutes. If some actants are eventually more central to the network than others and are called *obligatory passage points*, all that are spotted play a role in the analysis of the controversy and must be given equal conceptual and methodological treatment.

25. The third principle is *free association*, and refers to the idea that the natural and the social cannot be distinguished from one another. In other words, the natural and the objects therein, be they environmental or human-made *artefacts*, play a form of agency in society. Of course, non-biological beings do not act the same ways humans or microbes do. But their creation, which are in themselves a possibility for society to endure [69], has changed the social in such a way that other actants give them a voice and can no longer behave the same without them. [70] For example, the disruption of the informatic system that contained the data of several of patients of French hospitals led to the return of paper-based medical prescriptions and to delays in healthcare. [71]

26. These principles do not give us however the concrete tools nor the concrete sources to choose. A multiplicity of material "information" can be used, such as:

> "a paper slip, a document, a report, an account, a map, whatever succeeds in practicing the incredible feat of transporting a site into another one without deformation through massive transformations." [72]

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[68] M. WEBER, *Economy and Society*, Berkeley, University of California Press, 1978.

[69] B. LATOUR, 'Technology is Society Made Durable', in J. LAW (ed.), *A Sociology of Monsters, Essays on Power, Technology and Domination*, London, Routledge, 1991.

[70] E. SAYES, 'Actor–Network Theory and methodology: Just what does it mean to say that non-humans have agency?', *Social Studies of Science*, 2013, p. 137.

[71] *Les Echos*, 'Les données de 11 à 15 millions de Français dérobées lors d'une cyberattaque', 27 February 2026: https://www.lesechos.fr/politique-societe/societe/les-donnees-de-11-a-15-millions-de-francais-derobees-lors-dune-cyberattaque-2218424.

[72] B. LATOUR, *Reassembling the Social, — An Introduction to Actor-Network-Theory*, Oxford University Press, 2005, p. 223.

Sources are not hierarchized according to their relevance or reliability. The only part of the sentence that distinguishes reliable from unverified empirical material is that information should be conveyed without recalibration. That is why ethnography, i.e. direct observations by the researcher, has been adopted by many ANT scholars. [73] For a legal scholar interested in the ultimate (or at least temporary) judicial settlement of a controversy, going to hearings where arguments are debated by judges with barristers will be a key element for the description of legal stability or change. [74] That method is not always available however. If the researcher wants to look at past events, direct observation is not a possibility. In his seminal book *Science in Action*, Latour did not use ethnography to study the laboratory scientists, but relied on biographies and notes made available to trace their movement through society. There are no more indications found in ANT scholarship about the concrete methods or the proper sources to choose. This is another element that makes me state that ANT should not be used as a self-standing approach, but as a complement to other approaches when the latter can only provide partial explanations of social events. In any case, ANT scholars have always favoured qualitative methods. Statistics are summarised by categories, and therefore lead to some deformation. And since ANT focuses on controversies, i.e. on things that did not pan out as planned, they can hardly be subject to a methodology that requires large samples of similar data. The use of qualitative social-scientific methods in combination with classic legal scholarship therefore bears a lot of promise.

B. Studying the "penumbra" of the law with Actor-Network Theory

27. Law is a self-standing discipline that has differentiated itself from the other social sciences. It is one of the oldest sciences of government, and the specificity of its object, along with the complexity that it entails, have led to the establishment of canonical approaches — e.g. doctrine — that provide the tools for resolving issues surrounding the interpretation of rules. It has also developed an affinity with empirical approaches, such as law in context, [75] critical legal studies [76] or empirical legal studies. [77] The debate is ongoing, and the articulation of empirical

[73] A. MOL, *The Body Multiple. Ontology in Medical Practice*, Duke University Press, 2003; N. WICKRAMASINGHE and K. BALI, 'Ethical ethnography as an appropriate research methodology for ANT', *International Journal of Networking and Virtual Organisations*, 2009, pp. 36-46.

[74] For a recent example of ethnographic work at the Court of Justice of the European Union during a hearing, see N. HAAGENSEN, 'The multiple meanings of EU law: using sociological interpretivism to make sense of the Eurozone crisis', *European Law Open*, 2024, pp. 402-417.

[75] S. TAEKEMA and W. VAN DEN BURG, *Contextualising Legal Research. A Methodological Guide*, Cheltenham, Edward Elgar, 2024.

[76] M. TUSHNET, 'Critical Legal Theory', in M. GOLDING and W. EDMUNDSON (eds.), *The Blackwell Guide to the Philosophy of Law and Legal Theory*, Blackwell Publishing, 2005, pp. 80-89.

[77] L. EPSTEIN and A. MARTIN, *Introduction to Empirical Legal Research*, Oxford, Oxford University Press, 2014

insights in black-letter scholarship remains at early stages. [78] The difficulty of interdisciplinarity research persists between law and other sciences of government such political science or economics. Each discipline has canonical epistemologies that often boar strong assumptions about the behaviour of actors or the observance of rules. [79] Besides, methodologies starkly differ among social sciences, and law has a unique methodological skillset that is not always understood by others. [80]

28. ANT can provide a suitable and easier bridge between legal scholarship and other social sciences. First, ANT resists conceptual rigidity and is agnostic to the activities of actants. The researcher must simply find the suitable language or concepts that apply to all actants without distorting their original meaning. ANT scholars studying law will not (or at least should not) analyse law in action with stereotypes about power, domination or compliance. They must espouse first the language of actants and then unveil the meaning that lays behind for the profane observer. As such, ANT can provide an empirical account of the law while taking the law seriously. [81] Second, the methods traditionally employed by ANT scholars dot not require a full training in empirical social science. Following the actants means identifying the traces that they leave, such as press articles, official reports, minutes from meetings, etc. In other words, ANT is about archival work for studying the past. For the present, ANT can lead to semi-structured interviews or direct observation. The researcher may enhance his grasp of these methods with dedicated seminars, but their acquaintance does not require a specific training.

29. Moreover, ANT may help in providing the missing link about the law that the classic doctrinal approaches cannot provide. ANT is an approach that aims at unpacking what needs to be reassembled. It wants to put forward a description of events that could not be grasped by others, be they disciples of the sociology of the social, doctrinal lawyers and otherwise. Put differently, ANT may insert the social component that has been acknowledged by several legal theorists. Indeed, several of them acknowledge that the law cannot be disembedded from society. Kelen's fundamental norm assumes that fundamental social values shape the rest of the legal order. [82] Even when the legal order is consolidated and sustains most of its autopoietic existence, some cases evade the "core" of the law to enter its

[78] See the references supra, note 1.

[79] J. MAYORAL and T. PAVONE, 'Statistics as if legality mattered: the two-front politics of empirical legal studies', in M. BARTL and J. LAWRENCE (eds.), *The Politics of European Legal Research. Behind the Method*, Cheltenham, Edward Elgar, 2022, pp. 78-93.

[80] J. SMITS, 'What is Legal Doctrine? On the Aims and Methods of Legal-Dogmatic Research', in R. VAN GESTEL *et al.*, *Rethinking Legal Scholarship. A Transatlantic Dialogue*, Cambridge, Cambridge University Press, 2017, pp. 262-309.

[81] C. JOERGES, 'Taking the Law Seriously: On Political Science and the Role of Law in the Process of European Integration', *E.L.J.*, 1996.

[82] H. KELSEN, *Pure Theory of Law*, Clark, The Lawbook Exchange, 2005, pp. 193-220.

"penumbra", [83] leading judges and others to rely on extra-legal considerations. In other words but along the very same lines, easy cases only require a textual of "first-order justification", hard cases require a "second-order justification" that goes beyond the wording of statutes. [84] Judges must in these cases rely on "steadying factors", including of non-legal nature, to provide the necessary oil in the gears of the adjudication process. [85] All these eminent specialists stress the role of the social in the interpretation of law, but none provided the methodological tools to do so.

C. The limits of Actor-Network Theory

30. The benefits of adopting an ANT approach are outweighed by some shortcomings. One of the most important relates to the beginning of the research, which consists in *assembling* the social ties in a network. But since the researcher should remain agnostic to the agency of actors, and therefore must simply observe what is offered by the actants, a genuine point of departure is missing. [86] An answer given by Callon and Latour to the problem of the "epistemological chicken" is that actants do indeed use pre-established categories that were previously black-boxed, and that the opening of these black boxes constitutes the point of departure where the social moves. [87] The problem remains however that a start to the enquiry is needed, and that other approaches — such as doctrinal scholarship — can help us better to spot the *black boxes* that are opened.

31. Another shortcoming of ANT is that its focus on micro-objects and historicised controversies cannot help in thinking greater societal debates about gender, class or power. [88] The only solution for ANT to solve these problems would be to multiply the case studies about a similar topic and to gather them in edited collections. This raises at least two issues. First, the researcher studying legal controversies may not pragmatically have the time and the means to carry out several in-depth empirical investigations. Second, each controversy may possess a set of specificities that require a further conceptual work that could tie these specific controversies to broader issues. ANT does not

[83] H. HART, *The Concept of Law*, 3rd ed., Oxford, Oxford University Press, 2012.

[84] N. MACCORMICK, *Legal Reasoning and Legal Theory*, Oxford, Oxford University Press, 1994, pp. 100-128.

[85] G. BECK, *The Legal Reasoning of the Court of Justice of the EU*, Cheltenham, Edward Elgar, 2013, pp. 349-433.

[86] H. COLLINS and S. YEARLEY, 'Epistemological Chicken', in A. PICKERING (ed.), *Science as Practice and Culture*, Chicago, University of Chicago Press, p. 315.

[87] M. CALLON and B. LATOUR, 'Don't Throw the Baby Out with the Bath School! A Reply to Collins and Yearley', in A. PICKERING (ed.), in A. PICKERING (ed.), *Science as Practice and Culture*, Chicago, University of Chicago Press, pp. 343-368.

[88] J. LAW, *After Method, Mess in Social Science Research*, London, Routledge, 2004, p. 166.

provide the tools to accomplish that task, unlike other research designs such as "process-tracing" that allow for a generalizable pattern coming out of thick empirical descriptions. [89]

32. These shortcomings limit the potential of ANT as an enabling social-scientific approach to study law empirically. That is why I argue that its main strength consists in fixing, i.e. in providing an extra possibility added to another approach to bring new insights into the study of law. Other approaches, such as doctrine or law in context, can lay the solid ground upon which the researcher can build a terrain of investigation. And ANT may be employed as a complementary fix to study the controversial aspects of some unanswered questions. I will turn to the example of the EU to substantiate these claims.

III. Studying European Union objects with Actor-Network Theory

33. ANT could be used to study controversies in every political system. It is particularly suited to arenas where technological artefacts or attempts at regulating nature are prominent. The EU is a crucially relevant example in that regard. Its core activities remain centred on the Single Market and on the full achievement of the Four Freedoms of circulation, i.e. for goods, persons, services and capitals. [90] The EU indeed has an extensive set of regulations that allow for the circulation of human-made artefacts on the market, and these can be labelled "European objects". [91] For these, the EU is nowadays an obligatory passage point since the EU is not only legally entitled to regulate their existence, but is also the vehicle through the concrete passage of law from textbooks to social reality takes place, e.g. via technical standards. [92] As such, the law of the EU moves and finds its common place beyond the traditional arena of government where it is enacted, and undergoes *trials of strength* — a process through which law is shaped and altered — in other loci where EU law finds its "common place". [93] An ANT lens of law would not focus on the validity of norms, but lead us to follow where rules are employed, by whom and which shape it takes.

[89] D. Beach and R. Pedersen, *Process-Tracing Methods. Foundations and Guidelines*, 2nd ed., University of Michigan Press, 2019, especially pp. 269-280.

[90] C. Barnard, *The Substantive Law of the EU: The Four Freedoms*, 7th ed., Oxford, Oxford University Press, 2022.

[91] B. Laurent, *European Objects: The Troubled Dreams of Harmonization*, MIT Press, 2022.

[92] M. Eliantonio and M. Cauffman (eds.), *The Legitimacy of Standardisation as a Regulatory Technique*, Cheltenham, Edward Elgar, 2020.

[93] P. Ewick and S. Silbey, *The Common Place of Law. Stories from Everyday Life*, University of Chicago Press, 1998.

A. Coproduction of the European legal order: the making and undoing of European objects

34. The EU is historically depicted in EU legal scholarship as an "integration-through-law" project. [94] The major thrust in the accomplishment of the Single Market would have forcefully been the product of negative integration, i.e. the process by which barriers to free movement were erased, [95] propelling a harmonisation process carried out by the European Commission. [96] Little space is left however to the discoveries made by historians of technology about the role of technical standards, which were agreed upon by assemblies gathering engineers from several European countries throughout the 19th and 20th centuries. [97] Not only did these experts shape a common technology in the field of railways, telecommunications, energy and others, but these were invited by the High Authority and after the European Commission to participate in the government of Europe. [98] This new allocation of powers to actors present because of their scientific credentials gave rise to a new category of powerholder that is still today an obligatory passage point in EU policy-making: the expert. [99]

35. Expertise captures the idea that the social assemblages made by EU rules are a matter of "coproduction". [100] The expert must find the language to make his knowledge overcome the passage of law through a trial of strength, [101] but in turn the legal expert — and by extension the legal scholar — has a need for grasping the technology that is being regulated, [102] be they lawmakers, [103] bureaucrats or

[94] M. CAPPELLETTI *et al.* (eds.), *Integration Through Law: Europe and the American Federal Experience*, Berlin, De Gruyter, 1986.

[95] F. SCHARPF, *Governing in Europe. Effective and Democratic?*, Oxford, OUP, 1999, pp. 43-84.

[96] The most famous example remains the principle of mutual recognition declared by the European Court of Justice in 1979 (C-120/78, Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein (*Cassis*), 20 February 1979, ECLI:EU:C:1979:42), which led the Commission to launch an important harmonisation of standards towards the achievement of the free circulation of goods: K. ALTER and S. MEUNIER-AITSAHALIA, 'Judicial Politics in the European Community: European Integration and the Pathbreaking Cassis de Dijon Decision', *Comparative Political Studies*, 1994, pp. 535-561.

[97] M. KOHLRAUSCH and H. TRICHSLER, *Building Europe on Expertise. Innovator, Organizers, Networkers*, Basingstoke, Palgrave Macmillan, 2014.

[98] W. KAISER and J. SCHOT, *Writing the Rules for Europe. Experts, Cartels and International Organizations, Basingstoke,* Palgrave Macmillan, 2014; J. SCHOT and F. SCHIPPER, 'Experts and European transport integration, 1945–1958', *Journal of European Public Policy*, 2011, pp. 274-293.

[99] C. ROBERT, 'L'expertise comme mode d'administration communautaire : entre logiques technocratiques et stratégies d'alliance', *Politique européenne*, 2003, pp. 57-78.

[100] S. JASANOFF, 'Ordering Knowledge, Ordering Society', in S. JASANOFF, *States of Knowledge: The Co-Production of Science and the Social Order*, Routledge, 2004.

[101] S. JASANOFF, *Science at the Bar. Law, Science, and Technology in America*, Cambridge, Harvard University Press, 1995.

[102] E. KORKEA-AHO and P. LEINO-SANDBERG, *Law, Legal Expertise and EU Policy-Making*, Cambridge, Cambridge University Press, 2025.

[103] W. BEAUVALLET and S. MICHON, 'Des eurodéputés "experts" ? Sociologie d'une illusion bien fondée', *Cultures & Conflits*, 2012, pp. 123-138.

judges in charge of delivering and interpretating "techno-regulations". [104] This exercise of coproduction means that policy choices that are the result of an expert-based decision are never fully neutral from a scientific point of view. [105]

36. Coproduction also implies that objects are co-constituted, and that the symbiosis of the legal and the technical can break down and generate a *controversy*. Such a case currently occurs in the Single European Railway Area (SERA). [106] The directive and the four railway package aim at liberalising the railway sector by fostering the arrival of new (private) entrants in a Europeanised network. If the instrument provides the necessary substantive and institutional safeguards to achieve this purpose, the level of liberalisation of railways remains substantially shallower compared to other EU-liberalised sector economies such as telecoms or aviation. [107] An ANT analysis of the implementation of the SERA directive showed that the low level liberalisation of railways was less due to the lack of compliance by national authorities than it was to the resistance expressed by the infrastructure. The latter is a closed framework which is quickly saturated for the most profitable parts of the network, and the peripheral parts constitute economically unattractive segments of the network, thereby constituting major barriers to entry. [108] This example shows that non-human objects can defy and sometimes undo the spirit of the law.

B. The common place of EU law: following the "Euractants"

37. The example of SERA showed that law can travel many ways. Following EU law through the life its actants — that I call the Euractants — means that it can be reappropriated by many entities and be found in several places. Since every assemblage is historicised and thus unique, finding the common place of EU law is a never-ending task. Two generalisable hypotheses can be made in the EU however, if we follow the conceptual toolbox of ANT.

38. The first hypothesis is that the law, when subject to controversies, travels to places that escape the traditional loci in which it is found. Indeed, the complexity that surrounds contemporary European objects leads to the extension of the legal

[104] A. MOLITORISOVÁ *et al.*, 'Techno-regulation: technological collaboration between EU administrations', *Law, Innovation and Technology*, 2022.

[105] An example can be found in the regulation of electricity markets: J. TORRITI, 'Impact Assessment and the Liberalization of the EU Energy Markets: Evidence-Based Policy-Making or Policy-Based Evidence-Making?', *J.C.M.S*, 2010, pp. 1065-1081.

[106] Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (recast).

[107] P. BOUGETTE *et al.*, 'Which Access to Which Assets for an Effective Liberalization of the Railway Sector?', *Competition and Regulation in Network Industries*, 2021, pp. 87-110.

[108] J. BOIS, 'The mismatch between regulatory ideals and practical implementation: the challenges faced by national regulatory bodies in pursuit of the single European railway area', *Journal of European Integration*, 2025, pp. 1-20.

process to new arenas. Legislative, constitutional and judicial lawmaking is patchworked with the input of various bodies that bridge the coproduction of law and science through expertise. The first are EU agencies. These bodies are tasked with giving law its pragmatic sanction by substantiating abstract rules with concrete standards and thresholds. Despite the doubts that surround the mandate of these bodies, [109] agencies have become key arenas in the resolution and supervision of many EU policies. [110] Another example is the European committees for standardization. They have also become key players in giving shape to EU law. These non-EU bodies are tasked with drafting important standards that operationalize in concrete practice EU rules, not least with the Artificial Intelligence Act. [111] Even if these institutions are subject to a formal check by the Commission, the task is left to the European and national standardisation bodies to provide a concrete meaning to abstract concepts, such as "acceptable risk" in the management of artificial intelligence. [112]

39. The second hypothesis is that the law changes in nature during the socio-technical settlement of a controversy. The agencies and standardisation bodies typically enact guidelines and recommendations that fall in the category of "soft law". [113] This soft nature is meant to provide a necessary fluidity to the rigid EU, [114] but its detailed content, along with the obligation to explain why recommendations are not followed (with the "comply-or-explain procedure), [115] already beg the question of their nature not as soft, bur rather as hard law. [116] An ANT approach would allow for the verification of the bindingness of such standards from an empirical perspective.

[109] The "Meroni" doctrine of the Court of Justice of the European communities (C 10-56, Meroni & Co., Industrie Metallurgiche, società in accomandita semplice v High Authority of the European Coal and Steel Community, 13 June 1958, ECLI:EU:C:1958:8) stipulates that EU institutions can delegate limited executive tasks to agencies, without delegation of discretionary powers. But the current state of affairs leads us to rethink whether the Meroni doctrine is still applied, and if EU agencies do actually exercise discretion: P. VAN CLEUNENBREUGEL, 'Meroni Circumvented? Article 114 TFEU and EU Regulatory Agencies', *Maastricht Journal of European and Comparative Law*, 2014, pp. 64-88.

[110] M. CHAMON, *EU Agencies. Legal and Political Limits to the Transformation of the EU Administration*, Oxford University Press, 2016, pp. 102-133.

[111] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence. See J. LAUX *et al.*, 'Three pathways for standardisation and ethical disclosure by default under the European union artificial intelligence act', *Computer Law & Security Review*, 2024, pp. 1-13.

[112] See the progress made by the standardization bodies on the AI Act: https://artificialintelligenceact.eu/standard-setting-overview/#:~:text=Quick%20Summary%20%E2%80%93%20Standard%20Setting%20Under,publicly%20available%20work%20programme%20here.

[113] M. ELIANTONIO *et al.* (eds.), *Research Handbook on Soft Law*, Cheltenham, Edward Elgar, 2023.

[114] *Ibid*., p. 3.

[115] P. HUBKOVA, 'Limiting or Empowering? Soft Rulemaking of the European Supervisory Authorities and Its Impact on National Administrative Authorities', *R.F.D.de Liège*, 2023, pp. 247-266.

[116] A. VOLPATO, 'The legal effects of harmonised standards in EU law: From hard to soft law, and back?', in P. LANCOS *et al.* (eds.), *The Legal Effects of EU Soft Law. Theory, Language and Sectoral Insights*, Cheltenham, Edward Elgar, 2023, pp. 193-212.

Conclusion

40. Legal controversies generate frictions that cannot always be accounted for by black-letter approaches. ANT is a social-scientific methodology that is perfectly suited for studying legal controversies. It brings an innovative methodology to study the displacement of the law. Its most unique trait is about giving agency to non-human objects: the nature or human-made artefacts do not always follow the intent made by decisionmakers, and may impede full compliance with the rules.

41. ANT is a particularly useful approach for legal scholars seeking to end a puzzle about the interpretation of law. It requires a modest skillset in order to follow the actants. Indeed, it historically relies on qualitative methods such as legal ethnography or archival work that can shed some light about the uncertainties that could not be lifted by descriptive or normative legal scholarship. However, ANT also possesses strong shortcomings that make it unfit as a self-standing theory and methodology. Thinking "near ANT" suggests that it is better combined with other approaches, and comes as a fix in these cases.

42. This piece has used the EU as a suitable case-study. The European legal order regulates many technologies that caused several controversies over the last decades. Studying EU controversies through ANT allows the researcher to witness how European objects can resist the intentions of the legislator, as was illustrated by the case of railways. It also allows us to follow EU law to new venues and to see how it acquires a new shape, and can therefore substantiate a growing legal scholarship engaging with the role of soft law and harmonisation standards.